New York State
Department of Environmental Conservation

Division of Lands & Forests

Wilcox Lake Wild Forest

including: Saratoga County Boat Launch
Broadalbin Boat Launch

Draft Unit Management Plan/ Draft Environmental Impact Statement

Fulton County: Broadalbin
Hamilton County: Hope, Wells
Saratoga County: Corinth, Day, Edinburg, Greenfield, Hadley, Providence
Warren County: Johnsburg, Stony Creek, Thurman

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PREFACE

The Unit Management Plan (UMP) for the Wilcox Lake Wild Forest, Saratoga County Boat Launch, and Broadalbin Boat Launch has been developed pursuant to, and is consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the Adirondack Park State Land Master Plan (APSLMP or Master Plan), the Department of Environmental Conservation (the DEC or Department) rules and regulations, Department policies and procedures, and the State Environmental Quality and Review Act.

All of the state-owned land which is the subject of this Unit Management Plan (UMP) is 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, or shall the timber thereon be sold, removed or destroyed."*

ECL §§3-0301(1)(d) and 9-0105(1) provide the Department with jurisdiction to manage Forest Preserve lands, including the Wilcox Lake Wild Forest.

The APSLMP was initially adopted in 1972 by the Adirondack Park Agency (APA), with advice from and in consultation with the Department, pursuant to Executive Law §807, now recodified as Executive Law §816. The APSLMP provides the overall general framework for the development and management of State lands in the Adirondack Park, including those lands which are the subject of this UMP.

The APSLMP places state land within the Adirondack Park into the following classifications: Wilderness; Primitive; Canoe; Wild Forest; Intensive Use; Historic; State Administrative; Wild, Scenic and Recreational Rivers; and Travel Corridors. The majority of lands which are the subject of this UMP are classified by the APSLMP and described herein as the Wilcox Lake Wild Forest (WLWF or "the unit"). Two additional parcels (Saratoga County and Broadalbin boat launches) are classified intensive use.

For all State lands falling within each major classification, the APSLMP sets forth management guidelines and criteria. These guidelines and criteria address such matters as structures and improvements; ranger stations; the use of motor vehicles, motorized equipment and aircraft; roads, jeep trails and State truck trails; flora and fauna; recreation use and overuse; boundary structures and improvements; and boundary markings.

Executive Law §816 requires the Department to develop, in consultation with the APA, individual UMPs for each unit of land under the Department's jurisdiction which is classified in one of the nine classifications set forth in the Master Plan. The UMPs must conform to the

guidelines and criteria set forth in the APSLMP. Thus, UMPs implement and apply the Master Plan's general guidelines for particular areas of land within the Adirondack Park.

Executive Law §816(1) provides in part that "(u)ntil amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park." Thus, the APSLMP and the UMPs have the force of law in guiding Department actions.

It is important to understand that the APSLMP has structured the responsibilities of the Department and the APA in the management of State lands within the Adirondack Park. Specifically, the APSLMP states that:

> *"...the legislature has established a two-tiered structure regarding state lands in the Adirondack Park. The Agency is responsible for long range planning and the establishment of basic policy for state lands in the Park, in consultation with the Department of Environmental Conservation. Via the master plan, the Agency has the authority to establish general guidelines and criteria for the management of state lands, subject, of course, to the approval of the Governor. On the other hand, the Department of Environmental Conservation and other state agencies with respect to the more modest acreage of land under their jurisdictions, have responsibility for the administration and management of these lands in compliance with the guidelines and criteria laid down by the master plan."*

To put the implementation of the guidelines and criteria set forth in the APSLMP into actual practice, the Department and the APA have jointly signed a Memorandum of Understanding (MOU) concerning the implementation of the APSLMP. The document defines the roles and responsibilities of the two agencies, outlines procedures for coordination and communication, and defines a process for the revision of the APSLMP, as well as outlines procedures for State land classification, the review of UMPs, state land project management, and state land activity compliance.

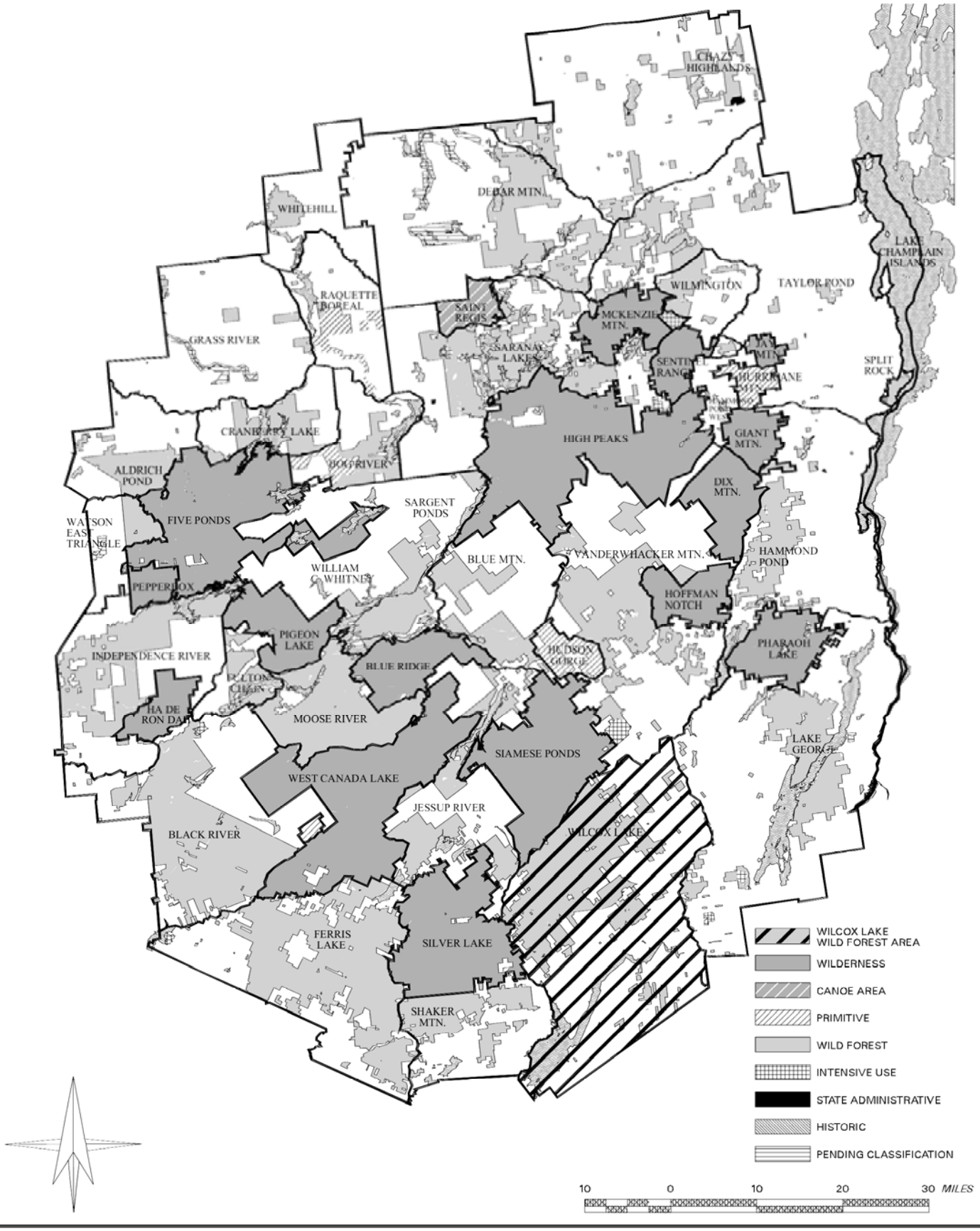
No Action Alternative

From a legal perspective, the "No Action" alternative of not writing a UMP is not an option. Executive Law §816 requires the Department to develop in consultation with the APA, individual UMPs for each unit under its jurisdiction as classified in the APSLMP. In addition, a UMP serves as a mechanism for the Department to study and identify potential areas for providing access to the WLWF for persons with disabilities in accordance with the Americans with Disabilities Act (ADA, 1990). The UMP also serves as an administrative vehicle for the identification of nonconforming structures as required by the APSLMP.

From an administrative perspective, the "No Action" alternative is not an option. The UMP provides the guidance necessary for Department staff to manage the lands of the unit in a manner that is most protective of the environment while at the same time ensuring the most enjoyable outdoor recreational opportunities for the public. Without the UMP, the sensitive environmental

resources of the unit could be negatively impacted and it is highly likely that as a result, visitor satisfaction with the resources would decrease. Management of the WLWF via a UMP allows the Department to maintain the natural landscape and its environmental integrity while simultaneously improving public use and enjoyment of the area, minimizing user conflicts, preventing overuse of the resources (e.g. through trail designations, access restrictions, placement of campsites and lean-tos, etc.), and allowing for public input into the decision-making for the unit.

ADIRONDACK PARK
WILCOX LAKE WILD FOREST AREA



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SECTION I – INTRODUCTION

A. PLANNING AREA OVERVIEW

The Adirondack Park is the largest park within the contiguous United States with a total land area of approximately 6 million acres in Upstate New York. The park consists of 2.7 million acres of publicly-owned Forest Preserve land interspersed with a slightly higher acreage of private holdings. Of the five major categories of state-owned lands in the Adirondack Park, Wild Forest lands are most prevalent; nearly half of the Forest Preserve is classified as Wild Forest. This unit management plan (UMP) will focus on a portion of this Wild Forest land situated in the southeastern portion of the Adirondack Park which is known as the Wilcox Lake Wild Forest (WLWF or "the unit").

The WLWF represents one of the largest Wild Forest units, comprising approximately 10% of the total Wild Forest acreage in the Adirondack Park. The unit consists of approximately 125,000 acres of land area in Warren, Hamilton, Saratoga, and Fulton Counties. The WLWF is entirely within the upper Hudson River watershed; generally the northern and eastern portions of the unit drain directly into the Hudson River while the western and southern portions drain into the East Branch of the Sacandaga River, the main stem of the Sacandaga River, and Great Sacandaga Lake. Nearby communities include Warrensburg, Thurman, Athol, and Stony Creek to the east; Hadley, Lake Luzerne, and Corinth to the southeast; Hope Falls, Day Center, and Edinburg to the south; Northville to the southwest; Wells to the west; and Johnsburg and North Creek to the north.

The WLWF consists of one large contiguous block of land (111,000 acres) as well as many disjunct parcels ranging in size from very small (a 13-acre parcel near Big Brewer Vly in the Town of Corinth) to reasonably large (a 2400-acre parcel surrounding Crane Mountain in the Towns of Johnsburg and Thurman). Some of these disjunct parcels are isolated and reasonably inaccessible to the public because of surrounding private lands, especially those in the southern part of the unit. However, many of the unit's most popular destinations, such as Crane Mountain, Snake Rock, and the two boat launches on Great Sacandaga Lake, the Saratoga County boat launch and Broadalbin boat launch, are contained within these smaller pieces of Forest Preserve land.

The planning area for the WLWF is much larger than the unit itself, encompassing 615 square miles (394,000 acres), and is generally bounded by the Hudson River to the east; the Adirondack Park boundary ("Blue Line") to the south; and the western shore of Great Sacandaga Lake, the Sacandaga River, the East Branch of the Sacandaga River, and NY State Rte. 8 to the west and north. Within the planning area, there are several parcels of state-owned land outside the scope of this UMP; these areas include the Sacandaga Public Campground (classified by the APA as intensive use) and the lands under the jurisdiction of the Hudson River/Black River Regulating District in and around Great Sacandaga Lake. In general, the majority of the private land within the planning area is classified by the APA under the "rural use" (132,000 acres) and "resource management" designations (65,000 acres). Of the resource management-designated lands, the

majority are owned and intensively managed by large timber companies including Lyme Timber, Yankee Timber, Mettowee Lumber, and Sweet Lumber. Many of the large timber company holdings are in the southern portion of the planning area and are often leased by private hunting clubs. Additional large private landowners include several hunting clubs with properties bordering extensively on Forest Preserve land (notably the Dog 'n Pup, Moosewood, and S and L Clubs, among others).

Several existing and anticipated state-owned easements exist in the vicinity of the WLWF. The majority of these are working forest easements in the process of being acquired for the Lyme Timber Company-owned lands in the WLWF planning area. These Lyme Timber Company easements will also include some limited recreational access, generally in the form of snowmobile trail corridors. Another easement in the planning area exists for a short trail segment across private land that originates on Harrisburg Road and provides access to a large piece of relatively inaccessible Forest Preserve land in the vicinity of St. John Lake.

The WLWF is closely associated with the Siamese Ponds Wilderness which encompasses 114,000 acres of rugged, unbroken terrain northwest of the unit. The 13.5-mile boundary between the two units is composed primarily of NY Rte. 8 (2.1 miles) and the East Branch of the Sacandaga River (11.1 miles). Other Forest Preserve units associated with WLWF include the Jessup River Wild Forest to the west, the Silver Lake Wilderness and Shaker Mountain Wild Forest to the southwest, and the Lake George Wild Forest to the east.

Topography within the WLWF ranges from rolling to mountainous. Mountain peaks are generally less than 3,000 feet with Crane Mountain (3,254 feet) as the exception. Other notable peaks include Mount Blue (2,940 feet) and Kettle Mountain (2,799 feet) in the northern portion of the unit; Baldhead Mountain (2,870 feet), Moose Mountain (2,831 feet), Long Tom's Ridge (2,766 feet), Hadley Mountain (2,680 feet), and Spruce Mountain (2,650 feet) in the east; and Harrington Mountain (2,618 feet) and Georgia Mountain (2,444 feet) on the western side. Although none of peaks in the WLWF attain the heights of the more renowned "Adirondack High Peaks", many of the unit's mountains offer open, rocky summits and spectacular views.

The WLWF does not offer the extensive opportunities for water-related recreation found in such Forest Preserve units as the Saranac Lakes Wild Forest and the St. Regis Canoe Area. However, Wilcox Lake, Garnet Lake, the East Branch of the Sacandaga River, and East Stony Creek are all notable water features of the unit that receive significant use. Additionally, the numerous small ponds and headwaters streams in the unit are popular with fishermen, especially during the spring months when brook trout fishing is at its best. Despite limited contact with Forest Preserve parcels, Great Sacandaga Lake and the Hudson River are undoubtedly other significant water components of the WLWF area.

From a recreational perspective, the most endearing features of the WLWF are its extensive trail network and ample access from surrounding roads. Despite these attributes, recreational use in the region is moderate to light with a few exceptions, notably Hadley and Crane Mountains. The WLWF has the most miles of designated snowmobile trail of any unit in the eastern portion of

the Adirondack Park. As a result, snowmobilers probably constitute the most significant user group on many trails within the WLWF.

The Adirondack Park State Land Master Plan (2001) describes the unit as follows:

> *"It is an area of rolling hills and open summits with a considerable number of attractive brook trout streams. Numerous old log roads provide easy access by foot in the summer and by snowmobiles, skis or snowshoes in the winter. At present the snowmobile trails on this tract probably represent the greatest mileage to be found on any state parcel in the Park. In contrast, there are few trails marked for hiking and cross country skiing."*

Management concerns in the WLWF are generally centered around several main issues; these include maintaining the proper balance between recreational use and resource protection at popular areas such as Crane Mountain, Hadley Mountain, and Wilcox Lake; motor vehicle access, all-terrain vehicle (ATV) use, and maintenance on the unit's many trails and roads; and the development of a network of designated snowmobile trails that provide safe, desirable connections between local communities. Other issues of interest in the unit include monitoring of trail use to address future conflicts, developing universally accessible recreational facilities, developing new trails and campsites where desirable, and closing of unneeded existing trails and campsites.

B. UNIT GEOGRAPHIC INFORMATION

The unit boundaries are depicted on the official Adirondack Park Land Use and Development Plan Map and State Land Map and on the Facilities Map in Appendix X. Additionally, Appendix B contains a detailed list of the parcels and tracts composing the WLWF. The planning area is covered by the following USGS quadrangle maps:

7½ ' X 15' series	**7½ ' X 7½ ' series**
Bakers Mills	Conklingville
Broadalbin	Corinth
Harrisburg	Edinburgh
Hope Falls	Johnsburg
Thirteenth Lake	Lake Luzerne
Three Ponds Mountain	North Creek
Wells	Northville
	Porters Corners
	Stony Creek
	The Glen
	Warrensburg

C. GENERAL LOCATION

The WLWF is located in the southeastern corner of the Adirondack Park, west of the Northway (Interstate Route 87) and north of the Thruway (Interstate Route 90). The unit is west of Lake George and the Hudson River and the main acreage is north of Great Sacandaga Lake. The parcels of the unit are contained within the Towns of Johnsburg, Stony Creek, and Thurman in Warren County; the Towns of Hope and Wells in Hamilton County; the Towns of Corinth, Day, Edinburg, Greenfield, Hadley, and Providence in Saratoga County; and the Town of Broadalbin in Fulton County.

As alluded to previously, the crude planning area boundaries are relatively simple – the northwestern boundary is generally composed of NYS Route 8 and the East Branch of the Sacandaga River; the southwestern boundary is composed of NYS Route 30 and the Great Sacandaga Lake; the Blue Line forms the southern boundary; and the Hudson River comprises the eastern boundary.

D. ACREAGE

The overall size of the WLWF is approximately 124,643 acres of land area. Additionally, the Department's Division of Fish, Wildlife and Marine Resources NYS Biological Survey lists 49 bodies of ponded water totaling approximately 1,150 acres to be *associated* with the unit. (These associated waters include both lakes and ponds surrounded entirely by Forest Preserve lands, e.g. Wilcox Lake, as well as those with significant Forest Preserve shoreline, e.g. Garnet Lake). Except for the boat launch parcels on the Great Sacandaga Lake the acreage and management of this waterbody will not be addressed in this UMP.

The breakdown of acreage for the WLWF is as follows:

Table 1. Acreage by county and town in the WLWF.

County/Town		**Land Area (acres)**
Warren County		*74,351*
	Johnsburg	16,260
	Stony Creek	29,684
	Thurman	28,407
Hamilton County		*35,786*
	Hope	12,025
	Wells	23,761
Saratoga County		*14,434*

	Corinth	4,443
	Day	6,741
	Edinburg	1,238
	Greenfield	263
	Hadley	1,634
	Providence	115
Fulton County		*72*
	Broadalbin	72

E. GENERAL ACCESS

Motor vehicle access to the main portion of the WLWF is generally excellent from all directions; however, access to some of the smaller disjunct pieces in the eastern and southern parts of the unit is limited or nonexistent, especially those parcels in the Kayaderosseras Range south of the Great Sacandaga Lake. Major points of access to the main tract of the WLWF include NYS Route 8 in the northwest; NYS Route 30, Windfall Road, Dorr Road, and Pumpkin Hollow Road in the southwest; Creek Road and Hope Falls Road in the south; Tower Road, Roaring Branch Road, and Bakertown Road in the southeast; West Stony Creek Road, Mud Pond Road, and Garnet Lake Road in the east; and Bartman Road and Armstrong Road in the north.

As a result of its location at the southern periphery of the Adirondack Park and its proximity to the Northway, the WLWF is second only to the Lake George Wild Forest among Adirondack Forest Preserve units in providing easily accessible recreational opportunities to the greatest number of people. However, register box entries suggest that the WLWF is generally not a long-distance travel destination where visitors stay for multiple nights such as the High Peaks Wilderness Area or the St. Regis Canoe Area. Most visits consist of day trips by members of local or regional communities and travelers passing by the unit on their way to or from more popular destinations. Besides the communities in the immediate vicinity of the unit mentioned previously, nearby cities include Lake George Village, Glens Falls, Saratoga Springs, and those in the Capital District (e.g. Albany, Troy, Schenectady, etc.). Additionally, Montreal, Quebec (120 miles) and New York City (220 miles) represent large metropolitan areas within reasonable driving distance of the unit.

F. GENERAL HISTORY

Compared to the lands to the east in the vicinity of Lake George and to the south in the Mohawk River valley, the WLWF had a relatively quiet history. Although precontact groups undoubtedly passed through the area occasionally while hunting and gathering, they left little evidence to suggest that they were permanent residents of the unit. The WLWF area remained relatively

undisturbed during the wars that raged in nearby valleys in the 18th century. Although evidence of a few early European inhabitants exists, it was not until the early 19th century, following the end of the fighting in the region, that the WLWF area began to be settled in earnest. As was occurring across much of the Adirondack region, people were moving to the area to take advantage of the abundant natural resources, including virgin timber, hemlock bark for tanning, iron ore, and gravel. Additionally, tourists began to flock to the area to appreciate its natural beauty, which is possibly the greatest resource of the Forest Preserve today.

Post-European Settlement History

The WLWF is situated between two major historic transportation routes comprised of Lake George and Lake Champlain valleys to the northeast and the Mohawk River valley to the south. These routes served to connect New York City and the Atlantic Ocean to Canada and the Great Lakes. During the 18th century, the valleys were used to transport troops and supplies to the great military campaigns to the north and west. First, these natural corridors were used by the British for defense against the French during several wars in the early 18th century that culminated in the French and Indian War of the 1750s. In the 1770s, the valleys were used by the Revolutionary Army against the British in Canada. Although the wars took place near the WLWF, little historic activity is recorded for the unit itself during those times. A fort was erected in 1775 on the margin of the unit in Mayfield to protect a few of the earliest settlers there (Bennis 1998). Generally, the area was considered to be disputed territory in a military frontier. The terrain made the area difficult to traverse and exploration and settlement did not begin in earnest until the next century.

The end of the wars in the nearby valleys paved the way for permanent settlement of the Adirondack region. The Adirondacks offered raw materials such as lumber and iron, and grist mills and forges became common. Lumbering began along the upper Hudson in the early 19th century. Although some small mills were set up near lumber sources, river driving was typically employed to convey most of the logs to larger mills in more developed areas. Log driving was facilitated by the construction of “flush dams” on small headwater streams across the region. Logs were piled on the ice of the impoundments created by these dams during the winter months and in the spring, the dams were breached and the logs were carried downstream with the surge of water to the Hudson River. Remnants of flush dams can still be seen on several of the unit’s streams today, including East Stony Creek. Logs were also moved across lakes, although they had to be bound and towed or left to the fate of the prevailing winds. Log driving often irritated shoreline landowners, and as a result, some rivers were declared public highways (Donaldson 1921). To avoid the losses caused by particularly large spring floods, a system of booms and piers was built by the Hudson River Boom Association, comprised of both millers and log owners. The largest boom system was constructed above Glens Falls, which was the home of many lumber mills. The number of logs that passed the boom was recorded yearly and the number generally exceeded three hundred thousand logs through 1850s and grew to around five hundred thousand in the 1870s. In 1872, over one million logs passed from the Adirondacks to Glens Falls (Smith 1885).

Although river driving was the cheapest mode of transportation for timber, the construction of railroads in the Adirondacks in the 1860s allowed for the transportation of heavy hardwoods that did not readily float. Many early timber companies developed their own rail lines. Northville and Broadalbin were both served by railroads built specifically for lumber transportation (Kudish 1996). Railroads were also necessary for transporting mined materials such as iron, gravel, and sand to processing plants, and carrying pelts and hemlock bark to and from the region's many tanneries.

Although logging was probably the region's most important early industry, the tanning industry was probably a close second, especially following the depletion of hemlock in the Catskill Mountains. The Adirondacks supplied an abundant quantity of the raw materials, namely pelts from furbearers and bark from hemlock trees, required for the tanning process. As a result, tanneries sprung up throughout the region, especially in the southern Adirondacks. The most notable tannery in the unit was located in the now abandoned hamlet of Oregon. The area where the tannery stood along Route 8, still evidenced by building remains, is now referred to locally as the Fox Lair. Other tanneries were located at Griffin and the Glen.

Although mining never became widespread in the WLWF, several historical accounts of mining exist for the lands in and around the unit. A white sand mine was reportedly located south of village of Corinth in the 19th-century (Kudish 1996). Also dating to this time period was a paint mine established in the cleft between Crane and Huckleberry Mountains (McMartin 1999). Apparently, an ore composed of a blend of iron and aluminum oxides was being extracted from this location as early as 1850 to paint houses in nearby communities, notably Johnsburg. Later, in 1893, entrepreneur D. M. Haley, upon finding that the ore deposit was sufficiently large, established a factory at the site to produce paint. Although the factory building was destroyed several times, once by fire and once by an avalanche off the slopes of Crane Mountain, the operation remained viable for a number of years before eventually shutting down in the early 1900s. Today, the former mine site is evidenced by a stone chimney, a foundation, and several of the pits.

Another industry that grew during the 19th-century and continues to flourish in the Adirondacks is tourism. The mountains, forests, and lakes drew people who enjoyed the views, hiking, and hunting. Large, scenic hotels were built in the 19th century to accommodate the tourists. Both environmental and historical tourism remain leading industries in the Adirondacks today.

In reaction to the deforestation and other environmental degradation caused by excess lumbering, the tanning industry, unregulated market hunting, and mining in the early and mid-19th century, the New York State Adirondack Forest Preserve was created in 1885 and the Adirondack Park was created in 1892. In 1894, Article XIV was added to the state constitution to prevent lumbering and development on state-owned Forest Preserve lands (VanValkenburgh 1985).

One of the most unique early 20th-century events in the region was the creation of Great Sacandaga Lake. The lake was a result of the construction of the Conklingville Dam on the Sacandaga River in 1930. Residents in Batchellerville and other settlements left their homes in the 1920s, and the structures were either moved, demolished or burned. Cemeteries were relocated and bridges and churches were also moved or destroyed before the valley was flooded. Today, artifacts of former communities can be seen scattered on the shoreline, especially during times when the lake water level is low (Bennis 1998).

SECTION II. – INVENTORY OF RESOURCES, FACILITIES, AND USE

A. NATURAL RESOURCES

1. Physical

a. Geology

The Adirondacks represent the only mountain range in the eastern United States that are not "geologically Appalachian" (Laing 1994). The Adirondack region is an uplifted dome approximately 60 miles in diameter that comprises a southeasterly extension of the Greenville Province of the Canadian Shield. The WLWF is located at the extreme southern edge of this region. The geological history of the WLWF and the Adirondack region as a whole is rather complex. During the Precambrian Era, a sea covered a large area of what is now North America including the location of the present-day Adirondack Mountains. Sediments deposited at the bottom of this sea eventually formed into sedimentary rocks such as sandstone, limestone and shale. Approximately 1.1 billion years ago, a continental plate to the east collided with proto-North America causing massive uplift and forming a five-mile high mountain range. Simultaneously, the pressure and heat generated by the collision caused the sedimentary rocks and underlying igneous rocks in the earth's crust to recrystallize into metamorphic rock.

Over the course of hundreds of millions of years, this mountain range was gradually eroded away, eventually becoming a fairly level high plain. More recently, approximately 5-10 million years ago, a period of localized domical uplift began, which in concert with erosion that removed the surface sedimentary rock layers, created the present-day Adirondack mountain range. The dome of the Adirondacks is characterized by three prominent geologic features: (1) long straight valleys running north-northeast following fault lines, (2) gently curved ridges and valleys, and (3) radial drainage patterns flowing outward from the dome. Elevations fall rapidly to the north and east of the Adirondack's central highlands, and decline more gradually to the south and west.

The bedrock within the WLWF is comprised primarily of metamorphic rock of sedimentary and uncertain origin consisting of biotite-quartz-plagioclase gneiss and mageritic, syenitic, charnockitic, and quartz syenitic gneisses. Gneisses are very hard, extremely dense, and resist weathering and erosion.

Glaciation has had a significant effect on the landscape within the WLWF as well as much of New York. During the Pleistocene Epoch, 1.6 million years ago, huge ice sheets advanced and retreated several times across the Adirondacks. The last major ice sheet, the Wisconsin glacier, reached its maximum advance across the state over 21,000 years ago. It was thick enough to bury the summit of mile-high Mt. Marcy, the highest point in New York. Ten thousand years later, in retreat, this glacier accomplished spectacular erosion; scouring mountaintops, scraping away soil and loose sediments, wearing away bedrock, gouging river valleys into deep troughs, and scattering glacial erratics in its path. Melting ice sheets released huge volumes of melt water that further shaped the landscape.

b. Soils

Like most soils in New York, soils within the WLWF are derived from the surficial geology, which primarily consists of glacial till – unconsolidated deposits of clay, silt, sand, and gravel. On steep slopes and mountain tops, thinner deposits have since eroded down to bedrock in many locations. Also dotting the landscape are numerous kame deposits. Kames are comprised of gravel and sand and resulted from deposits from the edge of the glacial ice sheets. Other glacial deposits include outwash plains composed of sand and gravel, and more recent deposits including alluvial deposits (river sediments) and deep organic deposits in wetlands.

From a management prospective, the key characteristic of soil is its erodibility. Highly erodible soils that are subject to intensive use or modified to remove stabilizing elements, such as vegetation, can result in significant soil loss, downslope/downstream sedimentation, and poor trail conditions. Available soil data for the unit are limited. However, based on review of the Warren County Soil Survey (USDA 1989) and the Saratoga County Soil Survey interim report (USDA 1995), most of the soils located on steep slopes in the unit are highly susceptible to erosion. However, the relatively low intensity of use within the unit has generally resulted in average to good trail conditions.

c. Terrain/Topography

The topography of the WLWF can be described as hilly to mountainous. Elevations of most mountain peaks are less than 3,000 feet. The exception is Crane Mountain, which, at 3,254 feet, is the highest point in the unit. Another notable peak is Hadley Mountain (elevation 2,675 feet), located in the southeastern portion of the unit, which has a restored fire tower and is undoubtedly the most popular destination within the WLWF from a recreational visitation perspective. Intermediate in elevation between Crane and Hadley Mountains are five trailless peaks including Mount Blue (2,940 feet), Baldhead Mountain (2,870 feet), Moose Mountain (2,831 feet), Kettle Mountain (2,812), and Long Tom's Ridge (2,766 feet). The elevations of the summits in the unit generally decrease from north to south and from east to west.

Low-lying areas contain many of the unit's numerous streams, lakes, ponds, and wetlands. The lowest points in the unit occur along the Hudson River (elevations generally ranging from 600 to 800 feet) and Great Sacandaga Lake (elevation of 771 feet). Very little WLWF lands exist in these areas. Within the largest contiguous piece of the unit, located north of the Great Sacandaga Lake, elevations generally range from 1,000 feet to 3,000 feet, with most mountain peaks exceeding 2,000 feet.

d. Water

The water resources of the WLWF are a significant component of the unit's natural landscape as well as its recreational appeal. Although the WLWF lacks the extensive opportunities for water-related recreation offered by some other Forest Preserve units, its waterways provide much-needed visual diversity and add substantially to the scenic beauty of the unit. For example, the views from Crane Mountain, although excellent in their own right, are made spectacular by the presence of Crane Mountain Pond.

The WLWF lies within two large watersheds - the Upper Hudson River and the Sacandaga River. These two watersheds are both part of the Greater Upper Hudson River Drainage Basin. This huge river basin comprises a large portion of the Adirondack Park. The unit is dotted with small ponded waters, many of which offer a remote, wilderness-like setting, and is drained by small, high gradient, headwater streams that flow into larger rivers and lakes.

Ponded Waters

The NYS Biological Survey identifies 45 lakes and ponds totaling 1,150.1 acres *associated* with the WLWF. These ponded waters range in size from small unnamed ponds of less than one acre to the 302-acre Garnet Lake. Prominent waterbodies completely surrounded by Forest Preserve lands include Bennett Lake (37 acres), Cod Pond (50 acres), Kibby Pond (41 acres), Middle Lake (31 acres), Murphy Lake (33 acres), Round Pond (83 acres), and Wilcox Lake (133 acres).

Appendix C lists the ponded waters in the unit with a brief narrative pertaining to their important features, including past and current management, accessibility, size, water chemistry, and fish species composition. Additional information about the ponded waters, including physical, chemical, and biological data, is provided in Tables 1 and 2 of this appendix.

Watercourses

Much of the central portion of the unit drains into East Stony Creek and its main tributaries—Madison Creek, Hill Creek, Harrisburg Lake Outlet, Dayton Creek, Wilcox Lake Outlet, and Tenant Creek—which generally flow south, eventually joining the Sacandaga River (Great Sacandaga Lake) in the Town of Hope, south of the village of Hope Falls. In the northern and eastern portions of the unit, major streams draining directly into the Hudson River include Mill Creek (in the Town of Johnsburg, not to be confused with Mill Creek in the Town of Wells), The Glen Creek, and Stony Creek. Aside from East Stony Creek, other major streams in the southern part of the unit include Paul Creek and Sand Creek. The unit's western slopes drain towards the Sacandaga River and its East Branch. Major streams in this area include Doig Creek, Coulombe Creek, Mill Creek, Jimmy Creek, Georgia Creek and Stewart Creek.

Wild, Scenic, and Recreational Rivers (refer to the Adirondack Park Land Use and Development Plan Map and State Land Map available from the APA or the 11" x 17" Hydrology map in Appendix Z)

The WLWF contains or borders four rivers or streams that are protected by the NYS Wild, Scenic, and Recreational Rivers System Act (WSRR). Management of these sections is guided by ECL Article 15, Title 27 and Regulations for Administration and Management of the Wild, Scenic, and Recreational Rivers System in 6 NYCRR Part 666.

East Stony Creek – East Stony Creek is classified as a "study" river for approximately 14.1 miles from its confluence with Harrisburg Lake Outlet to its confluence with the Sacandaga River. The upper 7.5 miles of this stretch is bordered entirely by Forest Preserve lands except for the Moosewood Club and Brownell Camp inholdings. For the next 3.5 miles, south to the village of Hope Falls, Forest Preserve lands compose about half the length of the stream's western shore. For two miles south of Hope Falls, the stream again flows entirely within Forest Preserve lands

except for one small private inholding. South of this stretch, the stream is no longer associated with lands of the unit.

East Branch of the Sacandaga River – The East Branch of the Sacandaga River is classified as a "recreational" river for approximately 14.0 miles from its confluence with Martha's Brook to its confluence with the Main Branch of the Sacandaga River, all of which borders the unit except for several small private parcels.

Main Branch of the Sacandaga River – The Main Branch of the Sacandaga River is classified as a "recreational" river for its entire length and borders the unit for approximately 0.8 miles.

Hudson River – The Hudson River is classified as a "recreational" river south of its confluence with Raquette Brook and borders the unit for approximately 1.9 miles.

e. Wetlands

The APSLMP (2001:19) defines a wetland as "...any land that is annually subject to periodic or continual inundation by water and commonly referred to as a bog, swamp, or marsh, which is one acre or more in size or located adjacent to a body of water, including a permanent stream, with which there is a free interchange of water at the surface...".

By this definition, the APA identifies 2,378 wetlands totaling 8,973 acres in the WLWF, roughly 7% of the total unit area. The majority, 98% of the wetlands and 91% of the wetland acreage, are classified as Palustrine systems based on the National Wetlands Inventory classification scheme (Table 2). Palustrine wetland systems are basically those wetland habitats not associated with lakes or rivers (Lacustrine and Riverine wetlands, respectively).

Table 2. National Wetlands Inventory (NWI) system classification breakdown for the Wilcox Lake Wild Forest (WLWF) generated from Adirondack Park Agency (APA) GIS data.

NWI System	Number	Total Acreage
L - lacustrine Includes wetlands and deepwater habitats with all of the following characteristics: 1. situated in a topographic depression or a dammed river channel; 2. lacking trees, shrubs, persistent emergents, emergent mosses or lichens with > 30% area coverage; 3. depth exceeding 2 meters; and 4. total area exceeding 20 acres (8 hectares)	25	669
R - riverine Includes all wetlands and deepwater habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between two bodies of standing water.	32	125

P - palustrine Includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses, or lichens; generally less than 2 meters in depth and 20 acres (8 hectares) in size.	2321	8179

As is true for much of the Adirondack Park, wetlands in the unit are common in the low-lying, flat areas between hills and mountains where runoff from steep slopes and groundwater seepage collects and is sometimes confined before entering drainage systems. These areas are commonly referred to as headwater wetlands and are often the origins of streams. Many of these headwater wetlands have been created, expanded, and modified by beaver dams. In most cases, the dams raise the water level, flooding adjacent upland areas. Depending on the length of time the dams are maintained, these upland areas can eventually become wetlands, creating hydric soils and supporting water tolerant vegetation. Remnants of the upland community are often apparent in these wetlands and may include dead trees such as spruce and fir. Other wetlands within the unit occur along the floodplains of streams and rivers and within and adjacent to deepwater habitats of lakes and ponds.

Forested evergreen wetlands, typically dominated by balsam fir and spruce species, are the most prevalent wetland cover type in the WLWF (Table 3). Due to the frequency and duration of flooding, many of the non-forested wetlands support emergent and scrub-shrub vegetation cover types, including many obligate wetland species. Prolonged inundation generally precludes invasion by tree species in these wetlands. Appendix Z contains a wetland cover type map for the unit.

Table 3. Wetland cover types in the Wilcox Lake Wild Forest (WLWF) based on National Wetlands Inventory (NWI) classification and Adirondack Park Agency (APA) GIS data.

Wetland Cover Type	**Area (acres)**	**% of total wetland area**
Forested, evergreen	3412	38.0%
Broad-leaved deciduous scrub/shrub (shorter than 6 meters)	1860	20.7%
Open water	1026	11.4%
Needle-leaved evergreen scrub/shrub (shorter than 6 meters)	917	10.2%
Persistent emergent	771	8.6%
Broad-leaved evergreen scrub/shrub (shorter than 6 meters)	441	4.9%
Forested, broad-leaved deciduous	344	3.8%

Forested, dead	173	1.9%
Forested, needle-leaved deciduous	12	0.1%
Needle-leaved deciduous scrub/shrub (shorter than 6 meters)	12	0.1%
Unconsolidated Shore - Cobble	2	0.0%
Unconsolidated Shore - Sand	2	0.0%
TOTAL	**8972**	

The largest wetlands in the WLWF generally occur in the northern portion of the unit. The extensive wetland complex along Stewart Creek between the Fish Ponds and Cod Pond is probably the largest. Other sizable wetlands are located along Georgia Creek, along Cotter Brook, along East Stony Creek, and along Madison Creek.

Wetlands of the WLWF present both opportunities and challenges to the public. They have great aesthetic value and offer considerable opportunity for study and general education. For visitors, the expanses of open space provided by wetlands supply much-needed visual contrast to the heavily forested settings that dominate much of the unit. Because they constitute one of the most productive habitats for fish and wildlife, wetlands afford abundant opportunities for fishing, hunting, trapping, and wildlife observation and photography. On the other hand, wetland areas are generally ecologically sensitive and are not conducive with heavy recreational use. Trails placed adjacent to wetlands are often plagued by seasonal wet spots and locations for new facility development (e.g. trails, primitive campsites, and lean-tos) are often limited by the presence of wetlands.

Other important ecological functions of wetlands include water quality improvement, stormwater attenuation, nutrient cycling, and habitat for threatened and endangered species. In their capacity to receive, store, and slowly release rainwater and meltwater, wetlands protect water resources by stabilizing flow rates and minimizing erosion and sedimentation. Many natural and man-made pollutants are removed from water entering wetland areas. Some of the threatened and endangered species and species of special concern which may utilize wetlands in the unit include the common loon, bald eagle, osprey, tiger beetle, snaketail and clubtail dragonflies, and bog turtle. The wetlands also may contain a number of rare, threatened and endangered plants including the swamp pink and numerous sedges.

WLWF Megawetlands[1]: Stewart Creek area (See Appendix Z)

[1]Charismatic Megawetlands were selected from the Cover Type Wetlands data based on visual clues of large cover type agglomerations. The extent of polygons comprising each Megawetland complex is intended to be functionally inclusive from the perspective of wildlife. Many of the Charismatic Megawetlands are made up of lowland boreal habitats, such as peatlands, which create habitat for many unique-to-NYS species such as Spruce Grouse, Gray Jay, Black-backed Woodpecker, and Three-toed Woodpecker. For more information on Charismatic

f. Climate

The region has a humid continental (temperate) climate that in general terms is best described as cool and moist; characterized by warm summers with cool nights, long, cold winters, and abundant precipitation evenly distributed throughout the year. Climatic conditions (especially temperature and precipitation) vary considerably throughout the unit and are influenced by such factors as slope aspect, elevation, distance and direction from large bodies of water, prevailing wind direction, and the location of natural barriers.

The average summer temperature is 68° F with an average daily maximum temperature of 79° F. The average winter temperature is 21° F, with an average daily minimum temperature of 12° F. Annual precipitation, in terms of liquid water, is approximately 35 inches. The average seasonal snowfall is 66 inches (USDA Soil Conservation Service 1989).

Additional precipitation information was obtained through the Water and Climate Center of the Natural Resources Conservation Service (NRCS). Using the Parameter-elevation Regressions on Independent Slopes Model (PRISM), the NRCS has developed annual and monthly precipitation estimates that take into consideration the variations in precipitation that occur in mountainous regions. Based on this information, it is obvious that total annual precipitation varies considerably across the WLWF from 40 inches to as much as 54 inches at higher elevations.

Due to the availability of direct sunlight, south-facing slopes are warmer and drier than north-facing slopes. Prevailing winds are generally from the west to southwest, but may be modified by topography. As a result, west-facing slopes tend to be wetter and east-facing slopes, leeward of prevailing winds, tend to be drier because of the origraphic effect. Extensive damaging winds (hurricane force) are rare, but do occur when coastal storms move inland or severe weather systems develop and may result in extensive areas of blowdown, as happened during the wind event of 1950. Additionally, ice storms, such as the one that struck the western part of the Adirondacks in 1998, have the potential to cause significant damage to the unit's forests.

g. Air Resources and Atmospheric Deposition

The effects of various activities on the air quality of the WLWF have not been sufficiently measured nor determined. Air quality and visibility in the unit appears to be good to excellent, rated Class II (moderately well controlled) by federal and state standards. The counties comprising the WLWF have not been designated as non-attainment for ozone or other criteria pollutants.

Megawetlands, including descriptions of each of the megawetlands shown on the map, refer to the "Wetlands Effects Data and GIS for the Adirondack Park" report and the "Charismatic Megawetlands" slideshow at http://www.apa.state.ny.us/Research/epa_projects.htm

Recent chemistry data for most of the ponds within WLWF indicate that acid deposition has had little impact on the fisheries resources. The pH of ponded waters generally range from 6 to 7.

The adverse effects of atmospheric deposition on the Adirondack environment have been documented by many researchers over the last two decades. While permanent monitoring sites have not been established in the WLWF, general observations of the effects of acidic deposition on the regional ecosystem are numerous and well documented.

Effects of Acidic Deposition on Forest Systems

At present, the mortality and decline of red spruce at high elevations in the Northeast and observed reductions in red spruce growth rates in the southern Appalachians are the only cases of significant forest damage in the United States for which there is strong scientific evidence that acid deposition is a primary cause (National Science and Technology Council Committee on Environment and Natural Resources, 1998). The following findings of the National Acid Precipitation Assessment Program (1998) provide a broad overview of the effects of acidic deposition on the forests of the Adirondacks.

The interaction of acid deposition with natural stress factors has adverse effects on certain forest ecosystems. These effects include:

- Increased mortality of red spruce in the mountains of the Northeast. This mortality is due in part to exposure to acid cloud water, which reduces the cold tolerance of these red spruce, resulting in frequent winter injury and loss of foliage;
- Reduced growth and/or vitality of red spruce across the high-elevation portion of its range;
- Decreased supplies of certain nutrients in soils (i.e. base cations such as calcium, magnesium, and potassium) to levels at or below those required for healthy growth.

Nitrogen deposition is now recognized with sulfur as an important contributor to effects on forest in some ecosystems, which occurs through direct impacts via increased foliar susceptibility to winter damage, foliar leaching, leaching of soil nutrients, elevated soil aluminum levels, and/or creation of nutrient imbalances. Excessive amounts of nitrogen cause negative impacts on soil chemistry similar to those caused by sulfur deposition in certain sensitive high-elevation ecosystems. It is also a potential contributor to adverse impacts in some low-elevation forests.

Sensitive Receptors

High-elevation spruce-fir ecosystems in the eastern United States epitomize sensitive soil systems. Soil base cation reserves are generally very low, and soils are near or past their capacity to retain more sulfur or nitrogen. Deposited sulfur and nitrogen, therefore, pass directly into soil water, where it leaches the minimal remaining amounts of calcium, magnesium, and other base cations out of the root zone and mobilizes soil aluminum. The low availability of these base cation nutrients, coupled with high levels of aluminum that interfere with root uptake of these nutrients can result in plants not having sufficient nutrients to maintain good growth and health.

Sugar maple decline has been studied in the eastern United States since the 1950s. Recently, studies suggest that the loss of crown vigor and incidence of tree death is related to the low supply of calcium and magnesium in the soil and foliage (Driscoll 2002).

Exposure to acidic clouds and acid deposition has reduced the cold tolerance of red spruce in the Northeast, resulting in frequent winter injury of current-year foliage during the period 1960-1985. Repeated loss of foliage due to winter injury has caused crown deterioration and contributed to high levels of red spruce mortality in the Adirondack Mountains of New York, the Green Mountains of Vermont, and the White Mountains of New Hampshire.

Acid deposition has contributed to a regional decline in the availability of soil calcium and other base cations in high-elevation and mid-elevation spruce-fir forests of New York and New England and the southern Appalachians. The high-elevation spruce-fir forests of the Adirondacks and Northern New England are identified as one of the four forest types nationwide that are both dominated by acid-sensitive plant species and also subjected to high acidic deposition rates.

Effects of Acidic Deposition on Hydrologic Systems

New York's Adirondack Park is one of the most sensitive areas in the United States affected by acidic deposition. The Park consists of over 6 million acres of forest, lakes, streams and mountains interspersed with dozens of small communities, and a large seasonal population fluctuation. However, due to its geography and geology, it is one of the most sensitive regions in the United States to acidic deposition and has been impacted to such an extent that significant native fish populations have been lost and signature high elevation forests have been damaged.

There are two types of acidification that affect lakes and streams. One is a year-round condition when a lake is acidic all year long, commonly referred to as chronic or critic acidification. The other type of acidification is seasonal or episodic acidification, typically associated with spring melt and/or rain storm events. A lake is considered to be insensitive to acidic deposition when it is not acidified during any time of the year (exemplified by ANC values greater than 50 ìeq/L throughout the year). Conversely, lakes with acid-neutralizing capability (ANC) values below 0 ìeq/L are considered to have chronic acidification. Lakes with ANC values between 0 and 50 ìeq/L are considered susceptible to episodic acidification; ANC may decrease below 0 ìeq/L during high-flow conditions in these lakes (Driscoll et al. 2001). Watersheds which experience episodic acidification are very common in the Adirondack region. A 1995 EPA Report to Congress estimated that 70% of the target population lakes are at risk of episodic acidification at least once during the year. Additionally, the EPA reported that 19% of these lakes were acidic in 1984, based on their surveys of waters larger than 10 acres. A 1990 report by the ALSC (which included lakes of less than 10 acres) published following an extensive survey of 1,469 lakes in the Adirondacks, found that 24% of Adirondack lakes had summer pH values below 5.0, a level of critical concern to biota. Moreover, approximately half of the waters in the Adirondacks surveyed had ANC values of <50 ìeq/L, suggesting they might be susceptible to episodic acidification. Confirming these conclusions, sampling conducted by the EPA's Environmental Monitoring and Assessment Program (EMAP) in 1991-1994 revealed that 41% of the Adirondack lakes were chronically acidic or susceptible to episodic acidification, demonstrating

that a high percentage of watersheds in the Adirondacks are unable to neutralize current levels of acid rain.

In addition to sensitive lakes, the Adirondack region includes thousands of miles of streams and rivers which may be sensitive to the effects of acidic deposition. While it is difficult to fully quantify the impacts of acidic deposition to the region's streams and rivers, it is certain that a large numbers of Adirondack brooks will not support self-sustaining brook trout populations. Over half of Adirondack streams and rivers may be acidic during spring snowmelt, when high aluminum concentrations and toxic water conditions adversely impact aquatic life. This adverse effect will continue unless further limits are placed on emissions of acid rain precursors.

2. Biological

a. Vegetation

The WLWF occupies a transition zone between the boreal forests to the north and the mixed forests of the south. The unit lies within three ecozones; many of the eastern and southern parcels are in the Eastern Adirondack Foothills ecozone, the southwestern corner of the main tract is in the Western Adirondack Foothills ecozone, and the remainder of the unit is in the Central Adirondacks ecozone (Reschke 1990). Its forests include a variety of vegetation associations that correspond to local variations in soil, moisture, temperature, and topography. Past events such as fire, wind, land clearing, and logging have also exerted a strong influence on present day conditions of the unit's forests.

Not much is known about the original forests of the WLWF, but they are believed to have been a mixture of mature, old growth northern hardwood forests, lowland conifer forests, and mixed woods forest types. Dense shade, many cavity trees, significant coarse woody debris, and few natural openings probably characterized these forests. Insect outbreaks, disease, wind and ice storms, and infrequent wildfires were vital parts of the natural environment of these forests and were undoubtedly the major agents of change.

The majority of the unit's current forests regenerated following extensive logging prior to Forest Preserve acquisition, abandonment of cleared agricultural lands, the severe wildfires of the early 1900s and other minor fires over the last century, and large scale blowdown events such as those occurring in 1950 and 1995. These disturbances have altered the composition of the unit's forested landscape dramatically. In many forests across the WLWF, selective logging practices during the late 1800s have eliminated or significantly reduced the softwood component, allowing the replacement by northern hardwoods. Historically and ecologically, these factors have resulted in a great diversity of ecological communities, which support a vast array of animal and plant species.

General Ecological Communities

In general, the forests of WLWF can be categorized into several main ecological communities based primarily on the dominant tree species. Each ecological community is characterized by distinct plant associations that develop under the specific climatic, edaphic, hydrologic, and site

history conditions that are present at a location. The ecological communities identified in the unit have been adapted from the New York Natural Heritage Program (Reschke 1990 and Edinger *et al*. 2002) and other UMPs and are as follows:

Northern Hardwoods Forest

A broadly-defined hardwood community type in which sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*), and yellow birch (*Betula alleghaniensis*) are codominant. Common associates include white ash (*Fraxinus americana*), eastern hophornbeam (*Ostrya virginiana*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), and basswood (*Tilia americana*). Hemlock (*Tsuga canadensis*) and red spruce (*Picea rubens*) may also be present at low densities. These forests generally occur on moist, well-drained, usually acidic soils and have several regional and edaphic variants

The northern hardwoods forest type is probably the most widespread ecological community in the WLWF. These forests dominate the fertile middle slope areas with deep glacial soils up to an elevation to 2,500 feet. Reschke (1990) and Edinger et al. (2002) do not include the northern hardwoods forest in their list of ecological communities, instead describing what they term the "beech-maple mesic forest" ecological community. Intuitively, the "northern hardwoods forest" label seems more appropriate than the "beech-maple mesic forest" label in the WLWF. The majority of the unit's mature hardwood forests are dominated by sugar maple with one or two other significant components that vary depending on elevation, aspect, and other site factors. Because of beech bark disease and the subsequent death of many large beech trees, the presence of beech trees in upper canopy positions is becoming increasingly rare. As a result, it is more common for yellow birch or white ash to be secondary in importance after sugar maple than beech, making the northern hardwoods forest designation a better descriptor of these communities.

Many locations throughout the unit support the northern hardwoods ecological community; examples include the approach to Baldhead Mountain, the descent to the Fish Ponds on the Bartman Trail, and along the Round Pond Trail east of the Garnet Lake parking area.

Hemlock-Northern Hardwoods Forest

A mixed forest that occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps. In any one stand, hemlock (*Tsuga canadensis*) is co-dominant with any one to three of the following: American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), red maple (*A. rubrum*), black cherry (*Prunus serotina*), white pine (*Pinus strobus*), yellow birch (*Betula alleghaniensis*), black birch (*B. lenta*), red oak (*Quercus rubra*), and basswood (*Tilia americana*).

The hemlock-northern hardwoods forest is common throughout the region, often occupying the areas around streams and the transition zones between wetlands and hardwoods forests. Good examples of this ecological community can be seen throughout the region; specific locations dominated by the hemlock-northern hardwoods forest type include the area around Hadley Mountain Trailhead and the lower slopes around the Fish Ponds.

Maple-Basswood Rich Mesic Forest

A species-rich hardwood forest that typically occurs on well-drained, moist soils of neutral pH. The distribution of this forest type is usually spatially correlated with calcareous bedrock, although bedrock does not have to be exposed. Where bedrock outcrops are lacking, surface features such as seeps are often present. The dominant trees are sugar maple (*Acer saccharum*), basswood (*Tilia americana*), and white ash (*Fraxinus americana*). Associate tree species can include ironwood (*Ostrya virginiana*), yellow birch, red oak, American beech, bitternut hickory (*Carya cordiformis*), shagbark hickory *(Carya ovata*), tulip tree (*Liriodendron tulipifera*), butternut (*Juglans cinerea*), and American hornbeam (*Carpinus caroliniana*). A rich herbaceous plant community is predominant in the ground layer.

The maple-basswood rich mesic forest ecological community occurs in small pockets of remote forest within the WLWF; usually interspersed with northern hardwoods forest. Example locations of this ecological community include small patches on the lower slopes of Hadley and Crane Mountains.

Appalachian Oak-Hickory Forest

A hardwood forest that occurs on well-drained sites, usually on ridge tops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several regional and edaphic variants. The dominant trees include one or more of the following oaks: red oak, white oak (*Quercus alba*), and black oak (*Q. velutina*). Mixed with the oaks, usually at lower densities, are one or more of the following hickories: pignut (*Carya glabra*), sweet pignut *(Carya ovalis*), and shagbark *(Carya ovata*).

Appalachian oak-hickory forests occurs on well-drained, shallow soils with a neutral pH. Example locations include the lower slopes of Baldhead and Hadley Mountains.

Appalachian Oak-Pine Forest

A well-drained, mixed forest that occurs on sandy soils, sandy ravines in pine barrens, or on slopes with rocky soils. A mixture of oaks and pines dominates the canopy. The oaks include one or more of the following: black oak, chestnut oak (*Quercus montana*), red oak, white oak, and scarlet oak (*Q. coccinea*). The pines are either white pine or pitch pine (*Pinus rigida*); in some stands both pines are present. Red maple, hemlock, American beech, and black cherry are common associates occurring at low densities. Example location include the middle slopes of Crane Mountain, Georgia Mountain, and Hadley Mountain.

Pine-Northern Hardwood Forest

A mixed forest that occurs on gravelly outwash plains, delta sands, eskers, and dry lake sands in the Adirondacks. Dominant trees are white pine and red pine (*Pinus resinosa*), which are mixed with scattered paper birch (*Betula papyrifera*) and quaking aspen (*Populus tremuloides*). In some stands there is a mixture of other northern hardwoods and conifers such as yellow birch, red maple, balsam fir (*Abies balsamea*), and red spruce (*Picea rubens*). Example locations include Pine Orchard and Madison Creek Ridge.

Pine Orchard is a stand of old-growth pine forest on a ridge in Hamilton County, Town of Wells, and consists of very large white pines with sparse mid-story and low ground cover. The gravelly eskers and glacial lake basin of Madison Creek Ridge in the town of Thurman, Warren County support a large stand of white pine-northern hardwood forest. Both of these sites have been recognized for their exceptional character. Pine Orchard is listed by the APSLMP as a Special Management Area - Illustrative Special Interest Area - Natural. The Madison Creek Ridge is listed by the Nature Conservancy as an Exemplary Natural Community.

Lowland Conifer Forest

A forest occurring in low-lying areas adjacent to ponds, lakes, streams, and wetlands where soils are typified by poor drainage and high moisture levels. Dominant species are balsam fir (*Abies balsamea*) and red spruce (*Picea rubens*); these species can occur in a mixture or in almost pure stands. Occasionally, there may be a white pine (*Pinus strobus*) component. Rare associates include northern white-cedar (*Thuja occidentalis*), hemlock (*Tsuga canadensis*), tamarack (*Larix laricina*), and black spruce (*Picea mariana*). Example locations of lowland conifer forest include the margins of many of the unit's wetlands and waterbodies including the shorelines of Fish Ponds and New Lake.

Successional Forest

A hardwood or mixed forest that occurs on previously cleared or disturbed lands. Characteristic tree species are generally light-requiring pioneers with wind or bird-dispersed seeds and the forests are characterized by small to medium diameter trees with little regeneration of canopy species. Dominant tree species generally include any of the following: quaking aspen *(Populus tremuloides*), big-tooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*), gray birch (*B. populifolia*), pin cherry (*Prunus pensylvanica*), black cherry (*P. serotina*), red maple (*Acer rubrum*), and white pine (*Pinus strobus*). Lesser associates may include white ash (*Fraxinus americana*), green ash (*F. pennsylvanica*), and American elm (*Ulmus americana*). Example locations of this ecological community include the forests around Baldwin Springs and the Fox Lair.

Plantation Forest

Although not naturally occurring, plantations represent ecological communities present in small areas of the WLWF. Two types of plantations exist in the unit.

Pine plantations consist of stands of pines planted for the cultivation and harvest of timber products, or to provide wildlife habitat, soil erosion, wind breaks, or landscaping. These plantations may be monocultures with more than 90% of the canopy cover consisting of one species or mixed stands with two or more dominant species (in which case more than 50% of the cover consists of one or more species of pine). Typical New York State pine plantations, which include white pine (*Pinus strobus*), red pine (*P. resinosa*), and Scotch pine (*P. sylvestris*), occur at a few locations in the unit including along Bakertown Road near Bakertown and along Old Armstrong Road near the junction with Bartman Road.

Spruce/fir plantations consist of stands of spruce or fir planted for the cultivation, and harvest of timber products, or to provide wildlife habitat, soil erosion control, windbreaks, or landscaping. These plantations may be monocultures with more than 90% of the canopy cover consisting of one species, or they may be mixed stands with two or more co-dominant species (in which case more than 50% of the cover consists of one or more species of spruce or fir). Softwoods that are typically planted include Norway spruce (*Picea abies*), white spruce (*P. glauca*), balsam fir (*Abies balsamea*) and Douglas fir (*Pseudotsuga menziesii*). An example location of spruce/fir plantation in the WLWF is the Norway spruce plantation along Old Armstrong Road near the junction with Bartman Road.

Exemplary Vegetative Communities

Other vegetation cover types aside from the communities described previously occur in the WLWF but generally occupy relatively small areas. These unique communities serve as outstanding examples of the biological diversity that can be found in the Adirondack Park (New York State Natural Heritage Program, 2002) and include areas adjacent to the Hudson River, the Sacandaga River, along West Stony Creek Road near Madison Creek, and on the rocky summits of Crane and Huckleberry Mountains. Appendix E illustrates the distribution and extent of these unique ecological communities, which include the following:

Riverside Ice Meadows

Example Location: Hudson River (South of the Glen); Sacandaga River (Town of Hope)
Towns: Thurman, Stony Creek, and Hope; Counties: Warren and Hamilton
Description: A meadow community that occurs on gently sloping cobble shores and rock outcrops along large rivers in areas where winter ice flows are pushed up onto the shore, forming an ice pack that remains until late spring. The ice scours the meadow, cutting back woody plants. The late-melting ice pack, which can be up to 8 ft (2.4 m) deep in late April or early May, creates a cool microclimate in late spring, and shortens the growing season. The ice pack deposits organic matter that has accumulated in the ice during the winter, apparently enriching the sandy soils of the cobble and rocky shores. Within this community there is a gradient of two to three vegetation zones that vary with elevation above the river and soil moisture.

Cobble Shore

Example Locations: Hudson River (South of the Glen)
Towns: Thurman and Stony Creek; County: Warren
Description: A community that occurs on the well-drained cobble shores of lakes and streams. These shores are usually associated with high-energy waters (such as high-gradient streams), and they are likely to be scoured by floods or winter ice flows. This community includes both active and stable shores. Active cobble shores have loose cobbles that are moved by waves or river currents; these shores are sparsely vegetated, and they have comparatively few species. The cobble shore community consists of vegetated bedrock outcrops along the western shore of the Hudson River. The Hudson River in this area is a very large mid-reach stream in a narrow to moderate sized river valley.

Shoreline Outcrop
Example Location: Hudson River (South of the Glen)
Towns: Thurman and Warrensburg; County: Warren
Description: A community that occurs along the shores of lakes and streams on outcrops of non-calcareous rocks such as anorthosite, granite, quartzite, sandstone, gneiss, or schist. The shoreline is exposed to wave action and ice scour. The vegetation is sparse with most plants rooted in rock crevices. Characteristic species include blueberries (*Vaccinium sp.*), black huckleberry (*Gaylussacia baccata*), poverty-grass (*Danthonia spicata*), and common hairgrass (*Deschampsia flexuosa*).

This community consists of vegetated bedrock outcrops along the shore of the Hudson River. The Hudson River in this area is a very large mid-reach stream in a narrow to moderate sized river valley. Ice accumulates along the river valley and scours all vegetation.

Cliff Community
Example Location: Crane Mountain and Huckleberry Mountain
Town: Johnsburg; County: Warren
Description: A community that occurs on vertical exposures of resistant, non-calcareous bedrock (such as quartzite, sandstone, or schist) or consolidated material; these cliffs often include ledges and small areas of talus. There is minimal soil development, and vegetation is sparse. Different types of cliffs may be distinguished based on exposure and moisture; these variations are not well documented in New York, therefore the assemblages associated with these variations (sunny, shaded, moist, or dry areas) are combined in one community. Characteristic species include rock polypody (*Polypodium virginianum*), marginal wood fern (*Dryopteris marginalis*), common hairgrass (*Deschampsia flexuosa*), mountain laurel (*Kalmia latifolia*), and hemlock.

Red Pine Rocky Summit
Example Locations: Crane Mountain and Huckleberry Mountain
Town: Johnsburg; County: Warren
Description: A community that occurs on warm, dry, rocky ridgetops and summits where the bedrock is non-calcareous (such as quartzite, sandstone, or schist), and the soils are more or less acidic. The vegetation may be sparse or patchy, with numerous rock outcrops. This community is broadly defined and includes examples that may lack pines and are dominated by scrub oak and/or heath shrubs apparently related to fire regime.

The Red Pine Rocky Summit communities occur on two contiguous dome-shaped mountains; Crane Mountain and Huckleberry Mountain. Both these areas can be characterized as red and white pine-dominated rocky woodlands, on flat to convex summits.

Vegetation Cover Type Inventory
Currently, no detailed inventories of ecological communities or forest cover types have been done specifically for the WLWF. As such, several GIS raster datasets exist that use satellite imagery to delineate different vegetation cover types across the state. Using these rasters, generalizations can be drawn about the extent of different vegetation cover types in the unit.

New York State Gap Analysis Project

From a raster created by the NYS Gap Analysis Project (GAP) at Cornell University, a vector dataset was developed and used to quantify the extent of the different vegetation cover types in the unit (M. Shyer, NYS DEC, 2005). Table 4 illustrates the major forest types and their prevalence in the unit.

Table 4. Vegetation cover types in the Wilcox Lake Wild Forest based on the NYS Gap Analysis Project satellite imagery and raster dataset.

Cover Type	**Acres**	**% of land area**
Sugar Maple Mesic	63779	52
Evergreen-Northern Hardwoods	31859	26
Spruce-Fir	25545	20.8
Emergent Marsh/Open Fen/Wet Meadow	421	0.3
Shrub Swamp	410	0.3
Evergreen Plantation	298	0.2
Evergreen Wetland	146	0.1
Deciduous Wetland	138	0.1
Mixed Wetland	14	0
Old Field/Open Grassland	11	0

United States Geological Survey (USGS) National Land Cover Data (NLCD)

Using the USGS NLCD, a vector dataset was developed and used to evaluate cover types in the WLWF (S. Signell, Adirondack Ecological Center, 2005).

Table 5. Vegetation cover types in the Wilcox Lake Wild Forest based on the USGS NLCD satellite imagery and raster dataset.

Cover Type	**Acres**	**% of land area**
Deciduous Forest	85994	69.1%
Evergreen Forest	21291	17.1%
Mixed Forest	13339	10.7%
Woody Wetlands	3470	2.8%
Emergent Herbaceous Wetlands	152	0.1%
Open Field/Agricultural	89	0.1%

Bare Rock/Soil	32	0.0%
Transitional Forest	30	0.0%

Future Vegetation Cover Type Data Development

Discrepancies between the two datasets arise from different satellite images and differing methods of vegetation typing and serve to illustrate the variability associated with assessing vegetation cover types from satellite imagery. In response to the paucity of a high quality, unit specific cover type data, the Bureau of Forest Preserve Management and SUNY ESF are working cooperatively to develop a detailed cover type inventory for the unit and in the future, planners will have access to GIS models that incorporate existing and future spatial data into a unified cover type map. These datasets will aid in the inventory phase of the unit management planning process and will increase the quantity and improve the quality of inventory data found in future updates of this UMP.

Rare, Threatened, and Endangered Plants

The New York Natural Heritage Program (NYNHP) has worked diligently to document the contemporary and historical occurrences of NYS-listed rare, threatened, and endangered species across the state. The NYNHP has identified one NYS-listed threatened plant species within the WLWF. Additionally, fifteen other occurrences of state-listed rare, threatened, and endangered plant species have been reported within the WLWF *planning area*, although not specifically on Forest Preserve land. Despite no documented evidence that these thirteen species occur within the unit itself, it is highly likely that Forest Preserve lands in the immediate vicinity of existing populations support additional individuals of at least some of these species. Although the specific locations of these occurrences is exempted from public Freedom of Information Laws (FOIL) to protect the species, this information is used and integrated by the Department in all planning activity.

Mountain goldenrod (*Solidago simplex* var. *randii*) was identified on the lower slopes of Crane Mountain, west of Crane Mountain Pond. It is currently classified as a NYS-threatened species, with a global G5T4 and a state rank of S2. The exemplary ecological communities along the Hudson River south of The Glen (riverside ice meadow, cobble shore, and shoreline outcrop) described above in the "Exemplary Vegetative Communities" subsection, support a number of protected plant species detected during surveys conducted in the 1980s and 90s. These include four endangered species – spurred gentian (*Halenia deflexa*, global rank G5, state rank S1), sticky false asphodel (*Triantha glutinosa*, global rank G3G5, state rank S1), New England violet (*Viola novae-angliae*, global rank G4Q, state rank S1), and Clinton's clubrush (*Trichophorum clintonii*, global rank G4, state rank S1) and four threatened species – Fernald's sedge (*Carex merritt-fernaldii*, global rank G5, state rank S2S3), brown bog sedge (*Carex buxbaumii*, global rank G5, state rank S2), dwarf sand-cherry (*Prunus pumila* var. *depressa*, global rank G5T5, state rank S2), and northern dropseed (*Sporobolus heterolepsis*, global rank G5, state rank S2). Additionally, sticky false asphodel was reported along the Hudson River north of The Glen near the confluence with Mill Creek in 1993 and dwarf sand-cheery was reported near the Sacandaga River in the Town of Hope in 2000. Dragon's mouth orchid (*Arethusa bulbosa*), a threatened

species with a global rank of G4 and a state rank of S2, was found near Dipper Pond in 2002. Historical records exist for four other protected plant species – false hop sedge (*Carex lupuliformis*), a classified rare species with a global rank of G4 and a state rank of S2, was reported in the Town of Broadalbin, Fulton County in 1912; cloud sedge (*Carex haydenii*), a endangered species with a global rank of G5 and a state rank of S1, and troublesome sedge (*Carex molesta*), a threatened species with a global rank of G4 and a state rank of S2, were reported along the Sacandaga River opposite the mouth of West Stony Creek in 1948; and downy lettuce (*Lactuca hirsuta*), an endangered species with a global rank of G5 and a state rank of S1, was reported on the ridge to the west of the Hudson River south of The Glen in 1960.

Invasive Plants

Nonnative, invasive species directly threaten biological diversity and the high quality natural areas in the Adirondack Park. Invasive plant species can alter native plant assemblages, often forming monospecific stands of very low quality forage for native wildlife, and drastically impacting the ecological functions and services of natural systems. Not yet predominant across the Park, invasive plants have the potential to spread - undermining the ecological, recreational, and economic value of the Park's natural resources.

Because of the Adirondack Park's continuous forested nature and isolation from the normal "commerce" found in other parts of the State, its systems are largely functionally intact. In fact, there is no better opportunity in the global temperate forested ecosystem to forestall and possibly prevent the alteration of natural habitats by invasive plant species.

Prevention of nonnative plant invasions, Early Detection/Rapid Response (ED/RR) of existing infestations, and monitoring are primary objectives in a national strategy for invasive plant management and necessitates a well-coordinated, area-wide approach. A unique opportunity exists in the Adirondacks to work proactively and collaboratively to detect, contain, or eradicate infestations of invasive plants before they become well established, and to prevent further importation and distribution of invasive species, thus maintaining a high quality natural landscape. The Department shares an inherent obligation to minimize or abate existing threats in order to prevent widespread and costly infestations.

The Department has entered into a partnership agreement with the Adirondack Park Invasive Plant Program (APIPP). The mission of APIPP is to document invasive plant distributions and to advance measures to protect and restore native ecosystems in the Park through partnerships with Adirondack residents and institutions. Partner organizations operating under a Memorandum of Understanding are the Adirondack Nature Conservancy, Department of Environmental Conservation, Adirondack Park Agency, Department of Transportation, and Invasive Plant Council of NYS. The APIPP summarizes known distributions of invasive plants in the Adirondack Park and provides this information to residents and professionals alike. Specific products include a geographic database for invasive plant species distribution; a central internet website for invasive plant species information and distribution maps; a list-serve discussion group to promote community organization and communication regarding invasive species issues; and a compendium of educational materials and best management practices for management.

Terrestrial Invasive Plant Inventory

In 1998, the Adirondack Nature Conservancy's Invasive Plant Project initiated Early Detection/Rapid Response (ED/RR) surveys along Adirondack Park roadsides. Expert and trained volunteers reported 412 observations of 10 plant species throughout the area surveyed, namely NYS DOT Right-of-Ways (ROW). In 1999, the Invasive Plant Project was expanded to include surveying back roads and the "backcountry" (undeveloped areas away from roads) to identify the presence or absence of 15 invasive plant species. Both surveys were conducted under the auspices of the Invasive Plant Council of New York "Top Twenty List" of non-native plants likely to become invasive within New York State. A continuum of ED/RR surveys now exists under the guidance of the Adirondack Park Invasive Plant Program (APIPP).

Assessments from these initial ED/RR surveys determined that four terrestrial plant species would be targeted for control and management based upon specific criteria such as geophysical setting, abundance and distribution, multiple transport vectors and the likelihood of human-influenced disturbance. The four priority terrestrial invasive plants species are purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), Japanese knotweed (*Polygonum cuspidatum*) and garlic mustard (*Alliaria petiolata*).

The Adirondack Park is susceptible to further infestation by invasive plant species intentionally or accidentally introduced to this ecoregion. While many of these species are not currently designated a priority species by APIPP, they may become established within or in proximity to a Forest Preserve unit and require resources to manage, monitor, and restore the site.

Infestations located within and in proximity to a unit may expand and spread to uninfected areas and threaten natural resources within a unit; therefore it is critical to identify infestations located both within and in proximity to a unit and then assess high risk areas and prioritize Early Detection Rapid Response (ED/RR) and management efforts.

Terrestrial Invasive Plant Locations

No terrestrial invasive plant occurrences are documented within the WLWF.

There are two (2) purple loosestrife infestations within NYS DOT Right-of-Way in proximity to the unit.

There are eleven (11) Japanese knotweed infestations within NYS DOT, County and Town Road Right-of-Ways in proximity to the unit.

There is one (1) high priority Japanese knotweed infestation on private property in proximity to the unit. At 4821088 N, 579708 E, aggressive Japanese knotweed infestations occur within the floodway of Garnet Lake Outlet. The infestations are on the downstream left within approximately 50 feet of the outlet and are subject to downstream transport by spikes in flow regime. The infestations occur at mean high water mark as well as on the slope above the stream. Affected area is approximately 1200 square feet.

Please refer to the terrestrial invasive plant species distribution map for specific locations of these infestations (Appendix V).

Aquatic Invasive Plant Inventory

A variety of monitoring programs collect information directly or indirectly about the distribution of aquatic invasive plants in the Adirondack Park including the NYS DEC, Darrin Fresh Water Institute, Paul Smiths College Watershed Institute, lake associations, and lake managers. In 2001, the Adirondack Park Invasive Plant Program (APIPP) compiled existing information about the distribution of aquatic invasive plant species in the Adirondack Park and instituted a regional long-term volunteer monitoring program. APIPP trained volunteers in plant identification and reporting techniques to monitor Adirondack waters for the presence of aquatic invasive plant species. APIPP coordinates information exchange among all of the monitoring programs and maintains a database on the current documented distribution of aquatic invasive plants in the Adirondack Park.

Aquatic invasive plant species documented in the Adirondack Park are Eurasian watermilfoil (*Myriophyllum spicatum*), water chestnut (*Trapa natans*), curlyleaf pondweed (*Potamogeton crispus*), fanwort (*Cabomba caroliniana*), European frog-bit (*Hydrocharus morsus-ranae*), and yellow floating-heart (*Nymphoides peltata*). Species located in the Park that are monitored for potential invasiveness include variable-leaf milfoil (*Myriophyllum heterophyllum*), southern naiad (*Najas guadalupensis*), and brittle naiad (*Najas minor*). Additional species of concern in New York State but not yet detected in the Park are starry stonewort (*Nitellopsis obtusa*), hydrilla (*Hydrilla verticillata*), water hyacinth (*Eichhornia crassipes*), and Brazilian elodea (*Egeria densa*).

Infestations located within and in proximity to a Forest Preserve unit may expand and spread to uninfected areas and threaten natural resources within a unit; therefore it is critical to identify infestations located both within and in proximity to a unit to identify high risk areas and prioritize Early Detection Rapid Response (ED/RR) and management efforts.

Aquatic invasive plants are primarily spread via human activities, therefore lakes with public access, and those connected to lakes with public access, are at higher risk of invasion. While a comprehensive survey for the presence of aquatic invasive plant species has not been completed at present, APIPP volunteers monitored the following waters within or in proximity to the WLWF: Crane Mountain Pond, Garnet Lake, Wilcox Lake, Livingston Lake, and Lake Algonquin. Eurasian watermilfoil was recorded only in Lake Algonquin. The APIPP Park-wide volunteer monitoring program aims to maintain a long-term monitoring program on these and other lakes. All aquatic invasive species pose a risk of spreading via transport mechanisms which may include seaplanes, motorized and non-motorized watercraft (canoes, kayaks, jet skies, motor boats etc.) and associated gear and accessories.

Aquatic Invasive Plant Locations

Longitude and latitude coordinates are used to indicate a lake with a documented infestation. Infestations may range from an isolated population to a lake-wide invasion. Knowledge of

locations and coordinates of specific infestations within the lake is limited and variable and will be provided as available.

Initial surveys detected occurrences of aquatic invasive plants in proximity to the unit:

Eurasian watermilfoil is confirmed in the following lake:
Lake Algonquin 432325N, 0741734W.

Forest Health

Many factors can affect the health of a plant community but typically fall into one of two categories - physical or biological. Physical factors potentially influencing forest health in the WLWF are often weather-related and may include lightning strikes, wind events, ice storms, drought, and wild fires. Biological factors influencing forest health include insect and disease outbreaks, wildlife (e.g. deer herbivory, beaver cutting, etc.) and invasive species. Additionally, environmental factors such as salt damage to roadside trees and acid deposition may impact the health of trees and understory plants.

Individual weather events influencing forest health in the WLWF are not well documented and have been discussed briefly above. Region-wide events known to have caused significant damage to forests across the Adirondacks include the wind storms of 1950 and 1995 and the ice storm of 1998. The damage from the 1950 blowdown was estimated for the Adirondacks and damage to the forests of the WLWF was relatively minor (APA 2005). Based on GIS data, 1,750 acres of the unit (1.4%) sustained 50-100% canopy damage and 2,960 acres (2.4%) sustained 25-50% canopy damage. The extent of the damage caused by the 1995 microburst and 1998 ice storm caused to the forests of the unit was never systematically quantified but is believed to be relatively minor. Low-intensity ground fires have burned through small areas of the WLWF periodically over the last 70 years and are most typical on the dry, upper slopes of the unit's higher peaks. The open summits of many of the unit's mountains (e.g. Crane Mountain, Mount Blue, Baldhead Mountain, Hadley Mountain, Moose Mountain (Stony Creek), and Spruce Mountain) are the product of more intense fires during the early 1900s. For example, four successive fires between 1903 and 1915 burned 12,000 acres of forest around Hadley Mountain and prompted the construction of the fire tower in 1916. As recently as 2002, a ground fire burned a small area on Huckleberry Mountain.

Currently, widespread biological factors affecting forest health in the WLWF include several species of defoliating insects and beech bark disease.

<u>Beech Bark Disease</u>

This disease is an insect-fungus complex that has caused extensive mortality of American beech across northeastern North America. The forests of the Adirondacks, where American beech is arguably the second most abundant hardwood species after sugar maple and the most important mast-producing species for wildlife , have been especially hard hit. The disease has two parts - an insect vector, the beech scale (*Cryptococcus fagisuga*) and a fungal pathogen (*Nectria coccinea* var. *faginata* or *Nectria galligena*) that attacks the tree via entrance wounds created by

the scale insect. Beech bark disease is prevalent across the unit and is contributing greatly to the mortality of overstory beech trees. This shift in species composition of the overstory trees affects wildlife species that consume beech nuts as well as those cavity-dependent species that require large dead and dying trees for den and nest sites.

Hardwood Defoliators

Several important species of hardwood defoliating insects are present in the unit. In general, defoliation alone rarely causes tree mortality; it is only when defoliation occurs in successive years in concert with other stressors, such as severe drought, that tree mortality becomes significant. The forest tent caterpillar (*Malacosoma disstria*), a native defoliator that feeds primarily on sugar maple, poplar species, and oak species, is the most important and widespread of the hardwood defoliators in the unit. Forest tent caterpillar outbreaks occur at 10-15 year intervals and typically last 3-4 years until environmental conditions (low spring temperatures or other adverse weather conditions) as well natural predators and parasites (e.g. Sarcophagid flies, NPV, *Entomopthera* fungi, etc.) cause the population to collapse. Gypsy moth (*Lymantria dispar*) represents another serious hardwood defoliator that has the potential to affect forest health in the unit. Gypsy moth caterpillars feed extensively on oak and willow species, although during severe outbreaks, they will feed on most hardwood species. Since being intentionally introduced to the United Sates during the 1800s, gypsy moths have become naturalized over much of the eastern United States and could potentially cause significant defoliation in the southern part of the unit where oaks are prevalent on the drier, south-facing slopes. Additional important hardwood defoliators include Bruce spanworms (*Operophtera bruceata*), eastern tent caterpillars (*Malacosoma americanum*), spring and fall cankerworms (*Alsophila* spp.), linden loopers (*Erannis tiliaria*), saddled prominents (*Heterocampa guttivitta*), and pear thrips (*Taeniothrips inconsequens*).

Conifer Defoliators

Several defoliating insects potentially pose a threat to the coniferous forests of the WLWF. The eastern spruce budworm (*Choristoneura fumiferana*) is probably the most serious of these; a significant outbreak of spruce budworm occurred in the Adirondacks in the mid-1970s and caused significant damage. Balsam woolly adelgid (*Adelgaes piceae*), an introduced pest of true firs, also occurs in the unit.

Future Forest Health Issues

Several serious forest health threats could potentially affect the unit's forests in coming years. The Asian longhorned beetle (*Anoplophora glabripennis*), an exotic wood borer from China, has established populations in the New York City and the Chicago areas and has been detected in Toronto, Ontario. The primary hosts for Asian long-horned beetle include maples, elms, willows, and birches and if this species became established in the unit, it could result in extensive mortality to overstory trees, especially sugar and red maples. The hemlock woolly adelgid (*Adelges tsugae*), an exotic insect from Asia, affects hemlock trees and has become established in the Appalachian Mountains from Maine to Georgia. Although the hemlock woolly adelgid is not expected to cause extensive damage to hemlocks in the Adirondacks because of its inability to withstand cold winter temperatures, it could affect forests on the southern periphery of the

Adirondack Park including those in the WLWF. The emerald ash borer (*Agrilus planipennis*), an exotic wood-boring insect from Asia, attacks native ash species and has become established in southern Michigan and Ontario, Canada. The species has caused extensive mortality to ash species—an estimated 10-12 million ash trees are dead and dying in the infested areas—and could potentially result widespread damage to the northern hardwoods forests of the unit.
The Sirex woodwasp, *Sirex noctilio*, a Eurasian native, was first discovered in New York in 2004, in the City of Fulton, Oswego County, and has since been detected in eastern Hamilton County. *S. noctilio* is rarely a pest in its native areas where it confines its attacks to dead or dying trees. However in areas where it has been introduced it is considered a major pest of pine plantations, as it will attack living trees and can cause up to 80% mortality, typically building up in stressed trees and then spreading to more vigorous trees. Widespread outbreaks have occurred in Australia, New Zealand, South Africa and South America. All pine species are believed to be at risk, particularly stressed Scots pine and red pine, as well as Eastern white pine. Literature indicates the Sirex woodwasp will also attack virtually all our other native softwood species. There are no known, native natural controls. If established in North America, *S. noctilio* has the potential to cause significant tree mortality in stressed or weakened pine plantations and natural forests.

Monitoring and Management

Although the management actions that can be taken in response to forest health problems on Forest Preserve land are limited by the NYS Constitution and the guidelines set forth by the APSLMP, Department personnel monitor forest health on both public and private lands throughout the Adirondack region. Over the last five years (2001-2005), aerial surveys of forest health have been conducted across the state and have included the Forest Preserve lands that comprise the unit. These surveys have provided valuable information to unit management planners about the extent of current forest health problems on Forest Preserve lands and will serve as a baseline for assessing future forest health damage. Additionally, the surveys help Department personnel to assist landowners in the management of private landholdings, especially those adjacent to Forest Preserve lands where forest health problems may be occurring.

b. Wildlife

Wildlife communities in the unit reflect those species commonly associated with northern hardwood and mixed hardwood/softwood forests that are transitional to the boreal forests of higher latitudes. Significant boreal forest within the unit includes high elevation (limited primarily to Crane Mountain) and lowland spruce-fir habitats that are important for a number of wildlife species with statewide distributions mostly or entirely within the Adirondacks (e.g., Bicknell's Thrush, Spruce Grouse, American marten). Terrestrial fauna are represented by a variety of bird, mammal, and invertebrate species. Amphibians and reptiles also occur on the unit, although species diversity is relatively low as compared with other vertebrates. 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 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 WLWF.

With the exception of NYNHP surveys, comprehensive field inventories of wildlife species have not focused specifically on the WLWF, or Forest Preserve units in general. Statewide wildlife survey efforts conducted by the NYSDEC have included two Breeding Bird Atlas projects (1980-1985 and 2000-2005) and the New York State Amphibian and Reptile Atlas Project (1990-1999). Additionally, the Bureau of Wildlife collects harvest data on a number of game species (those that are hunted or trapped). Harvest data are 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 are sometimes the only source of data on mammals.

The unit is largely covered by mature forests with limited areas of early successional habitat. The character of the unit's vegetation has a significant effect in determining the occurrence and abundance of wildlife species. While some species prefer mature forests, many others occur in lower densities on Forest Preserve 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, and beaver activity influence forest structure and wildlife habitats by creating patches of earlier successional stages within a larger matrix of mature forest. These natural disturbances create important habitat for a variety of species that depend on early succession vegetation communities and the edges created between these communities and the surrounding forest. However, these areas are usually limited in size. 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.

Amphibians and Reptiles

The New York State Amphibian and Reptile Atlas Project (1990-1999) confirmed the presence of 30 species of reptiles and amphibians in USGS Quadrangles within, or partially within WLWF. It is important to note that quadrangles (the survey sample unit) overlap and extend beyond the land boundary of the unit. Therefore, recorded species do not necessarily reflect what was found on the unit, but on the quadrangles. Some species may have been found on private lands adjacent to the state lands. However, these data should provide a good indication of the species found throughout the WLWF. These included four species of turtles, ten species of snakes, nine species of frogs and toads, and seven species of salamanders (Table 6). These species are classified as protected wildlife and some may be harvested during open hunting seasons. Of the thirty confirmed species, three were classified as special concern and none were classified as endangered or threatened. Of the special concern species, six occurrences of wood turtle, two occurrences of Eastern hognose snake, and one occurrence of Eastern box turtle, were documented within quadrangles within, or partially within the WLWF. (See Appendix D for descriptions of amphibian and reptile habitat associations).

Table 6. Amphibian and reptile species recorded in USGS Quadrangles within, or partially within, the Wilcox Lake Wild Forest (WLWF) during the New York State Amphibian and Reptile Atlas Project, 1990-1999.

Common Name	Scientific Name
Spotted Salamander	*Ambystoma maculatum*
Red-spotted Newt	*Notophthalmus v. viridescens*
Northern Dusky Salamander	*Desmognathus fuscus*
Allegheny Dusky Salamander	*Desmognathus ochrophaeus*
Northern Redback Salamander	*Plethodon cinereus*
Northern Spring Salamander	*Gyrinophilus p. porphyriticus*
Northern Two-lined Salamander	*Eurycea bislineata*
Eastern American Toad	*Bufo a. americanus*
Northern Spring Peeper	*Pseudacris c. crucifer*
Gray Treefrog	*Hyla versicolor*
Bullfrog	*Rana catesbeiana*
Green Frog	*Rana clamitans melanota*
Mink Frog	*Rana septentrionalis*
Wood Frog	*Rana sylvatica*
Northern Leopard Frog	*Rana pipiens*
Pickerel Frog	*Rana palustris*
Common Snapping Turtle	*Chelydra s. serpentina*
Wood Turtle[1]	*Glyptemys insculpta*
Eastern Box Turtle[1]	*Terrapene carolina*
Painted Turtle	*Chrysemys picta*
Northern Water Snake	*Nerodia s. sipedon*
Northern Brown Snake	*Storeria d. dekayi*
Northern Redbelly Snake	*Storeria o. occiptomaculata*
Common Garter Snake	*Thamnophis sirtalis*
Ribbon Snake	*Thamnophis sauritus*
Eastern Hognose Snake[1]	*Heterodon platirhinos*
Northern Ringneck Snake	*Diadophis punctatus edwardsi*
Smooth Green Snake	*Liochlorophis vernalis*
Black Rat Snake	*Elaphe o. obsoleta*
Eastern Milk Snake	*Lampropeltis t. triangulum*

[1]Special Concern species.

Birds

The avian community of the WLWF varies seasonally. Some species remain within the area year round, but the majority of species utilize the area during the breeding season and for migration. The first Breeding Bird Atlas Project (BBA) conducted during 1980-1985 (Andrle and Carroll, 1988) and the Breeding Bird Atlas 2000 Project (2000-2005) documented 150 and 111 species, respectively, in atlas blocks within, or partially within the WLWF (Appendix F). However, it is

important to recognize that atlas blocks overlap and extend beyond the boundaries of the WLWF. Therefore, these data do not necessarily reflect what is found on the unit, but on the atlas blocks. It is probable that some species determined to be present by BBA surveys were found only on private lands adjacent to the state lands. However, the BBA data should provide a good indication of the species found throughout the unit and adjacent region.

In atlas blocks within, or partially within the WLWF, 104 species common to both atlas projects have been documented, representing 69% and 94% of the total species recorded during 1980-1985 and 2000-2005, respectively. The first atlas project documented 46 species not found during BBA 2000-2005, and 7 species were documented during BBA 2000-2005 that were not found during the first survey effort (also see Table 9). Many factors can influence survey results (e.g. weather, survey effort); therefore, these comparisons should be used as a tool for further study and monitoring of bird populations and not as a definitive statement on bird population changes.

Birds Associated with Boreal Forest

The WLWF contains high elevation (limited primarily to Crane Mountain) and lowland boreal forest that is significant for a variety of birds. In total, boreal forest comprises approximately 18,914 acres or 15% of the unit. This acreage includes approximately 18,780 acres of lowland boreal forest, which occurs throughout the unit in a patchy distribution. The state endangered Spruce Grouse prefers lowland boreal forests, where it selects immature or uneven-aged spruce-fir habitats. Potential Spruce Grouse habitat is widespread throughout the unit (Appendix F). However, there are no extant or historical records of Spruce Grouse in the unit.

Additionally, there are approximately 134 acres of high elevation boreal forest (equal to or greater than 2,800 feet elevation) in the unit. High elevation spruce-fir forest is especially important as breeding habitat for Bicknell's Thrush, a special concern species in New York. Throughout the range of this species, montane forest between 2,900 ft. and 4,700 ft. and dominated by stunted balsam fir and red spruce is the primary breeding habitat (Atwood et al. 1996). This species utilizes fir waves and natural disturbances as well as the densely regenerated edges of ski slopes. The species is most common on the highest ridges of the Adirondacks, preferring young or stunted dense stands of balsam fir up to 9 ft. in height. Here they lay their eggs above the ground in the dense conifer thickets. Within the WLWF, the majority of this high elevation boreal forest is on Crane Mountain (111 acres), with small areas on Baldhead Mountain and Mt. Blue. No extant or historical records of Bicknell's Thrush exist for the WLWF.

In an effort designed to protect birds associated with high elevation boreal forest and their habitats, New York State designated the Adirondack mountain summits above 2,800 feet in Essex, Franklin, and Hamilton counties as the Adirondack Subalpine Forest Bird Conservation Area (BCA) in November 2001. The New York State Bird Conservation Area Program was established in September 1997, under Section §§11-2001 of the Environmental Conservation Law. The program is designed to safeguard and enhance bird populations and their habitats on selected state lands and waters.

Of 27 bird species associated with boreal forest that occur in New York (Tim Post, NYSDEC, personal communication), 21 (78%) have been documented in BBA survey blocks within, or partially within, the WLWF. During the two BBA projects, 13 species of lowland boreal forest birds, 3 species of high elevation boreal forest birds, and 5 species commonly associated with boreal forest, have been documented on the unit (Table 7). Some notable differences in boreal bird species composition were recorded between the two atlas periods; American Three-toed Woodpecker, Cape May Warbler, Bay-breasted Warbler, Red Crossbill, Blackpoll Warbler, Blackburnian Warbler, and Tennessee Warbler were documented in the first atlas project but not the second, and Boreal Chickadee and Ruby-crowned Kinglet were documented in the second atlas project but not the first.

Table 7. Bird species associated with boreal forest as recorded by the New York State Breeding Bird Atlas projects (1980-1985 and 2000-2005) occurring in atlas blocks within, or partially within the Wilcox Lake Wild Forest (WLWF).

Common Name	Scientific Name
Lowland Boreal Forest Species	
American Three-toed Woodpecker	*Picoides dorsalis*
Olive-sided Flycatcher	*Contopus cooperi*
Boreal Chickadee	*Poecile hudsonicus*
Ruby-crowned Kinglet	*Regulus calendula*
Cape May Warbler	*Dendroica tigrina*
Bay-breasted Warbler	*Dendroica castanea*
Rusty Blackbird	*Euphagus carolinus*
White-throated Sparrow	*Zonotrichia albicollis*
Yellow-bellied Flycatcher	*Empidonax flaviventris*
Lincoln's Sparrow	*Melospiza lincolnii*
White-winged Crossbill	*Loxia leucoptera*
Red Crossbill	*Loxia curvirostra*
Pine Siskin	*Carduelis pinus*
High Elevation Boreal Forest Species	
Blackpoll Warbler	*Dendroica striata*
Winter Wren	*Troglodytes troglodytes*
Swainson's Thrush	*Catharus ustulatus*
Species Commonly Associated with Boreal Forest	
Evening Grosbeak	*Coccothraustes vespertinus*
Blackburnian Warbler	*Dendroica fusca*
Magnolia Warbler	*Dendroica magnolia*
Northern Parula	*Parula americana*
Tennessee Warbler	*Vermivora peregrina*

Other Habitat Associations

In additional to boreal and mixed-boreal forests, other habitats types of importance include deciduous forests, lakes, ponds, streams, bogs, beaver meadows, and shrub swamps.

Birds associated with marshes, ponds, lakes, and streams include: common loon, pied-billed grebe, great blue heron, green-backed heron, American bittern, and a variety of waterfowl. The most common ducks include the mallard, American black duck, wood duck, hooded merganser, and common merganser. Other species of waterfowl migrate through the region following the Atlantic Flyway.

Bogs, beaver meadows, shrub swamps, and any areas of natural disturbance provide important habitat for species that require or prefer openings and early successional habitats. Species such as Alder and Olive-sided Flycatchers, American Woodcock, Lincoln Sparrow, Nashville Warbler, Chestnut-sided Warbler, Brown Thrasher, Blue-winged Warbler, Yellow Warbler, Common Yellowthroat, Indigo Bunting, Eastern Towhee, and Field Sparrow rely on these habitats and are rarely found in mature forests. These species, as a suite, are declining more rapidly throughout the Northeast than species that utilize more mature forest habitat. Habitat for these species are, and will be, very limited within the WLWF.

Birds that prefer forest habitat are numerous, including many neotropical migrants. Some species prefer large blocks of contiguous forest (e.g., Northern Goshawk), others prefer blocks of forest with adjacent openings, and many prefer forest with a relatively thick shrub layer. The forest currently is maturing, and will eventually become old growth forest dominated by large trees.

Songbirds are a diverse group filling different niches in the Adirondacks. The most common species found throughout the deciduous or mixed forest include the Ovenbird, Red-eyed Vireo, Yellow-bellied Sapsucker, Black-capped Chickadee, Blue Jay, Downy Woodpecker, Brown Creeper, Wood Thrush, Black-throated Blue Warbler, Pileated Woodpecker, and Black and White Warbler. The Golden-crowned Kinglet, Purple Finch, Pine Siskin, Red and White-winged Crossbill and Black-throated Green Warbler are additional species found in the coniferous forest and exhibit preference for this habitat. Birds of prey common to the area include the Barred Owl, Great Horned Owl, Eastern Screech-owl, Northern Goshawk, Red-tailed Hawk, Sharp-shinned Hawk, and Broad-winged Hawk.

Game birds include upland species such as turkey, ruffed grouse and woodcock, as well as a variety of waterfowl. Ruffed grouse and woodcock prefer early successional habitats and their habitat within the area is limited due to the lack of timber harvesting. Turkey are present in low numbers and provide some hunting opportunities. Waterfowl are fairly common along the waterways and marshes and provide hunting opportunities.

Mammals

A wide variety of mammal species inhabit the WLWF. However, formalized survey data equivalent to the NYS Amphibian and Reptile Atlas Project and Breeding Bird Atlas Project are somewhat lacking for mammals in the unit.

Large and Medium-sized Mammals

Large and medium-sized mammals known to occur in the central and southern Adirondacks are also believed to be common inhabitants of the WLWF and include the white-tailed deer, moose, black bear, coyote, raccoon, red fox, gray fox, bobcat, fisher, American marten, river otter, mink, striped skunk, long-tailed weasel, short-tailed weasel, beaver, muskrat, porcupine, and snowshoe hare (Saunders 1988). Of these species, white-tailed deer, black bear, coyote, raccoon, red fox, gray fox, long-tailed weasel, short-tailed weasel, bobcat, and snowshoe hare can be hunted. Additionally, these species (with the exception of white-tailed deer, black bear, and snowshoe hare) along with fisher, American marten, mink, muskrat, beaver, and river otter can be trapped. Hunting and trapping activities are highly regulated by NYSDEC, and the Department's Bureau of Wildlife collects annual harvest data on many of these species.

Important big game species within the area include the white-tailed deer and black bear. Generally, white-tailed deer can be found throughout the WLWF. From early spring (April) to late fall (November), deer are distributed generally on their "summer range". When snow accumulates to depths of 20 inches or more, deer travel to their traditional wintering areas. This winter range is characteristically composed of lowland spruce-fir, cedar or hemlock forests, and to a lesser degree, a combination of mixed deciduous and coniferous cover types. Often found at lower elevations along water courses, this habitat provides deer with protective cover from adverse weather and easier mobility in deep snows (see Critical Habitat section).

Chronic Wasting Disease (CWD) in White-tailed Deer – Chronic Wasting Disease (CWD) is a rare, fatal, neurological disease found in members of the deer family (cervids). It is a transmissible disease that slowly attacks the brain of infected deer and elk, causing the animals to progressively become emaciated, display abnormal behavior, and invariably results in the death of the infected animal. Chronic Wasting Disease has been known to occur in wild deer and elk in the western U.S. for decades and its discovery in wild deer in Wisconsin in 2002 generated unprecedented attention from wildlife managers, hunters, and others interested in deer. Chronic Wasting Disease poses a significant threat to the deer and elk of North America and, if unchecked, could dramatically alter the future management of wild deer and elk. However, there is no evidence that CWD is linked to disease in humans or domestic livestock other than deer and elk.

In 2005, the Department received confirmation of CWD from two captive white-tailed deer herds in Oneida County and subsequently detected the disease in two wild deer from this area. Until recently, New York was the only state in the northeast with a confirmed CWD case in wild deer. However, CWD was recently detected in wild deer in West Virginia.

The NYSDEC has established a containment area around the CWD-positive samples and will continue to monitor the wild deer herd in New York State. More information on CWD, New York's response to this disease, the latest results from ongoing sampling efforts, and current CWD regulations are available on the DEC website:

<http://www.dec.state.ny.us/website/dfwmr/wildlife/deer/currentcwd.html>

Black bears are essentially solitary animals and tend to be dispersed throughout the unit. The Adirondack region supports the largest black bear population in New York State (4,000 to 5,000 bears). Hikers and campers in this region are likely to encounter a bear, and negative interactions between black bears and humans, mainly related to bears stealing food from humans, have been a fairly common occurrence in the Adirondack High Peaks for at least twenty years. In 2005 a new regulation was enacted, requiring all overnight campers in the Eastern High Peaks Wilderness Area to use bear-resistant canisters for food, toiletries, and garbage. In other areas of the Adirondacks, the DEC recommends the use of bear resistant canisters as well.

Moose entered the state on a continuous basis in 1980, after having been absent since the 1860s. Currently, the moose population in New York State is estimated to be approximately 150-200 animals (Al Hicks, NYSDEC, personal communication). In the northeastern United States, moose use seasonal habitats within boreal and mixed coniferous/deciduous forests. The southern distribution of moose is limited by summer temperatures that make the regulation of body temperature difficult. Moose select habitat primarily for the most abundant and highest quality forage (Peek 1997). Disturbances such as wind, fire, logging, tree diseases, and insects create openings in the forest that result in regeneration of important hardwood browse species such as white birch, aspen, red maple, and red oak. Typical patterns in moose habitat selection during the summer include the use of open upland and aquatic areas in early summer followed by the use of more closed canopy areas (such as upland stands of mature aspen and white birch) that provide higher quality forage in late summer and early autumn. After the fall rut and into winter, moose intensively use open areas again where the highest biomass of woody browse exists (i.e., dormant shrubs). In late winter when browse quantity and quality are lowest, moose will use closed canopy areas that represent the best cover available within the range (e.g., closed canopy conifers in boreal forest). From late spring through fall, moose commonly are associated with aquatic habitats such as lakes, ponds, and streams. However, use of aquatic habitats can vary geographically over their range. It is believed that moose use aquatic habitats primarily to forage on highly palatable plants, however, moose may also use these areas for relief from insects and high temperatures.

Small Mammals

The variety of habitats that occur within the Adirondack region are home to an impressive diversity of small mammals. These mammals inhabit the lowest elevations to those as high as 4,400 feet (Southern bog lemming). Most species are found in forested habitat (coniferous, deciduous, mixed forest) with damp soils, organic muck, or soils with damp leaf mold. However, some species (e.g., hairy-tailed mole) like dry to moist sandy loam soils and others (e.g., white-footed mouse) prefer the drier soils of oak-hickory, coniferous, or mixed forests. Small mammals of the Adirondack region are found in alpine meadows (e.g., long-tailed shrew), talus slides and rocky outcrops (e.g., rock vole), grassy meadows (e.g., meadow vole, meadow jumping mouse), and riparian habitats (e.g., water shrew). It is likely that many, if not most, of the small mammal species listed below inhabit the WLWF (Table 8). An exception may be the Northern bog lemming, a species whose southernmost range extends just into the northern portion of Adirondack Park; only one recently-verified specimen exists (Saunders 1988). All listed species are known to occur within the Adirondack Park.

Table 8. Small mammal species recorded within Adirondack Park (data based on museum specimens; Saunders 1988). Number of towns represents the number of towns in which each species was recorded.

Common Name	Scientific Name	Number of Towns
Star-nosed mole	*Condylura crestata*	6
Hairy-tailed mole	*Parascalops breweri*	11
Short-tailed shrew	*Blarina brevicauda*	31
Pygmy shrew	*Sorex hoyi*	1
Long-tailed shrew	*Sorex dispar*	7
Smoky shrew	*Sorex fumeus*	18
Water shrew	*Sorex palustris*	10
Masked shrew	*Sorex cinereus*	25
Deer mouse	*Peromyscus maniculatus*	26
White-footed mouse	*Peromyscus leucopus*	14
Southern red-backed vole	*Clethrionomys gapperi*	32
Meadow vole	*Microtus pennsylvanicus*	31
Yellownose vole	*Microtus* chrotorrhinus	6
Woodland vole	*Microtus pinetorum*	1
Southern bog lemming	*Synaptomys cooperi*	12
Northern bog lemming	*Synaptomys borealis*	1
Meadow jumping mouse	*Zapus hudsonicus*	22
Woodland jumping mouse	*Napaeozapus insignis*	25

Endangered, Threatened, and Special Concern Species

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

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

Threatened: Any species that is either native and 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 documented 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 following section describes those species that are classified as endangered, threatened, or special concern within WLWF and briefly summarizes the habitat requirements of these species.

Table 9. Endangered, threatened, and special concern species documented in survey blocks within, or partially within, Wilcox Lake Wild Forest (WLWF). Bird data were collected during the 1980-1985 and 2000-2005 Breeding Bird Atlas projects. Amphibian and reptile data were collected during the 1990-1999 Amphibian and Reptile Atlas Project[1].

		Breeding Bird Atlas Project	
Common Name	Scientific Name	1980-1985	2000-2005
Birds			
Threatened			
Northern Harrier	*Circus cyaneus*	✓	
Bald Eagle	*Haliaeetus leucocephalus*		✓
Henslow's Sparrow	*Ammodramus henslowii*	✓	
Special Concern			
American Bittern	*Botaurus lentiginosus*	✓	✓
Common Loon	*Gavia immer*	✓	✓
Cooper's Hawk	*Accipiter cooperii*	✓	✓
Osprey	*Pandion haliaetus*	✓	✓
Sharp-shinned Hawk	*Accipiter striatus*	✓	✓
Northern Goshawk	*Accipiter gentilis*	✓	
Common Nighthawk	*Chordeiles minor*	✓	
Red-shouldered Hawk	*Buteo lineatus*	✓	✓
Red-headed Woodpecker	*Melanerpes erythrocephalus*	✓	✓
Whip-poor-will	*Caprimulgus vociferus*	✓	✓
Horned Lark	*Eremophila alpestris*	✓	
Golden-winged Warbler	*Vermivora chrysoptera*	✓	
Grasshopper Sparrow	*Ammodramus savannarum*	✓	
Amphibians and Reptiles[1]			
Special Concern			
Wood Turtle	*Glyptemys insculpta*		
Eastern Box Turtle	*Terrapene carolina*		
Eastern Hognose Snake	*Heterodon platirhinos*		

Habitat Associations – Threatened Species

Northern Harrier (*Circus cyaneus*).-- The Northern Harrier is a bird of open country and is associated with wet to mesic habitats (Johnsgard1990). Results of a 1979 survey showed that bogs and other wetland habitats provided nesting sites for Northern Harriers in the Adirondacks (Kogut 1979 *In*: Andrle and Carroll 1988). Unlike most New York raptors, harriers nest on the ground, either on hummocks or directly on the ground in nests that are woven from grass and sticks (Andrle and Carroll 1988).

Bald Eagle (*Haliaeetus leucocephalus*).-- Bald eagles breed in forested and open areas that are usually near large bodies of water with an abundance of fish. Bald eagles construct their nests in large living trees, approximately 50 to 60 feet off the ground and occasionally on cliffs. Tree species used for nesting is not as important as its structural characteristics (e.g., size, shape) and distance to other nesting eagles. Nesting sites with an unobstructed view are preferred and access points to and from the nest (pilot trees) and perch trees are important components of bald eagle habitat. Bald eagles are sensitive to human disturbance.

Henslow's Sparrow (*Ammodramus henslowii*).--Henslow's Sparrow is a grassland bird preferring neglected weedy fields and moist lowland areas with widely scattered shrubs. Special habitat requirements include dense herbaceous vegetation, moderate amounts of moisture, ground litter, and singing perches. The nest is usually in a depression on the ground near, or on top of, grass tussocks (DeGraaf and Rudis 1986).

Habitat Associations – Bird Species of Special Concern

American Bittern (*Botaurus lentiginosus*).-- In the Adirondacks, the American Bittern is a bird of freshwater emergent wetlands where it typically nests on a grass tussock or among the cattails. Here it lays its eggs from 4 to 18 inches above the water (Bull 1974) in scanty nests made from sticks, grass, and sedges. Separate paths are made in the tall vegetation for entering and exiting the nest (Erlich et al. 1988).

Common Loon (*Gavia immer*).-- Common Loons use small and large freshwater lakes in open and densely forested areas for breeding and nest on lakes as small as two acres. Special habitat requirements include bodies of water with stable water levels with little or no human disturbance. Loons use islets for nesting and shallow coves for rearing their young. Nests are constructed on the ground at the water's edge on sand, rock, or other firm substrates. Loons prefer small islands for nesting (to avoid predators) but will also nest along protected bays and small peninsulas of the shoreline. In an extensive project undertaken to determine the status of the common loon in New York, DEC staff surveyed 557 lakes in the northern part of the state during 1984 and 1985.

Cooper's Hawk (*Accipiter cooperii*).-- Cooper's Hawks use a variety of habitat types, from extensive deciduous or mixed forests to scattered woodlots interspersed with open fields. Floodplain forests and wooded wetlands are also used by Cooper's Hawks. Cooper's hawk construct nests typically at a height of 35 to 45 feet in both conifer (often white pine) and deciduous trees (often American beech). Nests are commonly constructed on a horizontal branch or in a crotch near the trunk. Cooper's Hawks have been known to use old crow nests as well. Foraging areas are usually located away from the nest in forested areas or open areas adjacent to forest.

Osprey (*Pandion haliates*). -- Osprey breed near large bodies of water, including rivers and lakes, that support abundant fish populations. Osprey typically construct their nest in tall dead tress, but also use rocky ledges, sand dunes, artificial platforms, and utility pole crossarms. Nests are placed in locations that are taller than adjacent areas, which provide vantage points.

Sharp-shinned Hawk (*Accipiter striatus*).-- Sharp-shinned Hawks prefer breeding habitats that consist of open or young woodlands that support a large diversity of avian species, the hawk's primary prey (Johnsgard 1990). Although Sharp-shinned Hawks use mixed conifer-deciduous forest for nesting, most nests recorded in New York State have been located in conifers, with 80% of the nests found in hemlocks (Bull 1974).

Northern Goshawk (*Accipiter gentilis*).-- Important habitat characteristics for Northern Goshawk include a combination of tall trees with a partial canopy closure for nesting and woodlands with small, open areas for foraging (Johnsgard 1990). In New York State, goshawks prefer dense, mature, continuous coniferous or mixed woods where they typically place their nest 30-40 ft. off the ground in the crotch of a tree (Andrle and Carroll 1988).

Common Nighthawk (*Chordeiles minor*).-- Two distinct habitats are used by nesting Common Nighthawks: bare flat rocks or bare ground in open fields and pastures, and, more recently (since the mid-late 1800s), on flat, gravel rooftops (Bent 1940). In upstate New York nighthawks also nest in mountainous areas, provided woods are interspersed with clearings or openings (Bull 1974).

Red-shouldered Hawk (*Buteo lineatus*).-- Red -shouldered Hawks breed in moist hardwood, forested wetlands, bottomlands and the wooded margins of wetlands, often close to cultivated fields, Red-shouldered hawks are reported as rare in mountainous areas. Special habitat requirements include cool, moist, lowland forests with tall trees for nesting. Red-shouldered hawks forage in areas used as nesting habitat as well as drier woodland clearings and fields.

Red-headed Woodpecker (*Melanerpes erythrocephalus*).-- Both wetlands (forested and riverine wetlands, beaver impoundments, dead tree swamps) and uplands (grasslands with scattered trees, golf courses, pastures, roadsides) are used by nesting Red-headed Woodpeckers (Bull 1974). Red-headed Woodpeckers also are attracted to old burns and recent clearings. Nests are usually located in snags or dead limbs of live trees, or in the absence of trees, poles, fences, or roofs (Erlich 1988).

Whip-poor-will (*Caprimulgus vociferus*).--Whip-poor-will select open woodlands in lowland deciduous forest, montane forest, or pine-oak woods (Erlich et. al. 1988) that is interspersed with open fields, with a preference for dry oak-hickory woods in some areas of upstate New York (Bull 1974). Whip-poor-will nest on the ground in dry, sparse areas. Eggs are typically laid in the open or under a small shrub on the leaf litter where they are well concealed (Bent 1940).

Horned Lark (*Eremophila alpestris*).-- The Horned Lark, first recorded breeding in the Adirondacks in 1900 (Andrle and Carroll 1988), inhabits short, grassy, open areas or open areas devoid of vegetation including fields and pastures, sandy beaches and dunes, barren wasteland, airports, and golf courses (Bull 1974). Here, the female digs a shallow depression with her beak and feet near or under a tuft of grass, rocks, or a clump of dirt (Bent 1942) where she lines the nest with roots, grass, plant down, or hair (Ehrlich 1988).

Golden-winged Warbler (*Vermivora chrysoptera*).-- Golden-winged Warblers prefer dense brush and scattered small trees, habitat that commonly succeeds as a result of abandoned farmland. In fact, large areas of land in early, secondary stages of succession coincide with the expansion of the Golden-winged Warbler in New York and New England (Andrle and Carroll 1988). On the ground at the base of a grass tuft, the Golden-winged Warbler hides its cup-shaped nest of long grass strips or grapevine bark; grapevine fibers smoothly line the nest (Erlich 1988).

Grasshopper Sparrow (*Ammodramus savannarum*).--The Grasshopper Sparrow is a grassland bird that uses hayfields and weedy fallow fields, but avoids shrubby fields. This species favors uplands with continuous tall herbaceous cover of various densities. Nests are located in a depression on the ground, usually well hidden by grasses (DeGraaf and Rudis 1986).

Habitat Associations – Amphibian and Reptiles Species of Special Concern

Wood Turtle (*Glyptemys insculpta*).-- The Wood Turtle is a semiaquatic turtle that inhabits both the terrestrial and aquatic environment. It favors streams with sandy-pebbly substrates that are deep enough so that they do not freeze during hibernation, are well-oxygenated, and have good water quality. Terrestrial habitat includes a variety of wetlands, upland successional fields, and deciduous woodlands with open areas for basking (Tuttle and Carroll 1997).

Eastern Box Turtle (*Terrapene carolina*).-- The Eastern Box Turtle is typically found in well-drained forest bottomlands and open deciduous forests. Preferred habitats include woodlands, field edges, marshes, bogs, and stream banks. The young are semiaquatic. The Eastern Box Turtle hibernates from late fall to April in loose soil, decaying vegetation, mud, or stream banks (DeGraaf and Rudis 1986).

Eastern Hognose Snake (*Heterodon platirhinos*).-- The Eastern Hognose Snake prefers sandy soils and open woodlands (typically pine or deciduous forest) where it preys on toads, frogs, salamanders, insects, and worms (DeGraaf and Rudis 1986).

Extirpated and Formerly Extirpated Species

The moose, elk, wolf, eastern cougar, Canada lynx, bald eagle, golden eagle, and peregrine falcon all inhabited the Adirondacks prior to European settlement. All of these species were extirpated from the Adirondacks, mostly as a result of habitat destruction during the nineteenth century. Unregulated harvest also lead to the decline of some species, such as moose, wolf, elk, beaver, American marten, and fisher. More recently some birds fell victim to the widespread use of DDT.

Projects to re-establish the peregrine falcon, bald eagle, and Canada lynx have been implemented. A total of 83 Canada lynx were released into the Adirondack Park from 1989 to 1991 by the SUNY College of Environmental Science and Forestry as part of their Adirondack Wildlife Program. Lynx dispersed widely from the release area and mortality was high, especially mortality caused by vehicle-animal collisions. It is generally accepted that the lynx restoration effort was not successful and that there are no lynx from the initial releases or through natural reproduction of released animals remaining in the Adirondacks. Lynx are legally

protected as a game species with no open season as well as being listed as threatened on both the Federal and State level.

Efforts to reintroduce the peregrine falcon and the bald eagle through "hacking" programs began in 1981 and 1983, respectively. These projects have been remarkably successful within New York. Bald Eagles are becoming much more common, and Peregrines are recovering. Both species are now found in portions of the Adirondacks and are believed to be common residents within the WLWF. Golden Eagles are generally considered to have always been rare breeders within the state.

The wolf and eastern cougar are still generally considered to be extirpated from NYS. Periodic sightings of cougars are reported from the Adirondacks, but the source of these individuals is believed to be from released captive individuals. Reports of timber wolves are generally considered to be misidentified coyotes, although there is some evidence to suggest that the Eastern coyote found in the Adirondacks may be a hybrid between the red wolf and coyote.

Invasive/Exotic Wildlife

As with invasive/exotic plant species, these organisms do not occur naturally in New York State. While some species go relatively unnoticed (e.g., spiny water flea), other introductions such as the zebra mussel have caused great concern. There are no confirmed reports of zebra mussels in unit waters. Domestic canines and felines can also have an impact on native deer, rodents, and birds.

Other Fauna

Other, less known, members of the animal kingdom occur within the unit. Insects are the most notable and abundant form of animal life. Some species can cause human health concerns (e.g., Giardia, swimmer's itch) or are generally considered a nuisance (e.g, black flies, mosquitoes) to individuals that recreate in the area.

Critical Habitat

Deer Wintering Areas

The maintenance and protection of deer wintering areas (or deer yards) are important in maintaining northern deer populations. These areas provide deer with relief from the energetic demands of deep snow and cold temperatures at a time when limited fat reserves are being used to offset reduced energy intake (i.e., nutritionally, winter browse is poor). Previous researchers have demonstrated that deer consistently choose wintering areas which provide relief from environmental extremes over areas that may provide more abundant forage (Severinghaus 1953; Verme 1965). These observations are consistent with the fact that the nutritional value of winter browse is poor due to low digestibility and that deer can expend more energy obtaining browse than the energy gained by its consumption (Mautz 1978).

Severinghaus (1953) outlined several habitat components of deer yards, including topography and forest cover type (i.e., presence of conifers). The most important characteristic of an Adirondack deer yard is the habitat configuration making up a "core" and travel corridors to and

from the core. The core is typically an area, or areas, of dense conifer cover used by deer during severe winter weather conditions. Travel corridors are dense but narrow components which allow access to food resources (hardwood browse) in milder conditions. Use of wintering areas by deer can vary over time depending on winter severity and deer population density. Although Severinghaus (1953) reported that some Adirondack deer yards have been used since the early 1800's, recent research suggests that the location of some current deer yards may overlap very little (or not at all) with their historical counterparts mapped in the late 1960's and early 1970's by the Department (Hurst 2004). Therefore, planning for the protection of deer wintering areas relative to recreational activities in the unit should consider the dynamic nature of these areas (not the static representation of historical boundaries) and seek to update our understanding of wintering areas currently used by deer.

Historical and Potential Deer Wintering Habitat – Historical deer wintering areas have been identified within the WLWF, with 2 core areas located partially in the unit and extending into the Siamese Ponds Wilderness Area (SPWA) to the north (Ed Reed, NYSDEC, unpublished data). One core wintering area was identified north of Cod Pond along Stewart Creek and another larger area west of Barker Mountain along Kibby Brook (mostly within SPWA). A GIS model of potential deer wintering habitat was recently developed for the Adirondacks (J. Gagnon and S. McNulty, Adirondack Ecological Center, unpublished data). While this model is a working draft, initial results suggest fairly extensive areas of potential deer wintering habitat within the unit (Appendix F).

Guidelines for Protection of Deer Wintering Areas – Research on wildlife responses to winter recreation (e.g., cross-country skiing, foot travel, snowmobiling) is limited. Studies conducted on mule deer (Freddy et al. 1986) and elk (Cassirer et al. 1992) suggest that these species can be disturbed by these activities. However, when planning the location of recreational trails, general guidelines for protecting deer wintering areas can be followed which should reduce the potential for disturbance.

Activities which substantially diminish the quality or characteristics of the site should be avoided, but this does not mean human use is always detrimental. Pass-through trails, and other recreational uses can be compatible with deer wintering areas if they are carefully considered. Recreational planning which affords protection of core sections and avoids fragmenting travel corridors are acceptable in many situations. Certain types of recreation such as cross-country skiing are not presently considered to significantly impact deer yards in an overall negative way, particularly if the traffic along trails is not prone to stopping or off-trail excursions. These types of trails in or adjacent to deer wintering areas can provide a firm, packed surface readily used by deer for travel during periods of deep snow. They can also create access for free-roaming dogs if the location is close to human habitation; thus, trails should avoid deer yards in these situations. High levels of cross-country ski use can increase the energy demands of deer within the yard due to increased movement.

In summary, general guidelines for protecting deer wintering areas include:

- Within travel corridors between core wintering areas, avoid placement of trails within a 100 foot buffer on either side of streams,
- Avoid placement of trails through core segments of deer yards to reduce disturbance associated with users stopping to observe deer,
- Trails should not traverse core segments of deer yards in areas adjacent to densely populated areas such as hamlets, villages, or along roadsides developed with human habitation because they provide access to free roaming dogs,
- In areas with nearby human habitation, avoid land uses which result in remnant trails, roadways or other access lanes which facilitate accessibility to free-roaming dogs.

c. Fisheries

Fish communities in the Adirondacks are a result of geological and human influences. Prior to human influences, relatively simple fish communities were common throughout the Adirondacks. Human-caused changes in habitat and introduction of fish species have altered those natural communities. In some cases, deliberate and inadvertent introductions of non-native fish species have had serious deleterious impacts on native Adirondack fish communities.

Geological History

The Fishes of the Adirondack Park, a DEC publication (August 1980) by Dr. Carl George of Union College, provides a summary of geological events which influenced the colonization of the Adirondack ecological zone by fishes. A limited number of cold-tolerant, vagile, lacustrine species closely followed the retreat of the glaciers during the most recent “ice age”. Such species presumably had access to most Adirondack waters. About 13,000 B.P. (before present), glacial Lake Albany, with a surface elevation of 350' above sea level, provided colonizing route for Atlantean and eastern boreal species to Lake George and Lake Champlain. Barriers above that elevation would have excluded those species from interior portions of the Adirondacks.

By about 12,300 BP, the Ontario lobe of the glacier had retreated sufficiently to allow species associated with the Mississippi drainage access to fringes of the Adirondacks via the Mohawk Valley and the St. Lawrence drainage including Lake Champlain. Lake Albany had apparently drained prior to that, as barriers had formed on the Lake George outlet.

The sequence of colonization routes to surrounding areas, combined with Adirondack topography, resulted in highly variable fish communities within the Adirondacks. In general, waters low in the watersheds would have the most diverse communities. The number of species present would have decreased progressing towards headwater, higher elevation sections. Chance and variability in habitat would have complicated the trends. Consequently, a diversity of fish communities, from no fish and simple communities consisting of monocultures to numerous species, occurred in various Adirondack waters.

Ponded Waters

The results of past fish inventories of the ponds and lakes associated with the WLWF are described at length in Appendix C. In general, a number of waters in the unit support reportedly

good fisheries. Because the waters are only systematically surveyed by fisheries personnel at long intervals, it is impractical and impossible to make detailed statements about the current quality of each of the unit's fisheries in this UMP.

Streams

Generally, the unit's streams are not considered to be high quality, "blue ribbon" trout fisheries. However, no fisheries survey data exist to support or refute this assumption. Superficially, the majority of the streams in the unit do not appear to provide sufficient thermal refuges, in the form of deepwater habitat or springs, to harbor trout through the hot summer months. Further, adequate spawning habitat seems to be lacking in many of the streams and anchor ice is prevalent throughout the winter months. The two Mill Creeks (one in the Town of Johnsburg and one in the Town of Wells) and possibly the Glen Creek in the Town of Johnsburg probably represent the unit's best stream fisheries.

Brook Trout

Brook trout are considered the premier sport fish in the WLWF and are favored through management whenever feasible. The available information suggests that historically brook trout were well represented in the unit but their exact distribution remains obscure because the area was heavily impacted by the early establishment of nonnative species. Today, brook trout are maintained in the waters that will support them principally through routine stocking and by reclamation. Reclamation is a management technique involving the application of a fish toxicant called rotenone to eliminate nonnative and/or competing fishes. Upon detoxification, these waters are generally restocked with brook trout to restore their native fish communities and provide a valuable recreational resource.

Acid Precipitation

The phenomenon of acid ion deposition, popularly known as "acid rain," has had little discernible impact on the fisheries resources of the WLWF. The most recent water chemistry data indicate that the pH of the unit's ponded waters generally ranges from near 6 to about 7. Although 22 of the waters have not had recent (since 1975) water chemistry surveys, the majority of these are small, unnamed ponds. Streams in the unit have received no documented water chemistry testing. It is unknown if acidic deposition has had any significant effects on stream water chemistry in the unit.

3. Visual and Scenic Resources/Land Protection

The natural landscape of the WLWF is an important scenic resource that draws visitors to the unit and adds to the unit's recreational appeal. The WLWF affords a variety of open vistas and scenic views, each dramatic and unique. Wetlands, mature forests, roaring headwater streams, and rocky, open summits ringed with cliffs add to the quality of visitors' experiences, whether they are driving down Route 8 on a Sunday afternoon, fishing for trophy brook trout in a small, unnamed beaver pond, or snowshoeing up Mount Blue. Author Lincoln Barnett summed it up best in his 1974 classic book, *The Ancient Adirondacks,* stating that within the unit,

"...there are deep, silent forests, plunging ravines and gorges, tumbling waterfalls, still lakes, soaring mountains, and bird-haunted wetlands."

One does not necessarily need to hike great distances to enjoy the visual resources of the WLWF; the accessibility of many of the unit's most scenic areas is excellent. And, while many of the unit's most stunning sights are readily available to anyone willing to take a drive down one of the many roads in and around the unit, the WLWF still provides endless opportunities for backcountry scenic vistas. In many places, users seeking the deep sense of remoteness generally offered by Wilderness areas can get away from the crowds of people typically present at the unit's more popular destinations such as Hadley Mountain and look upon vast expanses of natural area seemingly untrammeled by man.

a. Travel Corridors

Excellent views of the WLWF can be enjoyed from a number of state, county, and town roadways that border and bisect the unit's planning area. The drive along NYS Route 8 on the unit's eastern boundary is especially exceptional; scenic panoramas of the western edge of the WLWF, the eastern edge of the Siamese Ponds Wilderness, and the East Branch of the Sacandaga River valley are abundant. Other notable scenic byways in the area include Route 28 (beautiful views of the upper Hudson River), Route 30 (views of the Sacandaga River, Great Sacandaga Lake, the southwestern part of the WLWF, and the eastern edge of the Silver Lake Wilderness), and Route 418 (views of the Hudson River valley). Town and county roads in the vicinity of Crane and Huckleberry Mountains, including Garnet Lake Road and South Johnsburg Road, offer good views of these spectacular summits.

b. Observation Points

The summits of many of the unit's mountains burned in intense fires during the early 1900s and subsequently still have somewhat open summits of bare rock that afford visitors with excellent views. A partial list of these open peaks that offer sweeping vistas includes Crane Mountain, Baldhead Mountain, Hadley Mountain, Mount Blue, and Huckleberry Mountain. Of these peaks, most remain trailless and offer moderately difficult bushwhacking opportunities to adventuresome hikers and snowshoers. The notable exceptions are Hadley and Crane Mountain, undoubtedly the two most popular destinations in the unit and among the most visited sites in the southern Adirondacks. The Hadley Mountain Trailhead is accessed by a well-maintained road, while the summit is reached with a relatively easy 1.3-mile hike and has a restored fire tower, observer cabin and storage shed, which is used to store supplies and materials for renovation and maintaining the summit facilities. The exposed summit and tower offer 360^{o} panoramic views of the surrounding mountains as well as the Great Sacandaga Lake. The Hadley Mountain Brochure (available at the trail register) identifies various features within the viewshed, including the distant High Peaks and Catskill Mountains. Because of these features, Hadley Mountain is more heavily used than Crane Mountain. However, Crane Mountain is probably more spectacular; Barbara McMartin listed Crane as her favorite Adirondack mountain. While the hike up Crane is considerably more taxing than Hadley, the persistent hiker is rewarded with stunning views of both the mountains to the west and Crane Mountain Pond.

In addition to mountain peaks, many of the unit's waterbodies provide outstanding views. The views looking across Garnet Lake at Mount Blue and Ross Mountain, across Kibby Pond at Kettle Mountain, and across Wilcox Lake at New Lake Mountain, although not expansive, are classic images of a remote, unspoiled Adirondack setting.

c. Other Natural Areas

The APSLMP has designated the Hadley Mountain Summit and the Pine Orchard as a Special Management Areas. The Pine Orchard is listed as a Natural Illustrative Special Interest Area while the Hadley Mountain summit is classified as a Scenic Illustrative Special Interest Area.

The Pine Orchard is a stand of large diameter, 200 to 250-year-old white pine on a ridge in the Town of Wells in Hamilton County. The stand is believed to have regenerated in the early 1800s following a large-scale blowdown event (possibly remnants of a hurricane). When the timber industry began harvesting in this area during the mid and late 1800s, these trees were probably too small to be used and were subsequently left untouched.

B. MAN-MADE FACILITIES

An exhaustive inventory of campsites, trails and other maintained facilities or improvements in the WLWF was conducted as part of the UMP process. Noteworthy facilities in the unit include approximately 80 miles of designated trails (primarily snowmobile trails), road segments totaling over 10 miles, a fire tower and observer cabin atop Hadley Mountain, 4 lean-tos, 75 primitive campsites, and 18 improved parking areas. In general, the majority of these facilities are in fair to good condition and with regular maintenance will continue to serve their intended purposes. However, some facilities in the unit do require rehabilitation to function properly and have been identified in the Management Actions section of this UMP.

1. Trails

a. Designated Foot Trails	Length (miles)
Crane Mountain Trail system	3.55
Hadley Mountain Trail	1.32
Kibby Pond Trail	1.30
St. John Lake Connector Trail	0.35
Tenant Creek Falls Trail (at Brownell Camp)	1.73
TOTAL	**8.25**

b. Designated Snowmobile Trails	Length (miles)
Arrow Trail	3.93
(West Stony Creek Road to Oxbow Trail and Sweet Lumber Boundary)	
Baldwin Spring Spur	0.36
(West Stony Creek Road to Baldwin Spring)	
Bartman Junction Trail	2.22
(Bartman Trail to North Bend)	

Bartman Trail	4.95
(Bartman Road to barrier north of Baldwin Spring)	
Cod Pond Trail	0.84
(Oregon Trail to Cod Pond)	
Cotter Brook Trail	2.60
(Girards Sugarbush to Georgia Creek Trail)	
Davignon Road Extension	0.64
(Two segments of Davignon Rd. through Forest Preserve south of town maintenance)	
Dog'n Pup Bypass	1.70
(West Stony Creek Road to Arrow Trail)	
Dorr Road Connector Trail	0.34
(Pine Orchard Trail to private land near Dorr Road)	
East Stony Creek Trail	4.01
(Bakertown Road to Brownell Camp)	
Georgia Creek-Moose Mountain Trail	4.19
(NYS Route 8 to Cod Pond Trail)	
Girards Sugarbush Trail	1.66
(NYS Route 8 to Girards Sugarbush)	
Griffin Connector Trail	1.29
(Girards Sugarbush to Village of Griffin/Teachout Road)	
Harrisburg Lake-Tenant Lake Trail	1.79
(Forest Preserve boundary south of Harrisburg Lake to Forest Preserve boundary north of Tenant Lake)	
Indian Pond Trail	1.66
(Lizard Pond Trail to West Stony Creek Road)	
Lizard Pond Trail	3.68
(Garnet Lake to barrier north of Baldwin Spring)	
Louis Waite Road Extension	0.73
Murphy-Middle-Bennett Lakes Trail	7.25
(Pumpkin Hollow Road to Hope Falls)	
Old Fodder Brook Road Trail	2.63
(Private land off Hadley Hill Rd. to Forest Preserve boundary near Fodder Brook Rd.)	
Oregon Trail	3.10
(NYS Route 8 to North Bend)	
Oxbow Trail	1.64
(Arrow Trail to Bakertown Road)	
Pine Orchard Trail	9.34
(Pumpkin Hollow Road to Girards Sugarbush)	
Round Pond Trail	0.60
(Mud Pond Road to Round Pond)	
Round Pond Trail	2.35
(Round Pond to Garnet Lake)	
Tenant Creek Falls Trail (southern part)	1.88
(Private land near Hope Falls Rd. to state boundary near upper falls on Tenant Creek)	

Wilcox Lake Trail (Bakertown Road to Wilcox Lake)	0.91
Wilcox Lake-Willis Lake Trail (Pumpkin Hollow Road to Wilcox Lake Trail)	4.61
TOTAL	**70.55**

2. Roads

a. DEC Motor Vehicle Roads	Length (Miles)
Baldwin Spring Spur (West Stony Creek Road to Baldwin Spring)	0.20
Bartman Trail (Fish Ponds Road) (Baldwin Spring north to barrier)	0.97
Bakertown Road (Moosewood Club boundary to end of motor vehicle access)	0.54
Lizard Pond Trail (Bartman trail to Indian Pond Trail)	0.60
Oregon Trail (Baldwin Spring to North Bend)	1.71
Pumpkin Hollow Road (Forest Preserve boundary to Doig Creek)	0.32
Ski Hi Road (Forest Preserve boundary to Crane Mountain Trailhead)	0.40
Wilcox Lake Road[2] (Bakertown Road to Wilcox Lake Trail)	0.56
TOTAL	**5.30**

b. Non-DEC Roads

Aside from the roads in the unit under the jurisdiction of the Department, a number of town and private roads are closely associated with the lands of the WLWF. Although not controlled by the Department, the legal status and condition of these roads certainly affects the Forest Preserve lands they adjoin. At the very least, the required maintenance on these roads often impacts the adjacent land and vegetation and could potentially degrade water quality. Further, management of these roads is often complex and not entirely clear. It is the intent of this UMP to address the future of these roads on a case-by-case basis and determine the appropriate management actions to be taken in each individual situation.

Aside from Department roads, the remaining roads that require further discussion in this UMP can arbitrarily be placed into three classes. These classifications include town roads leading to inholdings, town roads not leading to inholdings, and private roads and driveways.

[2] This road was closed to motor vehicle use in 2004 due to steep grades and highly eroded soils that have led to braiding and gullying. Permanent closure is proposed in this UMP.

Town Roads leading to and ending at Inholdings - There are several prominent instances in the unit where town roads lead to inholdings completely surrounded by state land. These include:

Bartman Road – The southern end of Bartman Road leads to a large private inholding. From the point where the road first enters Forest Preserve lands (i.e. Forest Preserve on both sides of the road) to the northern boundary of the inholding is approximately 0.4 miles. The road remains a town road for 0.6 miles through the inholding and then reenters the Forest Preserve. The town road continues for 0.3 miles through Forest Preserve lands before turning east and reentering the inholding.

Dorr Road – The eastern end of Dorr Road provides access to three private inholdings. From the point where Dorr Road first enters the Forest Preserve, it is 0.4 miles to the first small inholding. The road continues through the inholding for 0.1 miles, then reenters Forest Preserve for 0.1 miles before reaching the second inholding. The road passes through the second inholding for 0.6 miles before reentering Forest Preserve land for 0.4 miles and then reaching the last inholding.

Garnet Lake Road (Maxam Road) – Garnet Lake Road runs parallel to the Garnet Lake shoreline through Forest Preserve lands for 0.5 miles before reaching a large private inholding on the southeastern shore of the lake.

Bakertown Road – West of Harrisburg Lake, Bakertown Road enters Forest Preserve land for 1.5 miles before reaching the Moosewood Club inholding.

Hope Falls Road – From the point where Hope Falls Road enters Forest Preserve land north of the village of Hope Falls, it is 1.3 miles to the Brownell Camp inholding.

Lens Lake Road – From the point where Lens Lake Road enters Forest Preserve, it is 0.7 miles to the private land boundary.

Pumpkin Hollow Road – As Pumpkin Hollow Road heads east from NYS Route 30, it provides access to four private inholdings. From the point where the road enters Forest Preserve land, it is 0.2 miles to the first large inholding. The road continues through this inholding for 0.8 miles before reentering Forest Preserve for 0.3 miles. The road then passes through a small inholding for 0.1 miles, Forest Preserve for 0.1 miles, and then into the Willis Lake inholding for 0.3 miles. After reentering Forest Preserve at the north end of Willis Lake, it is 0.8 miles east to the last inholding.

West Stony Creek Road – West Stony Creek Road leads to three private inholdings at its western end. From the point where the road enters Forest Preserve, it is 2.3 miles to the small inholding on the north side of the road near Dow's Pond. The road forms the southern boundary of this inholding for 0.1 miles and then passes through 0.7 miles of Forest Preserve before the eastern boundary of the second inholding is encountered. The

road forms the northern boundary of this inholding for 0.4 miles before reentering Forest Preserve on both sides of the road. It is 1.3 miles from there to the last private inholding, the Dog 'n Pup Club.

Town Roads not leading to Inholdings – There are two instances in the unit where a town claims jurisdiction over a stretch of road that does not lead to an inholding. These include:

Arrow Trail (West Stony Creek Road) – The Town of Thurman considers the 1.0-mile stretch of West Stony Creek Road from the southern boundary of the Dog 'n Pup Club to the Thurman town line to be a town road. Beyond the boundary line for the Dog 'n Pup Club, it is somewhat unclear why the town claims jurisdiction over the roadway. Because the town does not actively maintain this section and it is generally unfit for motor vehicle use, the Department has posted the road as a snowmobile trail and will work to close this stretch to motor vehicles. Further discussion of this proposal is found in Section IV of this UMP. Incidently, the Town of Thurman has opened its stretch of West Stony Creek Road to seasonal ATV use between October 1 and March 31.

Mud Pond Road – The Town of Thurman considers the entire length of the Mud Pond Road to be a town road, including the 0.7 miles from the state property line to the beginning of the Round Pond Trail. While at one time this stretch of road provided access to the Austin Scott inholding, the Department's purchase of this parcel has eliminated the need for private access at this location. The town continues to maintain this stretch of the road and it remains in excellent shape. At this time, the Department intends to work with the Town of Thurman to close Mud Pond Road at the Mud Pond Trailhead parking area. Further discussion of this proposal is found in Section IV of this UMP.

Private Access Roads and Driveways – There are numerous segments of private roads that pass through the WLWF. The majority of these occurrences are on detached parcels of Forest Preserve, south of the main part of the unit in the Towns of Corinth, Day, and Edinburg. They include:

Bartman Road Driveway – In the Town of Johnsburg, approximately 0.2 miles south of where Bartman Road enters Forest Preserve for the first time, a driveway splits off to the west. This driveway continues through Forest Preserve for 0.8 miles before reaching a private inholding.

Davignon Road Extension – This private road, in the Town of Corinth, has two segments that pass through Forest Preserve lands (0.6 miles total). As previously mentioned, the Department has designated these stretches as snowmobile trail, but they also receive motor vehicle use from lessees of adjacent private land and traffic associated with timber harvesting operations on this private land.

Greenfield Lake Lyme Timber Haul Road – Lyme Timber maintains a haul road that cuts through a corner of Forest Preserve land for 0.12 miles northwest of Greenfield Lake and

west of Colson Mountain in the Town of Day.

Lake Desolation Road Driveways – A driveway heads northeast on Forest Preserve land from Lake Desolation Road approximately 0.2 miles southeast of the Edinburg – Greenfield town line. After less than 0.1 miles, the driveway splits. Both the western and eastern forks continue for 0.4 miles from this divergence before exiting Forest Preserve lands. Department records show legal rights-of-way for both of these driveways.

Mason Road – Mason Road heads southeast from Fox Hill Road approximately 0.9 miles west of Albia Pond in the Town of Edinburg. The road traverses private land for 0.7 miles before entering Forest Preserve land for 0.3 miles, after which it reenters private land.

Ohmer Mountain Lyme Timber Haul Road – Lyme Timber maintains a haul road across a small piece of Forest Preserve south of Ohmer Mountain in the Town of Day. Total length of this road across Forest Preserve is 0.5 miles.

Reynolds Road – This private road, which heads west off of Davignon Road in the Town of Corinth, passes through the corner of a small, detached parcel of Forest Preserve land southwest of Davignon Pond. Total length of this road across Forest Preserve is 0.3 miles.

Roads on the South Shore Road Parcel – The detached parcel of Forest Preserve land that has road frontage on South Shore Road in the Town of Day has four private road segments totaling 1.4 miles.

Steve Kathan Road, Part 1 – This private road crosses a very small, detached parcel of Forest Preserve southwest of the hamlet of Allentown in the Town of Day. Total length of this road across Forest Preserve is 0.1 miles.

It is important to note that for those private roads described above where a legal ROW has not been identified, neither the mere presence of the roadway itself nor the ongoing use of the roadway proves the legal existence of a private ROW.

3. Primitive Tent Sites and Lean-tos

a. Primitive Tent Sites	Number
Bennett Lake	1
Crane Mountain Pond	3
Cod Pond	1
Eagle Pond	1
Fish Pond (Upper)	1
Fox Lair	6
Garnet Lake - roadside	3

Garnet Lake - boat accessible only	6
Bakertown Road	6
Hope Falls Road	6
Indian Pond Trail (Madison Creek)	1
Kibby Pond	3
Little Joe Pond	2
Middle Lake	5
Murphy Lake	3
Nate Davis Pond	1
North Bend (Oregon Trail)	1
Route 8 (excluding Fox Lair)	11
Pine Orchard Trail	2
Pumpkin Hollow Road/Wilcox Lake-Willis Lake Trail	3
River Road	2
Round Pond	2
West Stony Creek Road/Baldwin Spring	2
West Vly (Town of Providence)	1
Wilcox Lake	2
TOTAL	**75**

b. Roadside Campsites	Number
Fox Lair	6
Garnet Lake Road	3
Bakertown Road	6
Hope Falls Road	6
North Bend (Oregon Trail)	1
Route 8 (excluding Fox Lair)	11
Pumpkin Hollow Road	2
River Road	2
West Stony Creek Road/Baldwin Spring	2
TOTAL	**39**

c. Lean-tos	Number
Lizard Pond	1
Murphy Lake	1
Wilcox Lake	2
TOTAL	**4**

4. Other Facilities

a. Parking Lots (18)	Capacity
Baldwin Spring	10
Bakertown Road, Harrisburg Outlet Ford	3
Bartman Road	15

Crane Mountain Trailhead, Ski Hi Road	15
East Stony Creek/Tenant Falls Trailhead, Hope Falls Rd.	6
Fox Hill Road	3
Garnet Lake, Garnet Lake Road	7
Georgia Creek-Moose Mountain Trailhead, NYS Route 8	15
Girards Sugarbush Trailhead, NYS Route 8	15
Hadley Mountain Trailhead, Tower Road	15
Kibby Pond Trailhead, NYS Route 8	3
Mud Pond Road	8
Mud Pond Trailhead	2
Murphy-Middle-Bennett Lakes Trailhead, Creek Road	12
Murphy Lake/Pine Orchard Trailhead, Pumpkin Hollow Rd.	12
Oregon/Cod Pond Trailhead, NYS Route 8	6
St. John Lake Trailhead, Bakertown Road	6

Additionally, many of the town roads associated with the unit, such as Bartman Road, Bakertown Road, Glen Creek Road, and West Stony Creek Road, have multiple push-outs and pull-offs on Forest Preserve land that meet the public parking needs. Although these locations have not been inventoried as formal parking lots, they serve an important function in the unit. Likewise, pull-offs on NYS Routes 8 and 30, along with other state and county highways in the unit, play a similar role.

b. Trail Registers (13)	Location
Baldwin Spring	Baldwin Spring
Bartman Trailhead	Bartman Road
Cod Pond/Oregon Trailhead	NYS Route 8
Crane Mountain Trailhead	Ski Hi Road
East Stony Creek/Tenant Creek Falls Trailhead	Hope Falls Road
Garnet Lake/Round Pond Trailhead	Garnet Lake Road
Georgia Creek-Moose Mountain Trailhead	NYS Route 8
Hadley Mountain Trailhead	Tower Road
Kibby Pond Trailhead	NYS Route 8
Murphy-Middle-Bennett Lakes Trailhead	Creek Road
Murphy-Middle-Bennett Lakes Trailhead	Pumpkin Hollow Rd.
Pine Orchard Trail	Dorr Road
Wilcox Lake/East Stony Creek Trailhead	Bakertown Road

c. Pit Privies	Number
Baldwin Spring	1
Bennett Lake (Murphy-Middle-Bennett Lakes Trail)	1
Crane Mountain Trailhead	1
Garnet Lake Road (Maxam Road)	3
Hadley Mountain Summit	1
Hope Falls Road	1

Lizard Pond	1
Murphy Lake	1
North Bend (Oregon Trail)	1
Pine Orchard Trail	1
Wilcox Lake	2
TOTAL	**14**

d. Administrative Buildings (2)	Location
Fire Tower Observer's Cabin	Hadley Mountain
Storage Shed	Hadley Mountain

e. Fireplaces (21)	Number
Baldwin Spring/West Stony Creek Road	1
Bennett Lake	1
Bartman Trail	1
Fox Lair/Route 8	2
Garnet Lake Road	1
Bakertown Road	2
Hope Falls Road	3
Lizard Pond Lean-to	1
Middle Lake	1
Murphy Lake	4
Pine Orchard Trail	1
Pumpkin Hollow Road	1
Wilcox Lake Lean-tos	2

f. Gates (15)

Arrow Trail, Bakertown Road
Arrow Trail, side trail onto Sweet Lumber property
Bartman Trail, northern end
Creek Road
Lake Desolation Road parking lot
Lens Lake Dam
Murphy-Middle-Bennett Lake Trail, Creek Road Trailhead
Murphy-Middle-Bennett Lake Trail, near Bennett Lake
Crane Mountain, Putnam Farm Trail, northern end
Crane Mountain, Putnam Farm Trail, southern end
Girards Sugarbush Trail, Route 8
Old Armstrong Road, Bartman Road
Oregon Trail, Route 8
Pine Orchard Trail, near Dorr Road connection
Wilcox Lake-Willis Lake Trail, western end

h. Snowmobile Bridges (41)

	Number
Arrow Trail	2
Baldwin Spring Spur Trail	1
Bartman Trail	3
Cotter Brook Trail	3
East Stony Creek Trail	2
Georgia Creek-Moose Mountain Trail	2
Girards Sugarbush Trail	4
Bakertown Road	1
Lizard Pond Trail	3
Murphy-Middle-Bennett Lakes Trail	6
Oregon Trail	3
Pine Orchard Trail	6
Tenant Creek Trail (southern part)	1
Wilcox Lake Trail	1
Wilcox Lake-Willis Lake Trail	2

i. Fire Towers (2)

Hadley Mountain Summit
Spruce Mountain (Corinth) - located on private land

j. Fishing and Waterway Access Sites (1)

Garnet Lake

k. Boat Launches

There are two boat launches encompassed by the WLWF and administered by the DEC Bureau of Fisheries—the Saratoga County Boat Launch and the Broadalbin Boat Launch—both providing access to Great Sacandaga Lake.

1. Saratoga County Boat Launch

The Saratoga County Boat Launch is located off County Route 4, just north of the boundary between the towns of Edinburg and Day. This facility provides important boat access to the northen end of Great Sacandaga Lake. The site was constructed in the late 1960s and has received routine maintenance by Saratoga County since that time. Major maintenance items are taken care of by DEC staff from the Warrensburg "working circle" of the Division of Operations. The boat ramp consists of a macadam surfaced approach which is large enough to accommodate large car and trailer units. The ramp is a double-wide, macadam drive which is pitched at a 10%, significantly less than a the 13.3% considered optimal for launching modern trailered boats. The macadam surface is also "canted" which creates some problems for boaters. The ramp extends more than 50 feet. However, each year the Department receives complaints from boaters who have problems launching during times of low water. Great Sacandaga Lake is subject to extreme draw downs, requiring extremely long ramps to provide access at all water levels. Currently there are no docks for temporary mooring of boats while boaters are

parking and retrieving their vehicles. The lack of docking facilities is often another cause for boater complaints. There is no manmade shore protection at this site as the shoreline is wooded and stable. The parking area is sufficiently large to accommodate 44 cars and trailers. There is a modest vault toilet facility, which was constructed in 1987, and recently made accessible for persons with disabilities. During a boating needs assessment conducted in preparation for the 1987 Strategic Plan For Modernization of Department of Environmental Conservation Waterway Access Facilities in New York State, a 1987 publication prepared jointly by the DEC Division of Fish and Wildlife and the Division of Operations, clearly anticipated eventual construction of floating docks and extension of the ramp to accommodate lower water levels. It called for construction of a bulkhead with interior and end floating docks which "must accommodate the normal open water seasons' water level fluctuations which are dramatic. Construction of floating docks may not be possible at this site due to the wide fluctuations. During the planning period it is anticipated that a steel skid dock will be provided. This type of structure has proven to be a satisfactory solution to water level problems at the Northville and the Broadalbin boat launches on Great Sacandaga Lake, but they do require frequent adjustment. Perhaps a less labor intensive alternative will be discovered over the longer term.

2. Broadalbin Boat Launch:

The Broadalbin Boat Launch is located in Fulton County off Lakeview Drive, approximately 3.5 miles northeast of the Village of Broadalbin. This facility is located over 16 miles from the Saratoga County Boat Launch and provides boating access to the southern areas of Great Sacandaga Lake. It is maintained via the Northville "working circle" of the DEC Division of Operations. The Broadalbin Boat Launch was constructed in 1998, and as such is one of the newest launching facilities in Region 5. It features a double wide concrete ramp with a steel skid dock which must be moved frequently to accommodate the wide fluctuations in lake levels. Parking is provided for 68 cars and trailers and 3 cars without trailers. Amenities for persons with disabilities include reserved parking and an accessible portable toilet. The very large lake fluctuations make accessibility to the ramp and dock to persons with disabilities problematic.

The Broadalbin Boat Launch is adjacent to the Town of Broadalbin's Town Beach, which is located on State Forest Preserve Land. The beach is operated by the Town under a permit from the Department of Environmental Conservation. This permit is reviewed and renewed annually. At the time of the construction of the Broadalbin Boat Launch, DEC did extensive modifications to the town beach parking area. A gravel parking area accommodates 58 cars, and an additional 7 parking spots for persons with disabilities is provided in a separate, paved parking area.

The Town of Broadalbin Boat Launch is a very popular boating access facility and it is filled to capacity on nearly all peak boating season weekend days. The Department will necessarily need to consider expanding this facility at some time in the future. However, no expansion is anticipated during the 5-year planning period covered by this unit management plan. Because the facility is relatively new, no significant renovations are

anticipated during the planning period.

l. <u>Water Reservoir</u>

Serving the Sacandaga Campground and located on the east side of State Route 30, the area around this 8,000 gallon capacity reservoir is erroneously shown as Wild Forest on APA's State Land Map, which should be corrected to depict the area as Intensive Use.

m. <u>Dam</u> (2)

Unnamed tributary of East Stony Creek adjacent to Creek Road - Hope
Lens Lake - Stony Creek

C. EVIDENCE OF PAST INFLUENCES

1. Cultural Resources

The Adirondack Park contains numerous cultural resources related to its long history and precontact occupation. Management of these cultural resources is mandated by Section 106 of the National Historic Preservation Act, Section 14.09 of the State Historic Preservation Act, and the State Environmental Quality Review Act. Therefore, the presence of cultural resources in the unit has consequences for management strategies, especially when development of new facilities is concerned. Additionally, the degree of use throughout the Park not only affects the natural environment, but can also affect the cultural resources present. It is important to find a balance between using cultural resources to attract tourists and educate people about the past and losing the resources because of poorly-planned development and other problems such as looting of known sites by collectors.

Cultural resources generally consist of existing structures or archeological sites. Resources are considered National Register eligible if they meet specific criteria that indicate their importance to history or prehistory as determined by the Office of Parks, Recreation and Historic Preservation (OPRHP). An inventory of structures and archeological sites that have been listed or are eligible for listing on the National Register has been compiled from OPRHP files. The Adirondack Forest Preserve was listed as a National Historic Landmark by the National Park Service in 1963. It is therefore automatically listed in the State and National Registers of Historic Places.

2. Archaeological and Historic Resources

An inventory of archaeological sites within the WLWF has been compiled from the site files of the New York State Museum and the Office of Parks, Recreation, and Historic Preservation (Appendix H). Theses two site file sources occasionally overlap but generally contain different listings. The site inventories cannot be considered complete since no systematic archeological survey has been conducted within the entire unit. Some sites were discovered by relatively small systematic surveys. Others were reported by collectors, historians, 19th-century accounts, and early 20th-century archaeologists. Therefore, there is a wide range in the accuracy of the

descriptions and locations. Certainly many other sites lie undetected in the Adirondack Park. The inventory provides information about the types of resources that are present in the unit to provide additional historic background and an estimation of the resources that may have to be managed in the future.

D. PUBLIC USE

1. Land Resources

a. Current Use

Because of its Wild Forest classification under the APSLMP, a wide variety of activities are allowed on the WLWF. Many of these activities are trail-oriented and may include several distinct user groups during each season. Trail users are generally interested in one or more of the following recreational activities – backpacking, bicycling, fishing, hiking, horseback riding, hunting, nordic skiing, snowmobiling, and snowshoeing. Foot and snowmobile use of the unit's trails are most prevalent; use of the trails by cyclists and horseback riders appears to be relatively minor - probably as a result of the trails' rocky, uneven nature, and occasional steep grades and wet areas.

Despite the unit's Wild Forest designation, large size, ample access, and diversity of ecosystems and landscapes, the WLWF does not attract an overly large number of visitors. Unlike some of the more popular units in the Adirondack Park, such as the High Peaks Wilderness Area or the Lake George Wild Forest, visitor use is rarely leading to the degradation of recreational resources in the WLWF. However, overuse is occurring in a few locations across the unit, specifically the trails to the summits of Hadley and Crane Mountains.

Recreational use information for the unit is somewhat limited. The Department monitors trail use via voluntary registration at trailheads. The WLWF has a total of 13 trail registers; these registers are located at Baldwin Spring, the Bartman Trailhead, the Cod Pond/Oregon Trailhead, the Crane Mountain Trailhead, the East Stony Creek/Tenant Creek Falls Trailhead, Garnet Lake/Round Pond Trailhead, the Georgia Creek-Moose Mountain Trailhead, the Hadley Mountain Trailhead, the Kibby Pond Trailhead, the Murphy-Middle-Bennett Lakes Trailhead on Creek Road, the Murphy-Middle-Bennett Lakes Trailhead on Pumpkin Hollow Road, the Pine Orchard Trailhead on Dorr Road, and the Wilcox Lake/East Stony Creek Trailhead on Bakertown Road. Use of lean-tos and designated campsite use is not monitored, although lean-tos often contain a voluntary log book maintained by the lean-to steward. However, rough estimates of overnight use can be made using the trail register data.

Accuracy of the information obtained at register boxes is questionable. Use of register boxes is greatly affected by a number of factors; these variables include register box location, timing of visitation (both daily and seasonally), length of stay, group size, and type of activity. Vandalism and failure to replace filled register sheets have often led to substantial loss of user information. Additionally, access to the unit is available at many points not monitored by register boxes. For instance, NYS Route 8 offers 13.5 miles of easy access to the northwestern portion of the

WLWF, but except for register boxes at three discrete locations (Kibby Pond Trailhead, Cod Pond/Oregon Trailhead, and Georgia Creek-Moose Mountain Trailhead), the number of users entering the unit from Route 8 is unknown. For these reasons, there is an obvious need to improve the data collection and retention at existing trail registers and increase the amount of use data collected in the unit with additional registers. Further, a method of verifying and/or adjusting register data, possibly through the use of trail counters, may be a desirable refinement of the current system used to monitor visitation of the unit.

Despite the inherent deficiencies in the current voluntary user registration system, general trends and patterns of use can be gleaned from the limited register data that are available for the unit. Register data for the WLWF are listed below (Table 10).

Table 10. Annual registered visitors at the Wilcox Lake Wild Forest trail registers from 1995-2005.

	registered visitors/year										
LOCATION	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**	**1998**	**1997**	**1996**	**1995**
Baldwin Spring	N/A	101*	128	52*	186	239	143	N/A	N/A	N/A	N/A
Bartman Trailhead	41*	37	34	89*	95	28*	N/A	N/A	N/A	N/A	N/A
Cod Pond/Oregon Trailhead	113*	485	400	417	373	356	N/A	N/A	N/A	N/A	N/A
Crane Mountain Trailhead	3,839*	4391	4115	3,444*	N/A	N/A	N/A	N/A	N/A	N/A	4,164*
East Stony Creek/Tenant Creek Falls Trailhead	2918	2853	2,275*	599*	2,237*	2667	2764	1301	N/A	N/A	N/A
Garnet Lake/Round Pond Trailhead	629*	603*	483	345*	622	585	571	N/A	N/A	N/A	505*
Georgia Creek-Moose Mountain Trailhead	60	77	82	91*	79*	86	94	91	117	66	158
Hadley Mountain Trailhead	6,083*	9,190*	9,053*	13387	13180	8,100*	9920	N/A	N/A	N/A	4,381*

Kibby Pond Trailhead	285*	371	325	310*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Murphy-Middle-Bennett Lakes Trailhead at Pumpkin Hollow Rd.	432*	478	355*	446	487	375	523	604	648	149*	273*
Murphy-Middle-Bennett Lakes Trailhead at Creek Rd.	950*	1300	1281	602*	1,400*	1135	1236	N/A	N/A	N/A	N/A
Pine Orchard Trailhead at Dorr Road	513	724	205*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wilcox Lake/East Stony Creek Trailhead at Harrisburg Lake Outlet	88	185	98	184*	380*	308*	547	N/A	N/A	N/A	421*

**denotes partial, incomplete, or missing data*

A few conclusions about trends and patterns of use in the unit can be inferred based on the annual register box data:

- Registered use across the entire unit is highest in the summer months and generally remains high through October.

- Average group size is generally around 2-3 visitors with few groups larger than 6 people.

- Based on the incomplete data available, use of individual trails seems to be fairly consistent from year to year. Improved data collection will be necessary to monitor this trend.

- Speculating on the overall annual visitation to the unit as a whole is fruitless using the existing dataset. Missing data for locations such as Crane or Hadley Mountain could amount to failing to account for thousands of users in any given year. The general trend in overall visitation to the unit appears to be relatively constant.

- Use during the fishing and hunting seasons and winter use by snowmobilers is probably substantially underestimated by trail register data. Even along popular snowmobile routes, such as West Stony Creek Road to Oregon via Baldwin Spring, registered winter use remains low suggesting many users fail to register.

- The most popular destination in the unit is the summit of Hadley Mountain. Two years of complete register box data (2001 and 2002) indicate that a minimum of 13,000-14,000 people climb Hadley each year. Actual use is likely somewhat higher. The primary attraction at Hadley Mountain is the fire tower, which is open continuously from July 4 through Labor Day and on weekends through Columbus Day. Monthly use patterns reflect this; over 70% of the registered use at Hadley Mountain in 2002 occurred in the July to October period. A summit steward, renovations to the tower and observer cabin, and self-guided hiking brochures paid for by donations generated by the Hadley Mountain Fire Tower Association and DEC funds have added to the attractiveness of this destination. Easy access to the trailhead via an improved dirt road, a relatively short hike (1.3 miles), and an excellent view also help to make Hadley Mountain one of the Adirondacks' most popular summits.

- The trail-accessible mountain summits in the unit, Hadley and Crane, generally receive over 80% of the total registered annual use in the WLWF. Winter use of these mountains is minimal, probably due to the steep climbs to the summits and the overall lack of winter tourism in the immediate area.

- Overnight use of Hadley Mountain is basically non-existent due to the lack of overnight facilities. Overnight use of Crane Mountain is moderate, considering the presence of 4 designated campsites adjacent to Crane Mountain Pond, ranging from 100-300 visitor-nights per year.

- The destination of most users of the Tenant Creek Falls/East Stony Creek Trailhead is the series of waterfalls on Tenant Creek. People going to these falls are almost exclusively day-users.

- Winter use of the Tenant Creek Falls/East Stony Creek Trailhead is higher than Crane or Hadley Mountains; probably because the East Stony Creek Trail is designated for snowmobile traffic and the lack of steep grades on both the Tenant Creek Falls and East Stony Creek Trails make them good locations for nordic skiing.

- Overall use of the East Stony Creek Trail to access Wilcox Lake is low, probably because of the easier access to Wilcox Lake and its lean-tos from Bakertown Road.

- The total number of visitors to Murphy-Middle-Bennett Lakes Trail is probably around 2,000 annually and may be substantially higher because of the trail's popularity with snowmobilers. The trailhead on Creek Road is 2-3 times more popular than the trailhead on Pumpkin Hollow Road. This is surprising considering the proximity of the Pumpkin Hollow Trailhead to the lean-to on Murphy Lake and might be the result of the popularity of Bennett Lake with fishermen or the proximity of this trailhead to village of Northville.

- Overnight use of the shoreline designated campsites on Garnet Lake is relatively high (100-350 visitor-nights per year) and appears to be increasing. In 2004, there was 345 registered visitor-nights at the lake. These data do not include overnight use of the three roadside

designated campsites along Garnet Lake Road.

- The Kibby Pond Trailhead and Cod Pond/Oregon Trailhead both receive moderate amounts of use (300-500 visitors per year). The use of Kibby Pond is high in April and May during the prime brook trout fishing period; overnight use of Kibby Pond is low. The destination of most registered visitors at the Cod Pond/Oregon Trailhead is Cod Pond, although snowmobile use of the Oregon Trail to connect to the unit's trail network is undoubtedly higher than the register box entries suggest.

- Register data from the Pine Orchard Trail are scanty, but current use appears to be moderate and probable future use of this area might be significantly higher because of the increasing recognition and appreciation for the remaining large-diameter, "virgin" forest stands in the eastern US and the listing of this hike in many publications (e.g. Barbara McMartin's books).

The Department also collects information on camping through permits issued to users staying more than three nights or camping in groups larger than nine. Such permits indicate the popularity of Garnet Lake, Kibby Pond, Smith Clearing (located along the Pine Orchard trail near Jimmy Creek), and Fox Lair (and other campsites along Route 8) for longer stays, as well as the popularity of Crane Mountain, Murphy Lake and Lizard Pond for groups from children's summer camps. Campsites at Fox Lair are also occasionally used by groups larger than nine.

b. Future Use

Projecting future demand and use of the WLWF is difficult, especially considering the deficiencies in past and current trail register data. There are many economic, physical, and psychological factors that can impact use on an annual basis. For example, weather conditions, such as very wet or very dry periods, can have a dramatic effect on use. Economic factors and fuel prices may also dictate how far people are willing to travel and the types of vacations they can afford. The more recent issues of terrorism and second home ownership have undoubtedly influenced travel and development patterns within the Adirondacks, although specific information on how these trends will affect future recreational use of the unit is lacking.

The proximity of the Adirondack region, and the unit specifically, to major eastern metropolitan centers provides an attractive vacation destination. Conversely, the aging of the "baby-boomer" generation may reduce the overall population interested in primitive backcountry recreation activities. Uncertainty about the future underscores the importance of monitoring use and health of the Forest Preserve so that adverse impacts can be identified and addressed before damage has become severe or irreversible.

Despite these rampant uncertainties, based on the available information about past and current visitation to the unit and use in other Adirondack units, it seems unlikely that overall use of the WLWF will increase drastically in the foreseeable future. At locations such as Hadley and Crane Mountains, where most of the overall visitation to the unit occurs, the number of registered users today is very similar to the number of users during the mid-1990s. There are no trends in the existing dataset to suggest that use of the unit has increased substantially in recent years.

Additionally, in units such as the Eastern High Peaks Wilderness, visitation has decreased slightly for the last two years. It is important to note, however, that even if use remains constant or even declines, the future resource conditions may not necessarily reflect this use level.

2. Wildlife

Data regarding the amount of public use of the wildlife resources in the WLWF are not available. A variety of wildlife recreation uses occur on the unit, including: hunting, trapping, hiking, bird watching, and wildlife photography. Past studies by the DEC indicate that few sportsmen sign-in at trailhead registers. This, combined with the fact that many hunters and trappers traditionally bushwhack, and use unmarked trails and watercourses to enter the Forest Preserve, prevents an accurate estimate of total visitor use. Information regarding non-consumptive use of wildlife is also lacking. For the most part, observations of wildlife enhance the recreational experience of the general public. Recreational use tends to be heaviest near towns, roads, and access points. With the exception of the more readily accessible areas (e.g., adjacent to Route 8), the majority of the unit probably is not heavily used by sportsmen during the hunting and trapping seasons. Areas of WLWF adjacent to leased timber company lands may also somewhat experience higher use during hunting season.

A number of mammals and birds may be hunted or trapped during seasons set annually by the DEC. These species are identified in the Environmental Conservation Law (ECL), Section 11-0903 and 11-0908. The Department has the authority to set hunting and trapping season dates and bag limits by regulation for all game species. White-tailed deer and 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 and muzzleloader seasons. In addition, there is an early season for black bear.

Small game hunters may take certain waterfowl, woodcock, snipe, rail, crow, ruffed grouse, wild turkey, coyote, bobcat, raccoon, red fox, gray fox, weasel, skunk, varying hare, cottontail rabbit and gray squirrel. Muskrat, beaver, weasel, river otter, mink, fisher, American marten, skunk, raccoon, coyote, red fox, gray fox, and bobcat may also be trapped.

Harvest statistics are generated and compiled by the DEC using an automated licensing and reporting system (DECALS) for deer, bear, coyote, and turkey and a pelt sealing system for beaver, river otter, fisher, American marten, and bobcat. Harvest information is reported by township, county, and Wildlife Management Unit (WMU). Since harvest information is not collected on a Forest Preserve unit basis and harvest distribution is not evenly distributed across the landscape, harvest data by town are generally not representative of the actual harvest within units. Types and levels of non-consumptive uses of wildlife within the WLWF have not been determined.

Potential Impacts

The impact of public use on most wildlife species within the unit is unknown. Wildlife species that can be vulnerable to disturbance associated with public recreational activity include:

Non-Game Species

Common Loon: Common loons nest along shorelines of lakes and ponds. Their nests are often very near the water line, and are susceptible to disturbance from the land or from the water. Nests along shore are more susceptible to human disturbance where trails follow the shore of a lake. Nests along the shore or on islands are more susceptible to human disturbance if boats or canoes can be carried readily into lakes occupied by loons. Water bodies with greater boating access will have higher levels of disturbance. If adults are forced to leave the nest, nest abandonment could occur. Additionally, fledgling mortality can occur if chicks are chased by boats.

Loons are a long-lived species and a predator near the top of the food chain. These characteristics make loons more susceptible to the accumulation of environmental toxins. Thus, this species is often used by scientists as an ecological indicator of the health of the environment and water quality. Airborne contaminants, including "acid rain", can cause the bioaccumulation of mercury, a neurotoxin, and a decreased food supply, which can potentially lead to decreased reproductive success. The death of adult loons due to lead toxicity from the ingestion of lead fishing tackle accidentally lost by anglers is a concern and has recently been documented in New York State. As a result, regulations were recently passed in 2004 in New York prohibiting the sale of lead sinkers weighing less than one-half ounce, including split-shot. The effects of direct human impacts, such as disturbance or shoreline use, on breeding loons within this unit has not been determined, but is presumed to be low due to the minimal number of improvements and facilities. Management efforts will concentrate on protecting loon nesting areas and habitat.

The Adirondack Cooperative Loon Program reports that adult loons with chicks were observed in the WLWF area at Garnet Lake, Harrisburg Lake and Little Pond during their 2005 census.

Game Species

Impacts appear to be minimal for those game species that are monitored. The Department Bureau of Wildlife monitors the populations of game species partly by compiling and analyzing harvest statistics, thereby determining levels of consumptive wildlife use. Several recent legislative changes have occurred that likely have had impacts on use of the area by hunters. Both hunting of bears by using bait and by using dogs have been prohibited, probably lowering use by bear hunters. Use of the unit by deer hunters has probably increased with the development of specific traditional implements seasons (archery, muzzleloader) and legislative changes liberalizing the number of deer that can be harvested. Harvest statistics are compiled by town, county and wildlife management unit. Regular season deer regulations (bucks only) for this area result in limited impacts to the reproductive capacity of the deer population. Overall, deer populations within the unit are capable of withstanding current and anticipated levels of consumptive use.

An analysis of black bear harvest figures, along with a study of the age composition of harvested bears, indicates that hunting has little impact on the reproductive capacity of the bear population. Under existing regulations, the unit's bear population is capable of withstanding current and anticipated levels of consumptive use.

The coyote, varying hare, and ruffed grouse are widely distributed and fairly abundant throughout the Adirondack environment. Hunting and/or trapping pressure on these species is relatively light. Under current regulations, these species undoubtedly are capable of withstanding current and anticipated levels of consumptive use.

While detrimental impacts to game populations over a large area are unlikely, wildlife biologists continually monitor furbearer harvests, with special attention to beaver, river otter, bobcat, fisher, and American marten. These species can be susceptible to overharvest to a degree directly related to market demand for their pelts as well as a variety of other economic and environmental factors. The DEC Bureau of Wildlife closely monitors furbearer harvest by requiring trappers to have the pelts of beaver, bobcat, fisher, American marten, and river otter sealed by NYSDEC staff. Additionally, biological samples are required for all trapped martens, which biologists use to closely monitor the harvest. Specific regulations are changed when necessary to protect furbearer populations.

Other Impacts

Water fluctuations can have a significant impact on nesting activity of loons, marsh birds, and waterfowl and can also have a negative impact on furbearers such as muskrats and beaver. The maintenance and protection of winter deer yards remains a concern of wildlife managers, particularly in the Adirondacks, as they fulfill a critical component of the seasonal habitat requirements of white-tailed deer. Few data are available on the impacts of cross-country ski trails and foot travel during winter on deer use of wintering areas.

3. Fisheries

Quantitative information about the numbers and success of anglers who visit the waters of the WLWF is unavailable. However, it is obvious from informal observations by Department personnel and numerous trail register entries that fishing is a popular recreational pursuit in many waters across the unit.

Fishing pressure is generally highest on the readily accessible lakes and streams, but backcountry angling is a popular activity for some users on select waters within the unit. Angler use of the streams is believed to be substantially lower than use of the unit's lakes and ponds, probably because many of the unit's streams are marginal trout fisheries that become overly warm during the summer months and harbor few "holdover" fish (stocked fish that survive beyond the year in which they were stocked) while the lakes and ponds frequently offer deep, coldwater sanctuaries where trout can survive for multiple years. Most of the fishing activity in the WLWF is concentrated on "coldwater lakes" and "Adirondack brook trout ponds." Trout fishing on lakes and ponds typically peaks in April, May, and June when trout can still be found in the cool water near the surface. Surface fishing activity declines in the summer due to formation of a thermocline which causes fish to move to deeper water. Angling on the unit's warmwater lakes peaks in June and can also be good in the mornings and evenings in July and August and in early fall when water temperatures begin to drop.

As previously stated, no qualitative data exist on the number of fish harvested each year n the unit's waters. Currently, harvest of fish in the unit is generally regulated by the statewide fishing regulations set by the Department. The exception is Wilcox Lake, where special regulations were implemented to protect the fisheries resource. It is believed that the regulated harvest that occurs in the unit poses no threat to the long-term sustainability of the fisheries resource.

4. Water Resources

The lakes, ponds, streams and wetlands in the WLWF may be some of the unit's most attractive features. They have both active and passive recreational value. Boating is generally limited to those ponds that are in close proximity to roads, although with an increase in the availability of lightweight canoes, kayaks, rafts, and float tubes, backcountry boating may rise. Very few areas provide direct canoe access from pond to pond without portages, making opportunities for long distance canoe trips nearly nonexistent in the unit. Swimming is also limited due to the prevalence of cold water lakes and ponds. However, all of the water features provide wonderful scenery and are well used by those interested in fishing and hunting. Most camping sites in the unit are found adjacent to streams or other water sources.

Data regarding the use of the unit's lakes and ponds is extremely limited. The trail register data from Garnet Lake, displayed above, provide some insight into the level of use this water resource receives. From the data, it appears that annual visitation ranges between 500 and 600 visitors, with 100-350 overnight stays annually. Overnight use of the six lakeside designated campsites seems to be increasing in recent years. The majority of use at Garnet Lake occurs during the summer months. The only other lake or pond in the unit where a boat can be driven directly to the water's edge is Lens Lake. Because there is no register at the Lens Lake hand carry, the use of this water resource is unknown. It is assumed that visitation of Lens Lake is reasonably low – because of low water pH, this lake does not support a high-quality fishery.

The East Branch and Main Branch of the Sacandaga River provide seasonal white-water kayaking and rafting opportunities. Anecdotal accounts suggest that both of these waters provide exciting white-water opportunities with Class III rapids during times of high water, but are fairly underused. Proskine (1986) describes the East Branch as "a sleeper" among Adirondack white-water runs and the Main Branch as "a spirited Class-III run." However, low flows during the summer months prevent these waters from being popular with local commercial white-water rafting outfitters. Access to both streams is excellent from the lands of the unit – both stretches of rivers are paralleled by state highways, Routes 8 and 30, respectively. No data exist with regards to the use of these rivers or other white-water streams in the unit.

As previously stated, several of the unit's rivers are classified under the NYS Wild, Scenic, and Recreational Rivers System Act. Use of these waters has not been systematically quantified and it is unknown whether classification under this Act has affected the use and/or preservation of these waterways.

E. RECREATIONAL OPPORTUNITIES FOR PERSONS WITH DISABILITIES

To date, no universally accessible structures or improvements have been designed or constructed within the WLWF. However, Department observations have identified many locations in the unit where access to Department programs and services appears to be relatively barrier-free. Presumably, recreational program access for persons with disabilities could be provided at some locations with minor modifications to existing facilities. Generally, any modifications required for universal access could probably be made at the locations listed below without fundamentally altering the Wild Forest character of the unit or the nature of programs offered to the public. Locations in the WLWF where the development of universal access is feasible include:

- Garnet Lake – Garnet Lake offers several opportunities for universal access to Department programs, specifically boating and fishing. The car-top boat launch at the parking area is probably already close to meeting accessibility standards while several of the day-use areas between the road and the lakeshore could be made accessible with some leveling and surface hardening. Unfortunately, the existing pit privies serving the parking area and the two roadside designated campsites are not accessible. Due to the APSLMP guideline requiring pit privies to be at least 150 feet from water and steep slopes to the south of the road (away from the lake), installing an accessible pit privy and providing reasonable access to it is not practical at this location. Therefore, to make this location fully accessible, an accessible Port-a-John at the parking area would probably be required.

- Designated primitive campsites along NYS Route 8, Bakertown Road, and West Stony Creek Road – There are a number of designated roadside campsites throughout the unit that could potentially be made universally accessible; however none of the sites currently has an accessible pit privy. Although a few of the sites that could potentially be made fully accessible will be closed through the implementation of this UMP, several of the remaining sites will be considered as potential locations to provide universally accessible camping opportunities.

The necessary management actions required to bring these sites up to ADA accessibility standards are discussed in greater detail in Section IV of this UMP.

In addition to the above opportunities to provide universal access, a 2001 ADA settlement involving the Department (commonly referred to as the Consent Decree and discussed in much greater detail in Sections III and IV) dictated that the Department provide motorized access to persons with disabilities to recreational programs in the unit on the Arrow Trail and upper Bartman Trail (trail to Upper Fish Pond). However, to date, this access has not been developed. Proposed management actions in Section IV serve to remedy this situation.

F. RELATIONSHIP BETWEEN PUBLIC AND PRIVATE LAND

The public lands of the Wilcox Lake Wild Forest are affected by and have an effect on adjacent lands, both private and public. The nature of these relationships, especially with private lands, is

typically complex and may be beneficial, detrimental, or some combination of both positive and negative effects.

1. Land Ownership and Land Use Patterns

The APA classifies all private lands within the Adirondack Park using a general land classification scheme. As Table 11 shows, the majority of the private land within the WLWF planning area is reasonably undeveloped – over 80% of the land area is classified as 'Rural Use' or 'Resource Management.'

Table 11: Adirondack Park Agency (APA) land classifications on private lands within the Wilcox Lake Wild Forest *planning area* (APA CD 1, 2001).

Land Classification	Acres	% of land area
Rural Use	132001	55.1%
Resource Management	64944	27.1%
Low Intensity	24754	10.3%
Moderate Intensity	14493	6.0%
Hamlet	3286	1.4%

Cover type data generated using US Geological Survey National Land Cover Dataset (NLCD) satellite imagery suggest that despite significant differences in regulations guiding the management of public and private lands in the WLWF planning area, the cover type distribution on the private land in the planning area is remarkably similar to adjacent the Forest Preserve lands. As Table 12 shows, the percentage of land cover occupied by deciduous forest, evergreen forest, and mixed forest on private land in the planning area closely resembles the percentages of these cover types in the WLWF.

Table 12: Cover types on private lands in the Wilcox Lake Wild Forest *planning area* based on USGS NLCD satellite imagery and raster dataset.

Cover Type	Acres	% of land area
Deciduous Forest	124446	52.0%
Evergreen Forest	55561	23.2%
Mixed Forest	45478	19.0%
Woody Wetlands	4308	1.8%
Pasture/Hay	2354	1.0%
Row Crops	1957	0.8%

Residential	1497	0.6%
Commercial/Industrial/Transportation	1133	0.5%
Emergent Herbaceous Wetlands	614	0.3%
Transitional Forest	443	0.2%
Urban/Recreational Grasses	112	0.0%
Bare Rock/Soil	19	0.0%

2. Impact of Forest Preserve on Local Taxpayers

Although the state does pay full taxes on the assessed value of Forest Preserve lands pursuant to Real Property Tax Law §532(a), there nonetheless may be some minor impact on the area's other taxpayers. Some people argue that if Forest Preserve land was privately held and "improved", the assessed value of the property, and thus the property taxes paid, would increase, adding to the local tax base. However, state lands generate tax revenue without creating the public service demands typically associated with developed property.

As stated previously, the state pays local taxes on Forest Preserve lands under Real Property Tax Law §532(a). The tax rates on these lands are equivalent to those paid by private individuals on undeveloped land and are based on assessments done by local government assessors. The projected taxes paid by the State in 2004 in the towns and counties that cover the WLWF are as follows:

Table 13: Projected property taxes paid by NYS in 2004 for Forest Preserve lands.

TOWN	**PROJECTED TAXES FOR 2004**
Johnsburg	$1,176,441.00
Thurman	$612,532.00
Stony Creek	$559,084.00
Wells	$1,140,738.00
Hope	$192,893.00
Corinth	$90,010.00
Day	$115,295.00
Edinburg	$7,135.00
Greenfield	$4,179.00

Hadley	$18,502.00
Providence	$3,681.00
Broadalbin	$4,141.00

3. Relationship with Adjacent Private Lands

Adjacent public and private lands undoubtedly affect one another. For example, private landowners with property adjacent to Forest Preserve lands often benefit from access to those lands not available to the general public. Additionally, land adjacent to Forest Preserve is generally more valuable than equivalent lands not adjacent to Forest Preserve because there is no uncertainty about the future land use on Forest Preserve lands. On the other hand, private lands adjacent to public lands may experience a higher rate of trespass as users of the Forest Preserve venture across the property boundary either inadvertently or intentionally.

There are numerous in-holdings throughout the unit that present challenges to the management and public use of Forest Preserve lands. In most cases, issues are resolved through discussions and clarification of property boundaries and/or access corridors. Occasionally, recreational users are faced with blocked or posted access to designated trails and Forest Preserve lands due to private inholdings or adjacent uses. In most cases where private lands must be crossed to reach Forest Preserve, the means of access is well-established public right of access, typically in the form of an old or current town road. Rights of access to the unit provided by these roads are generally respected. However, access may be limited passively by the fact that several of the roads in question require the use of 4-wheel-drive vehicle. An example in the unit is West Stony Creek Road, mainly in the Town of Thurman. This road begins at Wolf Pond Road, a short distance from Harrisburg Road (paved). It is generally a rough, 4-wheel-drive road from the Forest Preserve boundary to its terminus and is technically open for vehicle use beyond the last private inholding, the Dog ‘n Pup Club, to the Thurman town line. However, the bridge over Madison Creek on the Dog ‘n Pup Club property is not suited for vehicles larger than a snowmobile or ATV and recent logging activity on the property has eliminated any clear roadway beyond the in-holding and has created highly disturbed conditions that preclude most vehicles.

The detached parcels of Forest Preserve completely surrounded by private lands present their own unique challenges. Generally, these parcels are difficult to access and police. Discussions with the unit’s Forest Rangers suggest that impacts to Forest Preserve land by users of the surrounding private lands are relatively minor and primarily limited to illegal vehicle and ATV use. This illegal use is of particular concern for some of the Forest Preserve parcels located in the Town of Corinth in the southeastern portion of the unit. Additionally, ATV trails have been cut through the Forest Preserve in a few locations. For example, an illegal ATV trail through Forest Preserve land was discovered in 2005 that originated on private lands and crossed Forest Preserve lands around Cherry Ridge.

Access to the Pine Orchard Trail at Dorr Road, the Tenant Creek Falls Trail, and the East Stony Creek Trail at Brownell Camp all originate on private lands. The Tenant Creek Falls Trail and the East Stony Creek Trail both pass through the private inholding, known locally as the Brownell Camp, at the northern end of the Hope Falls Road. The State possesses an easement on the East Stony Creek Trail that allows public travel along the portion of this trail located on private property. However, no formal agreement exists to allow public foot travel through the inholding for the Tenant Creek Falls Trail, a designated foot trail that breaks off to the east from the East Stony Creek Trail before the bridge over Tenant Creek. The southern leg of the Tenant Creek Falls Trail can potentially be used to link to Hope Falls Road south of the point where the road crosses into Forest Preserve land but this requires the crossing of a narrow strip of private property along the road. Currently, no easement exists to cross this property and the landowners have expressed no interest in selling an easement. Access to the Pine Orchard Trail at Dorr Road across the private inholding at the end of the road is currently allowed by the landowner's permission. This permission is announced on a sign adjacent to the parking area, but no formal easement exists for this access.

In addition to these "public access through private land" issues, there are also several instances in the unit where private access through Forest Preserve lands is an ongoing issue. Where this access is provided by some public roadway, private access is not in question. It is only in those situations where access for private landowners is provided by a private driveway or roadway through Forest Preserve lands that this becomes an issue. As previously discussed in the Inventory of Man-Made Resources Subsection of this UMP, numerous instances of private roads passing through Forest Preserve lands exist in the unit. The most notable of these include the southern extension of Davignon Road, two driveways off of Lake Desolation Road, Reynolds Road, Mason Road, and a driveway off of Bartman Road. The validity of these access routes needs to be established and the question of whether there will be public motorized access to the unit via these roads needs to be answered.

With the exception of these occasional access issues with private landowners, there does not appear to be a large conflict between Forest Preserve and private land uses. The relatively low level of use in the unit may be one important factor for this general lack of conflict.

4. Relationship with Adjacent Public Lands

As previously mentioned, the Wilcox Lake Wild Forest is not the only unit of publicly-owned land in the general area. The unit is in close proximity to two Wilderness units, three Wild Forest units, one Intensive Use area, lands under the jurisdiction of the Hudson River-Black River Regulating District, a piece of State Forest land, and several parcels of county-owned lands. Inherently embedded into these different land classifications are different types and levels of allowable public use. For example, Wild Forest units are less fragile ecologically than Wilderness units and the guidelines for public use reflect this. Snowmobiling is an acceptable use of Wild Forest units but is not allowed in Wilderness units. Further, accessibility to Wild Forest units is generally better than Wilderness units because motor vehicle roads, while not encouraged, are allowable in Wild Forest areas but not in Wilderness areas.

The intent of these restrictions is to concentrate different types of public use in the areas that can best support and withstand this use. For instance, an Intensive Use area cannot generally provide a backcountry experience while a Wilderness area is not an appropriate venue for a family reunion with 75 people camping for multiple nights at a single location.

a. Wilderness Areas

The Siamese Ponds and Silver Lake Wilderness Areas border the Wilcox Lake Wild Forest. Area statistics and brief descriptions are presented below.

Siamese Ponds Wilderness

Area	114,010 acres
Bodies of Water (80)	1,483 acres
Elevation (max.)	3,472 feet
Foot Trails	80 miles
Lean-tos	4

The Siamese Ponds Wilderness (SPW) is the third largest Wilderness areas in the Park and is located in the towns of Lake Pleasant, Wells, and Indian Lake in Hamilton County and the towns of Johnsburg and Thurman in Warren County. The SPW borders the WLWF along the northwest boundary for approximately 13.5 miles; the majority of this boundary is formed by the East Branch of the Sacandaga River with the remainder comprised of Route 8 and Mary's Brook. The APSLMP describes the SPW as follows:

> *"The topography consists of relatively low rolling hills with a few mountain summits like Bullhead, Eleventh, Puffer, and South Pond Mountains above the 3,000 foot level. In addition, the area contains a large number of beaver meadows and swamps....This large block of state land is unbroken by public roads and has been protected from wheeled motor vehicle use by administrative policies and the Sacandaga River, swamps, and other natural barriers....The area is known for its lovely natural features. Some of the more popular attractions are Thirteenth Lake, Chimney Mountain, Puffer Pond, Siamese Ponds, Auger Falls on the West Branch of the Sacandaga River, and John Pond. Chimney Mountain has ice caves that usually retain snow and ice through the summer months and provide an interesting spot for visitors."*

Despite the close proximity of the two units, little connectivity exists between the WLWF and the SPW due to the lack of crossings of the East Branch of the Sacandaga River. One of the few places where the two units "interact" is at the Teachout Road bridge-Forks Mountain Primitive Corridor. Currently, snowmobile traffic from the WLWF crosses the East Branch of the Sacandaga River on the Teachout Road bridge and continues west through the Forks Mountain Primitive Area Corridor which cuts across the southern tip of the SPW. The APSLMP strongly encourages ending snowmobile use of this corridor, a matter that is discussed in greater detail in the Management Actions section of this UMP.

Silver Lake Wilderness

Area	108,270 acres
Bodies of Water (48)	663 acres
Elevation (max.)	3,250 feet
Foot Trails	26.5 miles
Lean-tos	2

The Silver Lake Wilderness (SLW) is the fourth largest and southernmost Wilderness area in the Park and is located in the towns of Lake Pleasant, Benson, Wells, and Arietta in Hamilton County. The SLW borders the WLWF along its western edge; Route 30, the Sacandaga River, the Sacandaga Intensive Use Area (Sacandaga Campground), River Road, and numerous private parcels separate the two units. The APSLMP describes the SLW as follows:

> *"The terrain is relatively low with rolling hills and only four mountain tops that exceed 3,000 feet elevation....Silver Lake is the principal attraction near the center of this area, chiefly for brook trout fishermen. Mud Lake, Rock Lake, and Loomis Pond are also popular trout fishing spots. Big Eddy on the West Branch of the Sacandaga River and Cathead Mountain also attract visitors to the area. Hunters frequent the area during the big game season."*

There is little connectivity between the WLWF and the SLW, largely because of the lack of crossings of the Sacandaga River and the large amount of private land along Route 30; the Sacandaga Campground probably constitutes one of the few links between the units. One exception to this is the several small outparcels of the WLWF that border the SLW along River Road. Although these parcels are more closely associated with the SLW than the unit, they are managed under the APSLMP classification of Wild Forest and are part of the WLWF.

b. Wild Forest Areas

The Jessup River, Lake George, and Shaker Mountain Wild Forests are all in close proximity to the Wilcox Lake Wild Forest. Area statistics and brief descriptions are presented below.

Jessup River Wild Forest

Area	47,350 acres
Bodies of Water (9)	497 acres
Elevation (max.)	3,899 feet
Foot Trails	11.3 miles
Snowmobile Trails	28.3 miles
Lean-tos	0

The Jessup River Wild Forest (JRWF) is located in the towns of Arietta, Indian Lake, Lake Pleasant, and Wells in Hamilton County. The JRWF is composed of several large disjunct pieces, one of which is located between the Siamese Ponds Wilderness and the Silver Lake Wilderness along the western edge of the Wilcox Lake Wild Forest. The JRWF and WLWF are only separated by the Sacandaga River for a short stretch. The APSLMP describes the JRWF as

follows:

> *"Long popular with hunters, trappers, and fishermen, the interspersion of private woodlands with state ownership has made this area a top producer of fish and wildlife. The Jessup and Miami Rivers have long been known as good trout producers. Numerous logging roads and trails are open to foot travel. The Pillsbury Mountain summit, from which a vast view of lakes and forest may be obtained, offers a particularly enjoyable hike."*

Connectivity between the WLWF and the JRWF is quite low; the short common boundary, comprised the Sacandaga River, is not conducive with movement between the units. However, a snowmobile connection between Warrensburg and Speculator will probably rely heavily on trails in both units. Further discussion of this route is contained in the Management Actions section of this UMP.

Lake George Wild Forest

Area	62,242 acres
Elevation (max.)	2,645 feet
Foot Trails	26 miles
Primitive Campsites	20

The Lake George Wild Forest (LGWF) is located in the towns of Bolton, Chester, Hague, Horicon, Lake George, Lake Luzerne, and Warrensburg in Warren County and the towns of Dresden, Fort Ann, and Putnam in Washington County. The LGWF is located on the eastern side of the Wilcox Lake Wild Forest; the most closely associated parcels are probably the two small pieces north of the village of Warrensburg separated by the Hudson River. The APSLMP describes the LGWF as follows:

> *"Mountains rising steeply on either side of the lake provide many views of rugged beauty....The Tongue Mountain and Island Pond sections form the base for a varied wildlife resource. The moderating influence of the lake on both sides of this peninsula has produced an oak-pine cover type which is more characteristic of the southern part of the state than of the Adirondacks. Many plant and wildlife species found on Tongue Mountain are rarely found elsewhere in the Park.... The Black Mountain tract on the opposite shore is more precipitous. Spruce and hemlock are common. Recreational enjoyment of the area is enhanced by this diversity of plant and animal associations....Trails connect the lake at Shelving Rock and Black Mountain Point with interior ponds and the summits of Black Mountain and Sleeping Beauty. The latter provides some exceptional views."*

The connectivity between the LGWF and the WLWF is very low, probably because of the Hudson River and disjunct nature of both units where they border one another.

Shaker Mountain Wild Forest

Area	40,500 acres
Bodies of Water (30)	783 acres
Elevation (max.)	2,780 feet
Foot Trails	1.1 miles
Snowmobile Trails	8.1 miles
Lean-tos	1

The Shaker Mountain Wild Forest (SMWF) is located in the towns of Northampton, Mayfield, Bleeker, and Caroga in Fulton County and the town of Benson in Hamilton County. The SMWF is located at the southwestern periphery of the Wilcox Lake Wild Forest, south of the Silver Lakes Wilderness. The APSLMP describes the SMWF as follows:

> *"Most of the area was heavily logged prior to state acquisition and there are a considerable number of old log roads, chiefly in the southern half, where most of the hills are low and gently sloped. These woods trails make comfortable hiking that can be enjoyed by all ages....A number of small ponds afford some attractive camping sites. The second growth hardwoods that predominate allow easy foot travel both on and off the old woods roads and foot trails....This tract offers great potential to serve the wild forest recreational needs of New York's hikers, horsemen, snowmobilers, crosscountry skiers and campers, and it is capable of absorbing a considerable degree of public use."*

The SMWF and the WLWF have little effect on each other, with no trail connections or shared boundaries. The two units are separated by significant amounts of private land and the Sacandaga River.

c. Intensive Use Areas

The Sacandaga Intensive Use Area, also known as the Sacandaga Campground, is the only Intensive Use area closely associated with the Wilcox Lake Wild Forest. The two units are separated by Route 30, a two lane state highway with light to moderate traffic volume. Currently, there are no trails linking the WLWF and the Sacandaga Campground, but, with appropriate measures, an opportunity exists to enhance the experience of campground users by connecting them with the natural resources of the WLWF. Additionally, the bridge within the campground probably constitutes the safest snowmobile crossing of the Sacandaga River south of the Teachout Road bridge. For these reasons, proposals in the Management Actions Section of this UMP will seek to encourage increased connectivity between the WLWF and the Sacandaga Campground.

There is also at least one mapping error with respect to the APA's State Land Map regarding the Sacandaga Campground. The campground's current water reservoir (8,000 gallon capacity), an old 3,000 gallon reservoir and a short access road are all located east of State Route 30 on lands that are shown as Wild Forest on the APA map. This mapping error should be corrected to show the small area around these campground facilities as Intensive Use.

d. Hudson River-Black River Regulating District Lands

The lands surrounding Great Sacandaga Lake up to the high water mark are owned by the state and under the jurisdiction of the Hudson River-Black River Regulating District (HRBRRD). These lands include the islands within the lake and the area around the Conklingville dam. Much of this land, including the two largest islands, has been leased to private individuals who use it for docking boats, private swimming areas, and other minor improvements. However, the management of these lands is outside the scope of this UMP. One disjunct parcel of the WLWF, south of Great Sacandaga Lake in the town of Day, Saratoga County, borders HRBRRD lands.

e. State Forest

The "Blue Line," the line that delineates the boundary of the Adirondack Park, splits the state-owned parcel that straddles Lake Desolation Road in the towns of Greenfield and Providence in Saratoga County into a Forest Preserve parcel and a State Forest parcel. Because these pieces are adjacent, special care has been taken to establish the Park boundary on the ground to ensure that no inappropriate uses occur on the Forest Preserve half of the parcel.

f. County Lands

There are several parcels of county-owned land in the WLWF planning area. Most notable of these are two parcels adjacent to Forest Preserve land north of Day Center in the vicinity of Hadley Hill Road in the town of Day, Saratoga County, a parcel around the reservoir west of the hamlet of Corinth in Saratoga County, and the 1-acre parcel atop Spruce Mountain on which the State-owned fire tower is located.

G. CAPACITY TO WITHSTAND USE

It is obvious that the Wilcox Lake Wild Forest, like any area of public land, cannot sustain ever-increasing visitation without significant degradation of its essential wild character. Incidently, it is this natural character that often attracts visitors to the WLWF in the first place; if this feeling of pristineness is lost, the unit's attractiveness will undoubtedly diminish in the eyes of many users. Therein lies the dilemma facing most Forest Preserve managers – how to promote the present use and enjoyment of the Forest Preserve resources while simultaneously protecting them from overuse and ensuring that they are available for future enjoyment.

While the idea that ever-increasing use is not sustainable is reasonably intuitive, the same cannot be said for quantifying how much and what type of use *is* sustainable. Past research suggests that setting some general standard (e.g. number of visitor-days) that use must not exceed is impractical and highly ineffective. Rather than asking "how many users is too many," managers should be asking "how much change is acceptable."

1. Land and Man-Made Recreational Resources

a. General Observations

The level of human use in the WLWF has not generally exceeded the natural capacity of the resources to withstand this use. The obvious exceptions include resources such as the Crane

Mountain and Hadley Mountain Trails which exhibit overuse symptoms on par with those observed in the eastern part of the High Peaks Wilderness Area (HPWA) and some parts of the Lake George Wild Forest (LGWF). This is likely due, in large part, to the accessibility of these locations from the major transportation corridors and local population centers and the spectacular vistas that these specific locations provide.

High levels of soil erosion and compaction are probably the most obvious problems associated with overuse. On the aforementioned trails, these effects are due to extremely high volumes of foot traffic – upwards of 4,000 visitors per year at Crane and 15,000 visitors per year at Hadley. At other locations in the unit such as Bakertown Road, Wilcox Lake Road, and West Stony Creek Road, extensive use of four-wheel drive vehicles and All-Terrain Vehicles (ATV) on town roads and four-wheel drive use and occasional illegal ATV trespass on DEC roads and trails has resulted in similar instances of soil compaction and erosion, sometimes severe. These impact are compounded and exacerbated by a number of factors including use during seasonally wet periods, poorly located roads and trails with steep grades and wet spots, and large numbers of users combined with the aforementioned poor road and trail conditions which can result in extensive braiding.

Physical inspections of the trails and campsites throughout the WLWF by Department Forest Rangers and Foresters, coupled with user feedback, provide the following observations with respect to the capacity of the natural resources of the unit to withstand recreational use:

- Overall, the unit experiences the greatest number of users on summer weekends and holidays, especially on certain hiking trails such as the Hadley Mountain Trail. The high use levels on these popular trails can have multiple negative effects. Some of these effects are temporary; e.g. overuse may increase the crowdedness on the trail above an acceptable level for a Wild Forest setting. Additionally, overuse may result long-term effects; e.g. in places where the trails have been eroded to bedrock, hikers tend to walk on the edges of the trail, where the intact soil provides better footing. As hikers walk along these edges and more soil is worn away from the margins of the trail, the strip of exposed bedrock becomes wider and wider. This effect can be further exacerbated by water running down the trail, making the bedrock slippery and further eroding the edges of the trail. However, on the majority of non-holiday periods, the level of use of hiking trails in the WLWF remains such that long-term negative effects are minimal.

- Use of many trails is heaviest in the winter when the unit receives significant snowmobile traffic. Because winter use has far less impact on the trail condition than equivalent summer use, these trails are generally in reasonably good shape for their intended use. However, because many of the trails in the unit are snowmobile trails and were originally laid out and designed to support this activity, they may not be appropriately designed for summer foot travel. As a result, moderate amounts of use during the summer months may lead to poor conditions in some locations on these trails. For example, the Arrow Trail contains numerous seasonable wet spots that are inconvenient for summer hikers. However, these same locations are generally frozen during the winter and do not present a problem to snowmobilers.

- Recent changes in management of other Forest Preserve management units may affect use in the WLWF over the long term. For example, recent implementation of increased use restrictions in the High Peaks Wilderness Area (HPWA) of the Adirondack Park may result in an increase in visitation to other units. In addition, because Wild Forest units offer a greater range of recreational opportunities than Wilderness areas, there is heightened potential for user conflicts (e.g. skiers and snowmobiles, hikers and bikers). Therefore, it is increasingly important for ongoing monitoring of the unit's use to ensure that future potential displacement of use from other Adirondack Park units does not create unacceptable impacts on the recreational resources of the WLWF.

- Generally speaking, the majority of primitive tent sites in the unit appear to be well-established and stable. Most appear to be in suitable locations and self-contained.

- Lean-to sites on Wilcox Lake show some signs of overuse or inappropriate use, including littering, minor erosion, and loss of vegetation along the adjacent lakeshore.

In conclusion, superficial observation and anecdotal evidence suggest that very few locations in the unit experience visitation that vastly exceeds their capacity to withstand this use. Changes to the conditions of man-made and natural resources over time do not appear to be unacceptable. However, the conditions of the unit's natural and manmade resources have not been assessed with any measurable variables or compared to any recognized standards. Therefore, it is important that the Department implement a formal method of quantifying the impacts of use to the unit's resources and develop a strategy to address and correct overuse problems.

b. Formal Strategy

As previously stated, because the primary management goal on Forest Preserve lands is to preserve the integrity of the natural resources while at the same time enabling some level of sustainable use, it is essential to go beyond anecdotal accounts of the resources' conditions and formally adopt a standard way of assessing resource condition. To accomplish this goal, the understanding and application of several key ideas and theories is required.

Carrying Capacity Concepts

The term "carrying capacity" has its roots in range and wildlife management sciences. As defined in range management, carrying capacity means "the maximum number of animals that can be grazed on a land unit for a specific period of time without inducing damage to vegetation or related resources" (Arthur Carhart National Wilderness Training Center 1999). Over time, the concept has been modified to address recreational uses as well; however, its basic assumptions have proved to be significantly flawed when used to determine the maximum number of recreational users allowed to visit an area such as the WLWF.

After many years of study, basic research has suggested that the relationship between the amount of use and the resultant amount of impact is not linear (Hendee and Dawson 2001). For many types of impacts, most of the observable damage to the resource(s) occurs even at a relatively

low level of use. In some cases, such as trail erosion, once the soil begins to erode, additional foot travel on the trail does not cause the amount of impact to increase proportionately. This research has revealed that visitor behavior, site resistance/resiliency, and type of use may be more important in determining the amount of impact than the amount of use, although the total amount of use is still a factor (Hammit and Cole 1987).

These confounding factors make 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 site resistance/resiliency always requires research (often including much time, legwork and experimentation). Shaping the types of use impacting an area can call not only for education and 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.

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 DEC embraces this change in approach while recognizing the tasks it calls for in developing the best foundation for management actions. Professionally-informed judgements must be made such that carrying capacity is given definition in terms of resource and social conditions that are deemed acceptable; these conditions must be compared with the real, on-the-ground conditions; certain projections must be made; and management policies and actions must be drafted and enacted with an aim toward maintaining or restoring the conditions desired.

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 whether or not they are acceptable - is as critical in a Wild Forest area like the Wilcox Lake Wild Forest as it is in a Wilderness area. All such areas are State Forest Preserve units which must be protected, per the NYS Constitution, as "forever wild." Furthermore, the APSLMP dictates in the very definition of Wild Forest areas that their "essentially wild character" be retained.

The magnitude of the challenge here is made evident by other statements and acknowledgments found in the APSLMP concerning Wild Forest areas. The 1972 APSLMP claim that "[m]any of these areas are under-utilized" remains seemingly true, and from this determination and the determination that these areas "are generally less fragile, ecologically" comes a directive that "these areas should accommodate much of the future use of the Adirondack forest preserve."

Clearly, a delicate balancing act is called for, and yet just as clearly, the Department's management focus must remain on protecting the resource. "Future use" is not quantified in the above directive, but it is generally quantified and characterized in the definition of Wild Forest as only "a somewhat higher degree of human use" when compared to Wilderness. And whereas certain "types of outdoor recreation... should be encouraged," they must fall "[w]ithin constitutional constraints... without destroying the wild forest character or natural resource quality" of the area.

A central objective of this plan is to lay out a strategy for achieving such a balance in the Wilcox Lake Wild Forest. This strategy reflects important guidelines and principles, and it - along with the guidelines and principles - have directed the development of the management proposals which are detailed in Section IV.

Planning Approach

The long-term strategy for managing the WLWF uses a combination of two generally accepted Wild Forest planning methods: (1) the goal-achievement process; and (2) the Limits of Acceptable Change (LAC) model employed by the U.S. Forest Service and other agencies. Given the distinctly different, yet important purposes of these methods, there are clear benefits offered by employing a blend of these approaches.

Goal-Achievement Process

In Wild Forest units, the Department is mandated by law to devise and implement practices that will attain the Wild Forest guidelines laid out by the APSLMP. The goal-achievement process provides a framework for organizing UMPs to direct the determination of appropriate management actions through the careful, stepwise development of key goals and objectives. Goals are general descriptions of management direction reflecting legal mandates and general conditions to be achieved or maintained in the WLWF. Objectives are statements of more specific conditions whose achievement is necessary to assure progress toward the attainment of the more general goals. For each category in the Management Actions section of this plan, a written assessment of the current management situation and assumed future trends has been completed, an overall goal for the specific category has been described, objectives addressing specific steps required for achieving the goal have been distilled, and individual proposed actions to meet the objectives have been outlined.

However, this approach does little to establish specific thresholds of unacceptable impact on each of the unit's respective sets of resources nor does it give the land manager or members of the public clear guidance as to when a particular restrictive management action is warranted. Therefore, it is necessary to combine the goal-achievement process with some other method of assessing and addressing use issues – the limits of acceptable (LAC) procedure.

Limits of Acceptable Change (LAC) Method

The Limits of Acceptable Change (LAC) method employs carrying capacity concepts, not as a prescription of the total number of people who can visit a given area, but as a prescription or 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 well-crafted management objectives which are explicit and which draw on managerial experience, research, inventory data, assessments and projections, public input, and common sense. When devised in this manner, objectives founded in the LAC model essentially dictate how much change will be allowed (or encouraged) to occur and where, as well as how management will respond to changes. Indicators (measurable variables that reflect conditions) are chosen, and standards (representing the bounds of acceptable conditions) are set, all so that management efforts can be effective in addressing unacceptable changes. A particular standard may be chosen

to act as a kind of boundary which, given certain assessments, allows for management action before conditions deteriorate to the point of no longer meeting the standard.

Even well-conceived and well-executed efforts can prove ineffective and when this is the case, management responses must be adjusted appropriately. For this reason, monitoring of resource and social conditions is absolutely critical to make these necessary adjustments to management. The LAC model relies on monitoring to provide systematic and periodic feedback to managers concerning specific conditions related to a range of impact sources.

The LAC process involves 10 steps. These include:

1. Define Goals and Desired Conditions.
2. Identify Issues, Concerns, and Threats.
3. Define and Describe Acceptable Conditions.
4. Select Indicators for Resource and Social Conditions.
5. Inventory Existing Resource and Social Conditions.
6. Specify Standards for Resource and Social Indicators for Each Opportunity Class.
7. Identify Alternative Opportunity Class Allocations.
8. Identify Management Actions for Each Alternative.
9. Evaluate and Select a Preferred Alternative.
10. Implement Actions and Monitor Conditions.

Because of the substantial commitment of staff time and public involvement in implementing this process, the Department has distilled the LAC process into four primary factors used in identifying required management actions for an area:

- The identification of acceptable resource and social 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.

A prioritized list of indicators, which may be used by the Department for measuring and evaluating acceptable change on the WLWF, are:

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

These indicators form the basis for the proposed management actions presented in Section 4.

As previously mentioned, there are a few locations within the WLWF where heavy use during portions of the year have lead to obvious impacts. These areas include Wilcox Lake, Crane Mountain, and Hadley Mountain. The impacts do not necessarily suggest that the carrying capacity of these areas has been exceeded. However, they do point to the need for specific management actions to correct the problems. Certain trails, such as the Arrow Trail, show signs of some illegal vehicular use and need repair. Many roads in the area (e.g. Bakertown Road) are not well maintained and therefore have serious drainage and erosion problems. The use of various trails by both motorized and pedestrian activities (e.g. snowmobiling, snowshoeing, hiking and vehicular use) has also created use conflicts in certain areas of the WLWF. Heavy springtime fishing activity on Wilcox Lake also has at times created problems with noise and noncompliant behavior (S. Guenther, personal comm.). The specific conditions, management objectives, and proposed management actions to deal with these overuse problems are presented in Section 4 of this Plan.

This approach will require flexibility, determination and patience. It may not be possible to complete all inventories and assessments called for by this strategy, and by the APSLMP, in this plan's five-year time frame. It will be important to show progress in achieving APSLMP goals and in gaining initial managerial experience and knowledge in applying this strategy to some carrying capacity questions and issues. Knowledge gained as a result of the implementation of this first WLWF UMP will be useful to: a) revise and refine management actions, if evaluation shows that desired conditions are not being attained or sustained; and b) create 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 the WLWF.

2. Wildlife Resources

Current levels of consumptive (i.e., hunting and trapping) and non-consumptive wildlife uses are not expected to significantly impact wildlife populations in the WLWF. The inaccessibility of much of the unit substantially reduces the potential for overharvest of game species, including many furbearer species (e.g., river otter, fisher, and American marten) and provides a "reservoir" that ensures that harvests are sustainable over time.

Defining the amount and type of use that the area could withstand before negative impacts to the wildlife resource occurred would be a significant challenge. However, consideration of relative differences in wildlife or community sensitivities to disturbances could be useful for recreational planning. Endangered, threatened, and special concern wildlife species, critical habitats, and significant ecological communities should receive primary attention during planning efforts, because their capacity to withstand use is likely less than that for more abundant wildlife species and common habitats and communities. Furthermore, impacts to these resources due to our limited understanding of their capacity to withstand use could be much more serious than for other more common resources.

Several areas within the WLWF should receive careful consideration during planning efforts, including: 1) high-elevation and lowland boreal forests that are important to a number of wildlife

species, 2) shorelines of lakes where common loons nest, 3) the significant pine-northern hardwood forest and pitch pine-oak-heath rocky summit communities (Reschke 1990) identified by NYNHP, and 4) core deer wintering areas.

3. Fisheries Resources

Recreational angling in the WLWF appears to be moderate in most locations, although early season brook trout fishing pressure on many of the unit's waters, especially Bennett Lake, Kibby Pond, and Wilcox Lake, can be heavy. As a result, changes in the daily and total possession limit were implemented to protect the Wilcox Lake fishery, while the other waterbodies in the unit are protected by the statewide fishing regulations. Fishery inventories and anecdotal reports suggest that these fishing regulations are adequately protecting the fishery resource; i.e. under existing angling regulations, the coldwater and warmwater fish populations in the unit are capable of withstanding current and anticipated levels of angler use. Management actions are proposed in Section IV that will aid in the maintenance of native fish populations and determine the feasibility of reintroductions of native, extirpated, and endangered fish species where appropriate and consistent with Department policy and APSLMP guidelines.

H. EDUCATION, INTERPRETATION, AND RESEARCH

Very little education, interpretation, or research currently occur within the WLWF. Exceptions include the interpretive nature brochure and trail-side signs on the Hadley Mountain Trail developed by the Hadley Mountain Fire Tower Association and interpretive efforts by the summit steward stationed on this same mountain. As such, many opportunities for future improvements of the public education, interpretation, and research exist within the unit. These opportunities include:

- Researching methods to increase the quality and quantity of use data across the unit. Trail register data are generally incomplete due to vandalism, weather, and/or lack of register sheets. More meticulous collection of trail register data combined with other data collection techniques such as trail counters, user surveys, etc. may improve the Department's understanding of the types and intensity of use in the unit.

- Informing the public about the bald eagle community present in the vicinity of the Great Sacandaga Lake and Stewart's Bridge Reservoir. The effects of human disturbance need to be portrayed to the public, and a "do not disturb" approach may be beneficial. Continuing existing partnerships with the National Audubon Society, the Adirondack Mountain Club and other groups involved in the conservation of birds of the Adirondack region and fostering new partnerships will aid in achieving this goal.

- Researching the impact of acid rain deposition on the nesting success of songbirds in the WLWF. Acid rain can eliminate snails, arthropods, and other sources of calcium needed for egg production. The curtailment of sulphur dioxide emissions and the reduction of acid rain is currently a significant New York State initiative.

- Detailed inventorying and standardized monitoring of threatened and endangered plant and wildlife species, species of special concern, and rare communities in the unit and on surrounding private lands.

- Assessing the effects of the current and future levels of different types and intensities of recreational use on the unit's natural and man-made resources. This research would look primarily at air and water quality; soil erosion; man-made improvements including trails, primitive campsites, lean-tos, and pit privies; and biological resources, particularly plant and wildlife species of special interest.

- Continued monitoring of fish and wildlife game species and furbearer harvest by the DEC to determine what effect, if any, harvest has on fish and wildlife populations.

- Continued interpretation at Hadley Mountain in the form of a summit steward, brochure, and trail-side signage. These interpretative efforts reach and benefit the large number of users that visit this location annually.

- Expanding interpretation in the portion of the unit adjacent to the Sacandaga Public Campground. A trail from this campground with interpretive signage would probably be well-received by the public.

SECTION III – MANAGEMENT AND POLICY

A. PAST AND PRESENT MANAGEMENT

In light of the management restrictions imposed on Forest Preserve lands by various pieces of legislation, past management by the Department in the WLWF has primarily focused on fire protection and promoting public uses, including hiking, camping, snowmobiling, hunting, fishing, and other forms of outdoor recreation.

Fire protection, although still emphasized as a management priority, has become somewhat less important today than it was during the early and mid-20th century. However, remnants of the era of big Adirondack fires still remain in the form of the fire tower and observer cabin on Hadley Mountain, the bolts from the former fire tower on Crane Mountain, the fire tower on Spruce Mountain (although not on Forest Preserve land), and the open summits on many of the unit's peaks that resulted from turn-of-the-century fires.

The existing network of designated trails in the unit generally reflects the distribution of public and private roads from years past. These old roads continued to be used as thoroughfares for hikers, hunters, fishermen, and snowmobilers after state acquisition and consequently have warranted formal trail designations and regular maintenance.

Wildlife management in the unit, as in most of the state, has historically focused on the regulation of harvest of game species and furbearers and, more recently, the conservation of species of special interest (endangered and threatened species and species of special concern). Fisheries management has focused on reclaiming and/or stocking select waters to restore and/or propagate native brook trout or non-native cold- and warm-water fisheries.

Additional past and present management activities include the establishment of plantations on abandoned farmland acquired during the 1930s, possible (undocumented) salvage logging following the 1950 blowdown, and limited dam maintenance on several of the unit's lakes and ponds.

1. Land Management

Both historically and in recent years, the Department has taken something of a minimalist approach to the management of the Forest Preserve lands that comprise the WLWF. In applying this approach, the Department has been successful in maintaining a backcountry setting in the interior portions of the unit. By not designating a trail up every significant mountain peak or placing a lean-to at every trail intersection or water body, the Department has generally avoided encouraging use above and beyond what the resources of the unit can support. Further, this approach has provided an easily accessible area to those users whose top priority is avoiding other users and has allowed the Department to channel its financial resources to areas where use and impacts are significantly greater. It is hard to know if the overall light use of the unit is a response to the lack of improvements or if the lack of improvements is in response to the

generally light use. Regardless, it is not uncommon to spend a day in the interior of the unit without encountering another user.

As previously mentioned, following state acquisition and before the era of popularized outdoor recreation, the majority of early management efforts in the unit were dedicated to the prevention, detection, and suppression of forest fires. This fire management was largely in response to the repeated, severe wildfires that burned across the Adirondacks in the late 1800s and early 1900s. For example, successive severe fires on and around Hadley Mountain between 1903 and 1915 prompted the construction of the fire tower and observer cabin in 1917. This steel tower replaced a wooden tower on nearby Ohmer Mountain that had fallen into disrepair. Anecdotal evidence suggests that the current observer cabin dates back to the 1950s and is probably the second at this location. Today, the tower and observer cabin are used for interpretive purposes and receive routine maintenance.

The unit's several plantation forests are presumably a result of the 1930s reforestation movement that consisted largely of Civilian Conservation Corps (CCC) crews planting conifer species on burned areas and abandoned farmland acquired by the state for back taxes. Areas in the unit where these plantations are evident include along the Bakertown Road east of the Moosewood Club and along Old Armstrong Road east of Bartman Road.

The development of recreational facilities in the unit has been relatively minor. The unit's trail network largely reflects the distribution of old public and logging roads that served the area prior to state acquisition. Continued public use of the retired roads in the unit led to the eventual designation of many as trails. These old roads include the present-day Arrow Trail, Oregon Trail, Bartman Trail, Wilcox Lake-Willis Lake Trail, East Stony Creek Trail, Pine Orchard Trail, Murphy-Middle-Bennett Lakes Trail, and even a portion of the Hadley Mountain Trail. Because these trails were former roads, they have required little in the way of new trail construction or surface hardening.

Similarly, few of the unit's designated primitive campsites have required much additional development beyond the initial placement of a "Camp Here" disk. For example, the primitive campsites at the Fox Lair occupy locations that were already leveled and hardened to accommodate the 19th-century Oregon Tannery and many of the campsites along Rte. 8 are "jug handles" of Rte. 8 that were abandoned when the road was straightened over the years. Some of the campsites along Bakertown Road, such as the ones at "Fuller's Clearing" and "Moynihan's Second Clearing", are in locations where cleared openings for early homes or log landings have been maintained over the years. Further, only four lean-tos were constructed in the unit, and even the parking lots and trailheads are largely unimproved.

Because of the lack of other facilities, the principle management activity in the unit during the last 20-30 years has been trail maintenance. Formal trail maintenance has been principally accomplished by Department trail crews, Student Conservation Association (SCA) crews, and through cooperative agreements (e.g. Adopt-a-Natural-Resources stewardship agreements (ANRSAs, or AANRs)) with local snowmobile and hiking clubs. Other non-trail crew

Department staff, including foresters, forest rangers, and other Operations personnel also work on minor maintenance projects. The SCA crews are paid through an annual contract with the Department and typically complete one or two week-long projects in each unit per summer.

Temporary Revocable Permits

Maintenance work done on public and private roads and rights-of-way that adjoin or cross Forest Preserve lands is regulated through issuance of Temporary Revocable Permits (TRPs) if it entails tree-cutting or significant earth moving on Forest Preserve lands.

Stewardship Agreements

The Department maintains stewardship agreements and AANRAs with several private organizations in the unit. Of particular note are the stewardship agreements currently in place with the Thurman Connection snowmobile club and the Hadley Mountain Fire Tower Association. The Thurman Connection assists with routine maintenance, primarily blowdown removal, on the majority of the unit's snowmobile trails. Additionally, the club grooms many of the unit's snowmobile trails and provides information to Department personnel regarding potential trail improvements that would ensure a safer and more enjoyable snowmobiling experience. The Hadley Mountain Fire Tower Committee is a citizen task force that has dedicated time and monetary resources to restoring the Hadley Mountain fire tower and observer cabin and maintaining the trail to the tower. Recently, the Committee celebrated its 10th anniversary and is viewed as a model for fire tower adoption and restoration across the Adirondacks.

2. Wildlife Management

Past and present wildlife management activities on the WLWF have been shaped largely by Article XIV of the New York State Constitution that provides that the lands of the Forest Preserve "shall be forever kept as wild forest lands" and that the timber thereon shall not be "sold, removed, or destroyed." Therefore, habitat management through the use of timber harvesting, prescribed burning, or other means of modifying the vegetation to alter wildlife habitat is not permissible in the unit. Additionally, NYCRR §194.2 (b) prohibits prescribed fires to be set on Forest Preserve lands. Options for wildlife 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.

3. Fisheries Management

Fisheries management in the WLWF has emphasized brook trout, brown trout, largemouth bass, smallmouth bass and various panfishes. The Department stocks select waters in the WLWF annually to provide recreational fishing opportunities and help restore native fish communities. Bennett Lake, Crane Mountain Pond, Eagle Pond, Kibby Pond, Little Joe Pond, Lizard Pond, Middle Lake, Murphy Lake, Shiras Pond, and Wilcox Lake have been and continue to be managed solely as brook trout monocultures. If and when non-native fish species become

established in these waters, reclamation with rotenone is used to remove the undesirable fish species and then the waterbody is restocked with brook trout.

Historical biological data are available for all ponded waters in the unit excluding 24 unnamed waters, Greenfield Pond and Middle Lake (Appendix C). However, inventory data are not generally available for the streams and rivers in the WLWF. In the past, very little active fishery management has been conducted on the unit's waterways because of their remoteness and small size, although some of the accessible streams, including Mill Creek (Johnsburg), Mill Creek (Wells), and The Glen Creek have been stocked with brook, brown, and rainbow trout and public fishing access has been secured on some sections.

The waters of the WLWF are generally subject to statewide angling regulations, although a number of the larger waters in the unit are managed under special fishing regulations and may provide for angler use throughout the year. Information regarding general and special fishing regulations are occasionally posted near access points (especially on waters with special regulations) and can also be found on the Department's public website and in the Fishing Regulations publication provided with the purchase of a fishing license.

4. Water Resources Management

The water level in several of the water bodies associated with the WLWF are maintained through man-made water control devices (typically a dike or dam). Examples of these water bodies include Great Sacandaga Lake, Lens Lake, and Garnet Lake. Generally, the Department does not have jurisdiction over these structures unless they occur on Forest Preserve lands. The only example in the unit where this is the case is at Lens Lake, where the Department owns approximately half of the dam. At Lens Lake, the Department has, in the past, provided routine maintenance on the dam, in cooperation with the other stakeholders.

B. MANAGEMENT GUIDELINES

Wild Forest units, because of their allowable uses, higher carrying capacity, fewer resource-based constraints, and proximity to population centers, will need to accommodate the majority of public recreational uses in the Adirondack Park in the future. This use will include a wide variety of activities (e.g., hiking, fishing, hunting, snowmobiling, camping, horseback riding), many of which present the potential for significant user conflicts and potential resource degradation. This being the case, land and recreation management will be particularly important and potentially difficult in Wild Forest units.

Because the management of Wild Forest units present significant challenges to the Department, a series of guidelines have been established through state law, federal law, and Department policy to provide unit managers with direction. Although not generally specific to the WLWF, these guidelines, along with the management principles discussed later, provide the basis for management in the unit.

1. Guiding Documents

This UMP has been developed in accordance with the guidelines set forth by Article XIV of the State Constitution, Article 9 of the Environmental Conservation Law, Parts 190-199 of Title 6 NYCRR of the State of New York, the Adirondack Park State Land Master Plan, and established Department policy.

New York State Constitution
Article XIV of the State Constitution provides in part that, "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."

Adirondack Park State Land Master Plan (APSLMP) Wild Forest Guidelines
The APSLMP provides guidance for the use and management of lands which it classifies as "Wild Forest" by establishing basic guidelines. APSLMP management guidelines for Wild Forest Areas include the following:

- Prohibiting additions or expansions of non-conforming uses.
- Requiring minimum primitive campsite separation distances.
- Prohibiting material increases in the number or mileage of roads and snowmobile trails open to motorized use by the public.
- Designating separate areas for incompatible uses.
- Requiring all conforming structures and improvements to be designated and located in such a way as to blend with the surrounding environment.
- Requiring facilities to be designed to emphasize the self-sufficiency of the user.
- Requiring new, reconstructed or relocated lean-tos, primitive tent sites, and other shoreline structures to be located so as to be reasonably screened from the water (minimum 100-foot setback).
- Requiring pit privies to be located a minimum of 150 feet from water.

Additional constraints dealing with what constitutes conforming uses, facilities, and improvements in Wild Forest areas are described in detail in the APSLMP.

Wild, Scenic, and Recreational Rivers Act
The stretches of waterway in the unit that have been designated under this Act are to be managed in accordance to guidelines outlined by 6NYCRR Part 666 and the APSLMP.

Restrictions
Pursuant to NYCRR §196.5(b)(2), the operation of mechanically propelled vessels, other than those powered by an electric motor with a rating of five horsepower or less, is prohibited on Willis Lake (Town of Wells).

Policy Guidance
DEC policy has been developed for the public use and administration of Forest Preserve lands.

Select policies relevant to the management of the WLWF include:

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17)
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1)
- Tree Cutting on Forest Preserve Land (O&D #84-06)
- Cutting and Removal of Trees in the Forest Preserve (LF-91-2)
- The Administration of Conservation Easements (NR-90-1)
- Acquisition of Conservation Easements (NR-86-3)
- Division Regulatory Policy (LF-90-2)
- Adopt-A-Natural Resource (ONR-1)
- Policies and Procedures Manual Title 8400 - Public Land Management
- Fish Species Management (Liming EIS, Division of Fish and Wildlife General EIS, Comprehensive Plan for Fish Management)
- Motor Vehicle Access to State Lands Under the Jurisdiction of DEC for People with Disabilities (CP-3)
- Snowmobile Trails – Forest Preserve (ONR-2)
- Adirondack Subalpine Forest Bird Conservation Area – Management Guidance
- Forest Preserve Roads Policy (CP-38)

The Department also maintains 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 lands are provided through Attorney General Opinions, Department policy memos, and Regional operating procedures.

Clarification Documents

- Interim Guidelines for Snowmobile Trail Construction and Maintenance (11/1/2000)
- Clarification of Practice Regarding Motor Vehicle Use for Snowmobile Trail Grooming, Maintenance, and Construction (11/1/2000)
- Guidelines for Motor Vehicle Use Proposals in Wild Forest UMPs Memorandum (7/25/2001)

State Environmental Quality and Review Act (SEQR)

The recommendations presented in this unit management plan are subject to the requirements of the State Environmental Quality and Review Act of 1975. All proposed management activities will be reviewed and significant environmental impacts and alternatives will be assessed.

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. A Long Environmental Assessment Form (LEAF) is used to identify and analyze relevant areas of environmental concern based upon the management actions in the draft unit management plan. For this plan, SEQRA review has been initiated with the preparation of the LEAF. Upon review of the information contained in the LEAF, there will not be any large or important impacts associated with any of the

management actions, therefore there will not be a significant impact on the environment and a Negative Declaration will be prepared. Any changes that are made in this plan, based upon public comments, will be considered in the LEAF and determination of significance when the final plan is written.

Snowmobile Plan for the Adirondack Park
Appendix N consists of a briefing document published by the Department that outlines the vision and goals of the Snowmobile Plan for the Adirondack Park. The snowmobile trail recommendations of this UMP were developed in accordance with this document.

2. Guidelines

In addition to the guidance and information conveyed in the guiding documents described previously, the Department adheres to certain standards when developing management objectives and conducting management actions to meet those objectives. The following guidelines, standards, and practices will be applied when constructing, maintaining, and rehabilitating facilities and structures in the Wilcox Lake Wild Forest.

Department Standards
All **trail construction and relocation projects** will be developed in accordance with the APSLMP, and will incorporate the use of Best Management Practices, including but not limited to such considerations as:
- Locating trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or clear or partially cleared areas;
- Locating trails away from streams, wetlands, 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 crossings with low, stable banks, firm stream bottom and gentle approach slopes;
- Constructing stream crossings at right angles to the stream;
- Limiting stream crossing construction to periods of low or normal flow;
- Using stream bank stabilizing 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 **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 pond/lake shorelines, streams, wetlands, and unstable slopes;
- Use of drainage structures on trails leading to lean-to sites, to prevent water flowing into site;
- 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 storm water 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.

All **fish stocking projects** will be in compliance with the *Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation, Division of Fish and Wildlife*, dated December 1979.

All **liming projects** will be in compliance with the *Final Generic Environmental Impact Statement on the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters*, dated October 1990, as well as the Division of Fish, Wildlife and Marine Resources liming policy.

All **pond reclamation projects** will be in compliance with the "Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation" and *"Programmatic Environmental Impact Statement on Undesirable Fish Removal by the Use of Pesticides Under Permit Issued by the Department of Environmental Conservation, Division of Lands and Forests, Bureau of Pesticide Management."*

The Americans with Disabilities Act (ADA) and Its Influence on Management Actions for Recreation and Related Facilities

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 the manner by which people with disabilities are afforded equality 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 applies to the Department and requires, in part, that reasonable modifications must be made to its services and programs, 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 to the Department. Since recreation is an acknowledged public accommodation program of the Department, and there are services and activities associated with that program, the Department has the mandated obligation to comply with the ADA, Title II and ADA Accessibility Guidelines, as well as Section 504 of the Rehabilitation Act.

The ADA requires a public entity to thoroughly examine each of its programs and services to determine the level of accessibility provided. The examination involves the identification of all existing programs and services and an assessment to determine the degree of accessibility provided to each. The assessment includes the use of the standards established by Federal Department of Justice Rule as delineated by the Americans with Disabilities Act Accessibility Guidelines (ADAAG, either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. The development of an inventory of all the recreational facilities or assets supporting the programs and services available on the unit was conducted during the UMP process. The assessment established the need for new or upgraded facilities or assets necessary to meet ADA mandates, in compliance with the guidelines and criteria set forth in the Master Plan. The Department is not required to make each of its existing facilities and assets accessible. New facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in the "Proposed Management Recommendations" section.

The Americans with Disabilities Act Accessibility Guidelines

The ADA requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

Currently adopted ADAAG address the built environment: buildings, ramps, sidewalks, rooms within buildings, etc. The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities: trails, camp grounds, picnic areas and beaches. The proposed ADAAG is contained in the September, 1999 Final Report of the Regulatory Negotiation Committee for Outdoor Developed Areas.

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Further, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when the Department is planning the construction of new recreational facilities, assets that support recreational facilities, or is considering an alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance to achieve modifications to trails, picnic areas, campgrounds, campsites and beaches in order to obtain programmatic compliance with the ADA.

ADAAG Application

Current and proposed ADAAG will be used in assessing existing facilities or assets to determine compliance to accessibility standards. ADAAG are not intended or designed for this purpose, but using it to establish accessibility levels lends credibility to the assessment result. Management

recommendations in each UMP will be proposed in accordance with the ADAAG for the built environment, the proposed ADAAG for outdoor developed areas, the New York State Uniform Fire Prevention and Building Codes, and other appropriate guiding documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, the Department is required to use the best information available to comply with the ADA; this information includes, among other things, the proposed guidelines.

Historic and Archaeological Site Protection

The historic and archaeological sites located within the WLWF, as well as additional unrecorded sites that may exist in the unit, are protected by the provisions of the New York State Historic Preservation Act (SHPA - PRHPL Article 14), ECL Article 9, 6 NYCRR 190.8 (g) and Education Law §233. No actions that would impact these resources are proposed in this Unit Management Plan. Should any such actions be proposed in the future, they would be reviewed in accordance with the requirements of SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by ECL Article 9 and Education Law § 233. In some cases additional protection may be afforded these resources by the federal Archaeological Resources Protection Act (ARPA).

The archaeological sites located in the WLWF, 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 will be accomplished under the auspices of all appropriate permits. Research permits 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.

C. ADMINISTRATION AND MANAGEMENT PRINCIPLES

1. Administration

Administration of the WLWF is shared by several programs in the Department. Within the context of the WLWF, 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.

- The Division of Fish, Wildlife and Marine Resources 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, 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 water bodies 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, and maintains trails and lean-tos.

- The Division of Public Affairs and Education 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 all of New York's Environmental Conservation 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 Division of Forest Protection and Fire Management (Forest Rangers) 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 are the primary public contact for the WLWF. They are responsible for fire control and search and rescue functions. Forest Rangers enforce all state laws and regulations with emphasis on the Environmental Conservation Law.

2. Management Principles

Management of Forest Preserve lands is guided by a number of underlying principles that were instrumental in the initial creation and ongoing preservation of these areas.

General Forest Preserve Principles

The primary goal of Forest Preserve management is the perpetuation of Forest Preserve lands as "forever wild" pursuant to with New York State Constitution, Article XIV, Section 1. In conformance with the constitutional and legal constraints that embody this goal, the DEC manages the Forest Preserve to protect and preserve the natural resources of the Unit and to provide opportunities for a variety of recreational activities for people of all abilities where those activities are permissible under the APSLMP, Department regulations and policies, and will not

compromise the natural resource. Through partnerships with local governments, organizations, and individuals, DEC provides for the use and enjoyment of the Forest Preserve in a manner that is supportive of the economy of the region while protecting the wild forest character of the area.

Those areas classified as "wild forest" are generally less fragile, ecologically, than the "wilderness" and "primitive" areas. Because the resources of these areas can withstand more human impact, these areas should accommodate much of the future use of the Adirondack forest preserve.

The Department allows and promotes recreational use of the Forest Preserve to the extent that it does not degrade the character of the area. To achieve this, the DEC uses the "minimum tool" necessary to obtain specific objectives, employing indirect methods (limiting parking, etc.) whenever possible, and developing regulations only where necessary and as a final resort. Existing programs that promote responsible use and etiquette such as "Pack It In, Pack It Out," will be utilized where appropriate and feasible. Examples of successful programs and messages used in other management units include, "Leave No Trace" and the International Mountain Biking Association's "Rules of the Trail."

Public use controls are not limited to assessing and matching types and levels of use to physical and biological resource impacts. Social issues, such as user preferences, are also considered. This presents a unique challenge in managing the Forest Preserve, as access is free and use is relatively unregulated.

D. PLAN FOR PUBLIC PARTICIPATION IN THE UMP PROCESS

1. Introduction

Effective public participation/involvement is important to development of unit management plans. The exchange of information and perspectives between DEC staff and the public increases the understanding of resource management, unit management issues and concerns, and improves decision making. Through public participation the DEC provides opportunities for citizens to participate in the planning and decision-making process critical to the development of management plans for the use of public land units in the Forest Preserve. Timely, effective implementation of public participation activities help gather informed public input, provide opportunities for public involvement in decisions made during the planning process, and facilitate completion of effective unit management plans. A number of formal and informal activities are undertaken to inform the public and more importantly allow them opportunities to provide input on the development of the unit management plan. These include press releases, letters to interested parties, postings on the DEC website and open houses.

2. Document Repository

Document repositories may be established to provide a location for maintaining background information such as technical reports, facts sheets, plans, and other documents in a place easily

accessible to the public. The repositories are typically established in municipal offices, schools or community libraries in or near the forest preserve unit. Materials may be reviewed at the repository but not removed from the site.

Due to its proximity to the unit, a document repository for the WLWF was established at the Warrensburg DEC sub-office.

3. Initial Press Release

The initial press release serves as an introductory measure to inform the public that the Unit Management Planning process has begun and that their input is being sought. The press release also serves as a tool to inform the public of general facts and characteristics about the forest preserve and the specific unit. The press release also provides a brief description of Governor Pataki's 1999 Unit Management Plan Initiative, the components of the unit management planning process, the requirements and guidelines required by the Adirondack Park State Land Master Plan; and the role of the Adirondack Park Agency.

The press release identifies the unit management plan team leader and includes information for providing public comment to the DEC, such as a mailing address, a telephone number and an e-mail address. The date, time, location and brief description of a public open house is also provided.

The initial press release for the WLWF was sent out on April 1, 2002 to newspapers, radio stations and television stations in the Adirondack region and periphery. A copy of the press release can be found in Appendix S.

4. Interested Party Letter

The interested party letter provides the same notification and information as the press release. The difference being that the interested party letter is sent to specific interested parties. Interested parties are those individuals and groups that have previously indicated an interest in the management plan for a specific unit, or parties identified by the planner as being potentially affected by the plan.

Interest that may be affected by a plan may include local governments; businesses, such as camps, campgrounds, lodging facilities, guides and outfitters; recreational groups such as hikers, campers, climbers, hunters, anglers, trappers, boaters, and recreational vehicles users; adjacent landowners and local residents. The letter seeks out their input and informs them of the various means for providing comments to the DEC such as by letter, phone call, telefax, meeting, or email.

Interested party letters regarding the WLWF were sent to 263 individuals or groups on February 13, 2002. A copy of the interested party letter can be found in Appendix T.

5. UMP Web Page

The DEC has established a UMP web page that serves as a clearinghouse of information regarding the unit management planning process and individual unit management plans. The UMP web page's purpose is to keep the public up to date on specific developments relevant to each individual UMP. The web page also serves to reach the increasing number of people that depend on the internet for their information needs and as an additional way for the public to provide comment.

The essential elements within an individual UMP web page include a descriptive paragraph of the area, a map of the unit, a letter to interested parties, an open house notice, a summary of public comments, a draft UMP, and the final UMP. If a fact sheet is developed for the unit it is also included on the web page. An e-mail address for public questions and comments can also be accessed from this page.

The UMP Web Page, www.dec.state.ny.us/website/dlf/publands/ump/index.html, contains a link to the WLWF web pages.

6. Open House

An Open House is organized to provide the public with information on the unit management plan process and to facilitate the gathering of public comments. The open house is divided into four components. The informal discussion period, the DEC's presentation, formal oral comment period and another informal discussion period.

The informal discussion period provides an opportunity for members of the public to meet with the DEC staff serving as team members for a unit. During this period the public may gather information on the unit and the unit management process by speaking with DEC and APA staff , observing displayed materials or browsing through brochures, fact sheets, maps and other literature. The public may also take the opportunity to provide team members with information, ideas, or concerns they may have regarding the unit or the unit management process. Team members will note these comments and provide them to the team leader at the end of the open house.

DEC's presentation provides the public with information on the unit management planning process; the guidelines for developing a unit management plan such as Article XIV of the State Constitution, the Adirondack Park State Land Master Plan, as well as other applicable state laws, regulations and policies; and geographical, natural, recreational and historical facts about the unit.

Formal oral comments are then taken from those attendees who wish to participate. Speakers are allowed three minutes to provide information, express ideas, and share concerns they may have regarding the unit or the unit management planning process. The main points of the speakers comments are written down by DEC staff, or are tape recorded and later reviewed to determine

the main points. Speakers are asked to review what was written to ensure that their comments are properly represented. Speakers are also assured that additional comments may be provided by letter, phone call, telefax, meeting, or email.

The second informal discussion period allows those attendees who prefer not to speak publicly to share their thoughts with team members, and allows those who spoke to expand on or clarify their comments. As with the first informal discussion period, team members will note these comments and provide them to the team leader at the end of the open house.

The open house for the WLWF was held at the Thurman Town Hall in Athol, NY at 6:00 PM on March 8, 2002. Some of the issues that were discussed involved: the expansion of hiking opportunities, access improvements for persons with disabilities, motor vehicle limitations, fire protection improvements, and increased ranger patrols in the area. A copy of the agenda for the open house can be found in Appendix U.

7. Informal Discussions

Interested parties often meet with or telephone DEC to discuss management of a unit and provide information, concerns and ideas. Most often these informal discussions are held with the team leader, but any team member may be contacted. The comments made are summarized, noted and evaluated.

The team leader and team members assigned to the WLWF had numerous contacts with individuals and groups regarding the management of the area. The comments provided were noted and summarized with other comments provided by the public as described below.

8. Small Group Meetings

Occasionally it is deemed appropriate to assemble a group of individuals representing the various interests that may be affected by the unit management plan. While these small groups may be labeled Focus Groups, Discussion Groups, or Advisory Committees, the basic function of these groups is to discuss concerns and management options, and provide the DEC with information and suggestions to assist in selecting management options. DEC will form such groups when it is determined that group input or interaction would be helpful in addressing management options for particular controversial issues.

Due to the lack of conflicting interest groups or controversial issues, it was determined that the formation of a focus or discussion group was not necessary for the WLWF.

9. Public Comments

All comments from the public - however and whenever they are obtained - are noted, reviewed, summarized and evaluated as the UMP is developed. A response to public comments is developed as part of the planning process.

E. MANAGEMENT ISSUES, NEEDS, AND DESIRES

Many issues of concern were raised through the public input process and are being addressed through the development of this UMP. The following list outlines the issues, needs and desires that were received from the public during the UMP open house session and the public comment period.

- **Access for Persons with Disabilities**
  - Support motor vehicle access for persons with disabilities.
  - Improve existing hiking trail network to provide opportunities for persons with disabilities.
  - Support existing CP-3 access.
  - Request additional CP-3 access.

- **Promote hiking, skiing, etc. to take some of the heavy use burden off of the High Peaks Region of the Adirondacks**
  - Expand hiking opportunities to areas without trails or with limited access (e.g., Baldhead Mountain, north side of Crane Mountain Pond).
  - Identify and/or improve hiking trails elsewhere within the WLWF.

- **Segregate/Designate Types of trail uses (hikers/skiers, bicycles, horses, motorized vehicle, snowmobile, etc.)**
  - Improve trailheads; signage including emergency information at trail registers.
  - Continue maintenance of existing trail network including the relocation of existing trails from wetland areas to drier areas where feasible, and improvement of trail locations so they go to businesses, and in-turn, help improve the local economy.
  - Explore cooperative trail improvement and maintenance opportunities.
  - All newly developed trails should comply with State Standards and Guidelines as outlined in the New York *Statewide Comprehensive Outdoor Recreation Plan* (SCORP) trail standards and guidelines (NYSOPRHP 2003).

- **Motorized Vehicles – ATVs**
  - Research impacts of ATVs on Wild Forest lands.
  - ATVs are important to the economic vitality of the area.
  - Re-evaluate state policies regarding ATV use in the Adirondack Park.
  - Keep ATVs off trails allowing non-motorized use only.
  - Enforce ATV regulations in the Forest Preserve.
  - Designate appropriate routes for ATV use (i.e. Wilcox Trail). Maintain as needed with help from clubs to reduce impact and illegal use.
  - Designate areas currently open to 4-wheel drive use.

- **Motorized Vehicles – Snowmobiles**
  - Local snowmobile clubs desire improved maintenance of trails with an improved trail system linking towns (e.g. Stony Creek to Wells) and other points of interest (Murphy

Lake, Cod Pond, etc.).
- Keep snowmobile trails to character, grade, and width of footpaths and don't open these summer hiking and winter snowmobile trails to ATV use.
- Construct, maintain, and publicize community connector trails as outlined in the Snowmobile Plan for the Adirondack Park.

- **Enforcement**
  - Develop a strategy to deal with illegal motorized vehicle and ATV use in the Forest Preserve.
  - Management strategy will require supporting regulations to allow enforcement. Hire seasonal employees to assist with preservation of the resources, the area's heritage, and to improve educational opportunities for the public.
  - Need additional law enforcement personnel to assist Environmental Conservation Officers and Forest Rangers in enforcing illegal activities on forest preserve lands.

- **Other**
  - Increase tourism/business in the WLWF area by providing additional facilities (i.e. trails, scenic vistas, campgrounds, etc.). Increased use of underutilized areas within the WLWF would help relieve overuse in other units within the Adirondack Park (i.e. High Peaks, Lake George, etc.).
  - Provide additional individual and group camping opportunities within the WLWF, and designate these camping areas as per criteria outlined in the APSLMP.
  - Important to communicate with local groups (i.e. youth groups, snowmobile clubs, mountain bikers, hiking clubs, etc.) regarding opportunities within the WLWF.
  - Promote the use of volunteers (schools, clubs, etc.) and provide funding sources to maintain volunteer programs.
  - Increase opportunities for horseback riding within the unit.
  - Increase opportunities for mountain biking within the unit.
  - Improve public use data.

Issues identified above, and those proposed management actions dealing with creation, closure, maintenance, and improvement of facilities in the unit will be discussed in more detail in Section IV of this Plan.

SECTION IV – PROPOSED MANAGEMENT ACTIONS

This section of the plan breaks down the various resources of the unit into the following categories; bio-physical resources, land and cultural resources, man-made facilities, and public use and access. Under each resource category, the present conditions are discussed, management objectives described, and management actions to meet these objectives are proposed. All recommended actions are consistent with the management guidelines and principles outlined in Section III, and are based on information gathered during the inventory process, through public input, and in consultation with the Planning Team.

A. BIO-PHYSICAL RESOURCES

1. Air

Present Conditions:
Currently, the air quality in the WLWF is reasonably good. Motorized use of the unit's resources, especially by snowmobiles, probably has some negative effects on air quality but no monitoring has been conducted to determine if these effects are significant. Additionally, no research investigating the effect of noise pollution from motorized use of the unit's resources on user satisfaction or wildlife has been conducted.

Objectives:
- To maintain and/or improve air quality on the WLWF.

Management Actions:
- Monitor air quality on the WLWF to determine if potential air pollutants are affecting the resources or user experience in the unit.
- Develop a noise pollution monitoring protocol if it is deemed that noise pollution in the unit has become detrimental to user satisfaction and/or wildlife.

2. Water

Present Conditions:
The WLWF has ample water resources consisting of hundreds of miles of numerous small streams, mid-sized tributary streams, and rivers, 45 lakes and ponds totaling over 1,150 acres, and over 7000 acres of wetlands. Overall, the unit's water resources are in pristine condition – no major water quality issues have been identified within the WLWF. Nevertheless, there are some specific areas where some minor water quality impacts are occurring.

Fords across streams represent a potential site for water quality impacts from the disturbance of the stream bed and banks as well as occasional vehicle fluid discharges. The potential water quality impairments become more serious if and when a vehicle becomes stuck in the ford. The WLWF has two fords currently open to public motor vehicle access; one across East Stony Creek near Baldwin Spring and one across the Harrisburg Lake Outlet on Bakertown Road. A

third ford across East Stony Creek on Wilcox Lake Road was closed in 2004; permanent closure is proposed in this UMP. Studies of the unit's fords' current or future impacts on water quality have not been conducted.

Sedimentation from soil erosion on roads and trails can impact aquatic resources, but no research has been conducted to investigate whether these impacts are occurring in the WLWF. However, erosion is evident in the significant gully formation, exposed bedrock, and "washing" at several locations in the unit, including the Wilcox Lake Road, west of the East Stony Creek ford; the Hadley Mountain Trail; and the Crane Mountain Trail. Logging activity at the Dog 'n Pup Club in-holding along West Stony Creek Road has resulted in some significantly disturbed conditions on that road that may be contributing sediment to East Stony Creek.

Setback distances for lean-tos and pit privies are also important in preventing water quality impacts. Based on APSLMP guidelines, lean-tos must be set back at least 100 feet from the water's edge, while the setback requirement for pit privies is 150 feet. Although designated campsites can be located near the water, camping outside these locations is not allowed within 150 feet of the shoreline. No research has been conducted to determine if camping at designated campsites, lean-tos, or non-designated locations or pit privies associated with camping locations have had any significant effect on water quality in the unit or whether these effects are worse when the facility does not meet APSLMP setback distance guidelines.

As discussed in Section II, four rivers and streams in the WLWF are classified as part of the state's Wild, Scenic, and Recreational Rivers System; these include East Stony Creek, the East Branch of the Sacandaga River, the main branch of the Sacandaga River, and the Hudson River. The classification of these waterways under the Wild, Scenic, and Recreational Rivers System legislation requires special consideration when evaluating management proposals adjacent to these waterways.

Acidic deposition has caused significant acidification to some surface waters within the Adirondack Park, but currently, water quality monitoring by Department staff has revealed no significant acidification to any ponded waters in the WLWF. Data regarding the effect of acidic deposition on streams and rivers in the unit are nonexistent.

Objectives:

- To maintain and/or improve overall water quality in the WLWF.
- To protect and enhance the Wild, Scenic, and Recreational River corridors within the WLWF.
- To reduce the potential for pathogenic contamination (especially giardiasis) from all water sources.

Management Actions:

- Evaluate the appropriateness of the existing fords in the unit in the Roads-Management Actions subsection of this UMP. Consider closing all of the unit's fords, at least seasonally, if water quality impairment is occurring.

- Relocate facilities in the unit that do not meet APSLMP guidelines for setback distance from water. Construct future improvements, including lean-tos, pit privies, and groupings of primitive campsites, in such a manner that complies with these guidelines.
- Incorporate ALSC and biological survey work into all future water-related planning activities.
- Develop a routine water chemistry monitoring program specific to evaluating the effects of acidic deposition on the unit's water quality. This program should not only include ponded waters but also streams and rivers.
- Monitor activities under existing DEC rules and regulations on adjacent lands, especially timber harvesting and road construction, that have the potential to impact the quality of surface waters in the WLWF.
- Advise the public through DEC information and education programs to protect water quality while camping by using appropriate sanitation methods, and to treat all water prior to consumptive use.

3. Soil

Present Conditions:
Available soil data for the WLWF are limited; however, based on review of the Warren County Soil Survey (USDA 1989) and the Saratoga County Soil Survey Interim Report (USDA 1985), most of the soils located on steep slopes in the unit are highly susceptible to erosion. Erosion is common on some trails, e.g. the Hadley Mountain Trail, and may become a problem on certain other trails over time, especially if use increases. Examples of roads and trails that have become stream beds include the first segment of the Kibby Pond Trail, the Wilcox Lake Road west of the East Stony Creek ford, and several sections of the Crane Mountain Trail system. On the southern portion of the Arrow Trail, steep slopes to the east of the trail have resulted in washouts and very poor trail conditions. However, when looking at the unit as a whole, trail erosion is not significant on most trails at this time.

The trail, road, and campsite maintenance required to prevent further soil erosion within the unit is somewhat lacking. Currently, one or two trail maintenance projects are completed each summer in the unit; however the need for routine maintenance exceeds this allocation of resources. Over time, this lack of regular maintenance may lead to the gradual loss of soil from many of the unit's facilities.

Objective:
- To keep soil erosion and compaction caused by recreation use within acceptable limits that closely approximate the natural erosion process.

Management Actions:
- Target trail maintenance to heavily-used, highly-eroded trails such as the Hadley Mountain Trail and Crane Mountain Trail system.
- Evaluate permanent closures of roads, trails, and campsites with significant soil erosion problems in the appropriate sections of this UMP.

- Consider requesting voluntary compliance with seasonal closures of certain roads and trails during periods of wet weather; usually from November 1- December 15 and April 1-May 15, or at appropriate times set by the area manager.

4. Vegetation

Present Conditions:
The WLWF is dominated by mature second growth deciduous and mixed deciduous/coniferous forests. Wind, fire, insects and disease, pre-Forest Preserve logging, other past land use, and recreational use have all exerted an influence on the WLWF's vegetated landscape. Despite the widespread human-mediated changes that have occurred across much of the unit, several unique ecosystems requiring special management attention are present in the WLWF. These areas include the Pine Orchard area, the riverside ice meadows along the Hudson River, the red pine rocky summit on Crane and Huckleberry Mountains, the numerous wetland communities, and perhaps some other areas not yet identified. Within the unit, trees are only cut, by permit, for construction and maintenance of authorized improvements when suitable materials cannot be brought in from sources outside the unit. Additionally, hazard tree removal for road maintenance is allowed through the TRP process. Timber trespass from logging on adjacent private lands has occurred in the unit several times in the past and is of particular concern on isolated parcels of Forest Preserve land with limited access and/or public use.

Currently, APIPP has identified multiple occurrences of two invasive plant species, purple loosestrife and Japanese knotweed, at the periphery of the unit, but to date, no infestations of terrestrial or aquatic invasives have been identified in the interior portion of the unit.

Objectives:
- To ensure that the natural succession of plant communities in the unit is not altered by human impacts, most importantly recreational use and timber trespass.
- To preserve and protect known locations of sensitive, rare, threatened, and endangered plant species and communities.
- To assist natural forces in restoring natural plant associations and communities where they have been severely altered by human activity.
- To prevent the spread of invasive plants into the unit.

Management Actions:
- Develop LAC indicators and standards for the condition of vegetation at the unit's designated campsites.
- Monitor vegetation condition at these locations to ensure that LAC standards are not surpassed.
- Emphasize information distribution and public education as the primary means to reduce impacts and slow unnatural change in all vegetation protection and restoration programs .
- Support botanical studies on the WLWF to produce a more complete inventory of rare, threatened, and endangered species.
- Correlate ecological inventorying and mapping with recreation and fish and wildlife project

plans to avoid unintended and undesirable impacts to sensitive, rare, threatened, and endangered species.

- Mark unit boundaries and monitor logging activity on private lands adjacent to the unit to prevent deliberate or accidental timber trespass.
- Reclaim the abandoned gravel pit on Creek Road to appropriate standards.
- Enter into cooperative partnerships through Adopt-A-Natural-Resource Stewardship Agreements (AANRs) and Temporary Revocable Permits (TRPs) to facilitate containment and eradication of the invasive plant occurrences within the Unit. Any eradication work involving the use of herbicides will be carried out under an Interagency Work Plan for Management of Terrestrial Invasive Plant Species on State Land in the Adirondack Park (Invasive Plant Work Plan), developed by DEC and APA. This Invasive Plant Work Plan will provide a template for the process through which comprehensive active terrestrial invasive plant management will take place on state lands in the Adirondack Park. The Work Plan will provide protocols for implementing BMPs on state land. The protocols will describe what management practices are acceptable and when they can be implemented, who can be authorized to implement the management practices, and which terrestrial invasive plant species are targeted. The Work Plan will also describe a process by which the Department may enter into AANRs to facilitate individuals or groups seeking to manage terrestrial invasive plant species on state lands using the listed BMPs, including herbicide use, in the appropriate circumstances. The Invasive Plant Work Plan will be subject to SEQRA and serve as the mechanism for assessing the impacts and suitability of eradication BMPs and actions.
- Assess terrestrial invasive plant infestations occurring within the unit on a site-by-site basis prior to implementing containment and/or eradication controls. The geophysical setting and the presence or absence of sensitive native flora within or adjacent to the targeted infestation often dictates the Best Management Practices (BMP's) and limitations of the control methodology. Infestations occurring within specific jurisdictional settings may trigger a permitting process, as do most terrestrial infestations occurring adjacent to or within an aquatic setting. The species itself often dictates whether manual management controls, e.g. hand-pulling or cutting, or the judicious, surgical application of herbicides is warranted in order to best control that specific species in that specific setting. No single BMP guarantees invasive plant containment or eradication. Many infestations require multiple, seasonal control efforts to reduce the density and biomass at that setting. Adaptive Management protocols suggest that implementation of integrated control methodologies may provide the best over-all efficacy at specific infestations.
- Base all invasive plant management actions on specific knowledge of non-native invasive species present within the unit and their location, species, abundance, density, and life history characteristics. A complete inventory of the Unit is necessary to identify aquatic and terrestrial invasive plant threats facing the unit. Inventory will be based on existing inventories, formal or informal inventories during routine operations, and by soliciting help from volunteers to actively study the Unit and report on invasive species presence, location, and condition.
- Implement a continuum of Early Detection inventories in the unit. All trails, trailhead parking areas, lean-tos, horse trails, camping areas and other high-use areas and facilities

within the WLWF will be inventoried for the presence of invasive plant species.

- Assess the extent of the Eurasian watermilfoil infestation in Lake Algonquin through additional surveys.
- Implement a rigorous educational campaign to prevent the transport of aquatic invasive species. Aquatic invasive species signage will be posted at all public access locations.
- Inventory all waters with public access for the presence of aquatic invasive plants. When identified, all "easy to contain - low abundance" aquatic plant infestations will be considered immediate targets for containment and eradication controls. Minimizing the spread of newly documented and immature infestations before they have the chance to become well-established will be considered a priority management action. Rapid response will be implemented by hand-pulling plants via the guidelines set forth by the Adirondack Park Agency's "Advice on the Hand-harvesting of Nuisance and Invasive Aquatic Plants." Additional methods may be required to manage an infestation to contain, reduce, or eradicate the population. Management will require assessing a set of criteria to evaluate site conditions to determine appropriate and permitted actions. Additional research and collaboration among partners and stakeholders will occur to develop an appropriate, effective, and approved prevention and integrated plant management plan.
- Implement perpetual ED/RR protocols in probable locations of invasive plant introductions. 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 include:
    - Public Day Use Areas
    - Parking Areas
    - Primitive Tent Sites
    - Boat Launches
    - Roads
    - ATV CP-3 Routes
    - Snowmobile Trails
    - Horse Trails
- Incorporate protocols to minimize the introduction and transfer of invasive plant species during routine operations and historic and emergency maintenance activities, which may include the following:
    - Construction Projects – Supplemental to the principles of the Minimum Tool Approach, all soils/straw/seed or sources of materials to be used as stabilization/cover for construction projects within the unit will be certified as weed-free.
    - Trail and Road Maintenance – Supplemental to the principles of the Minimum Tool Approach, all soils/straw/seed or sources of materials to be used as stabilization/cover for trail and road maintenance projects within the unit will be certified as weed-free.
    - Field Sampling – Personnel performing field sampling should avoid transferring aquatic invasive species between waters by thoroughly inspecting and cleaning equipment between routine operations. Potential pathways include: vehicles, boats, motors, and trailers; sampling equipment; measuring and weighting devices; monitoring equipment; and miscellaneous accessories.
    - Angling Tournaments / Derbies – Licensing, registration, and/or permitting

information distributed by the Department to Tournament or Derby applicants should include guidelines to prevent the introduction and transport of invasive species.

- Recognize that the restoration of sites where invasive plant management occurs is critical to maintain or enhance historical ecological function and structure. Restoration should incorporate best available science to determine effective techniques and the use of appropriate native or non-invasive plant species for site restoration.
- Work to educate natural resource managers, elected officials, and the public because disseminating information 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 should 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.

5. Wildlife

Present Conditions:
While all of the objectives and management actions outlined below are important, a management priority should be placed on increasing the understanding of the occurrence and distribution of many wildlife species and their habitats within the WLWF. This priority is reflected under the list of potential management action projects (denoted by letters) outlined below.

Objectives:
- To perpetuate, support, and expand a variety of wildlife recreational opportunities, including sustainable hunting and trapping and 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 increase understanding of the occurrence, distribution, and ecology of game and non-game wildlife species and their habitats.
- To minimize wildlife damage and nuisance problems.
- To meet the public's desire for information about wildlife and its conservation, use, and enjoyment.

Management Actions:
- Manage and protect wildlife through enforcement of the Environmental Conservation Law and applicable Rules and Regulations.
- Support traditional use of the unit's wildlife resources, particularly activities designed to perpetuate hunting and trapping programs and education efforts.
  a. Conduct a survey of hunters and trappers that use the unit.
- Continue to monitor and inventory wildlife populations and their habitats, particularly game species, species classified as threatened, endangered or special concern, and those species associated with boreal habitats.
  a. Conduct targeted surveys for threatened and special concern bird species that were documented in the first Breeding Bird Atlas Project, but not the second. These species

include Northern Harrier, Henslow's Sparrow, Northern Goshawk, Common Nighthawk, Horned Lark, Golden-winged Warbler, and Grasshopper Sparrow.

b. Inventory boreal forest habitats within the unit.
c. Where harvest information is lacking, conduct surveys for American marten to better understand distribution and habitat use.
d. Conduct surveys for bird species associated with lowland and high-elevation boreal forest. Priority should be placed on those species that were detected during the first Breeding Bird Atlas Project, but not the second and on those species that were not detected during either project. These species include Spruce Grouse, Bicknell's Thrush, Black-backed Woodpecker, Gray Jay, Palm Warbler, Red Crossbill, Connecticut Warbler, American Three-toed Woodpecker, Cape May Warbler, Bay-breasted Warbler, Red Crossbill, Blackpoll Warbler, Blackburnian Warbler, and Tennessee Warbler.
e. Monitor existing radio-collared moose and continue to collar new individuals on an opportunistic basis.
f. Monitor use of deer wintering areas in the unit.
g. Continue to support statewide survey efforts that increase our understanding of the occurrence and distribution of flora, fauna, and significant ecological communities (e.g., Breeding Bird Atlas, New York Natural Heritage Program surveys).

- Accomplish active management of wildlife populations primarily through hunting and trapping regulations developed by the NYSDEC Bureau of Wildlife for individual or aggregate Wildlife Management Units. Continued input from Citizen Advisory Committees will be considered in determining desirable levels of wildlife.
- 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.
  a. Conduct surveys for Spruce Grouse and evaluate the distribution and quality of potential Spruce Grouse habitat. Based on results of the surveys and habitat assessment, consider reintroducing this species.
- 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, advice and/or direct assistance to requests for relief from, or solutions to reduce or alleviate, problems with nuisance wildlife.
  a. Provide information to user groups on avoiding problems associated with black bears. Encourage the use of bear-resistant food canisters.
  b. Work cooperatively within the Department to assess problems associated with beaver-flooded trails. Recommend, where appropriate, the use of water-level control devices to control flooding. Work with area trappers and encourage trapping at nuisance sites during the open beaver trapping season.

6. Fisheries

Present Conditions:

Fisheries inventory data for the WLWF indicate the presence of both native and introduced fish

communities in the lakes and ponds across the unit. Many of the unit's waterbodies are managed exclusively as brook trout fisheries and have been reclaimed with rotenone in the past to remove invasive, non-native fish species accidentally or purposely introduced to them. Reclamation and brook trout stocking in the WLWF has helped to propagate and sustain an outstanding recreational resource and restore, to the extent possible, the natural aquatic ecosystems that existed in the unit prior to European settlement. In most cases, this management has been extremely successful and has provided the public with a unique, backcountry brook trout fishing experience found few other places in the country outside the Adirondacks. In waters lacking the deepwater habitat necessary to support a coldwater fishery or that cannot be reclaimed due to extensive wetlands or the absence of natural or manmade fish barriers, non-native fish species are typically present and in some cases encouraged. An example of a non-native warmwater fishery promoted by the Department is Round Pond, where largemouth bass were stocked during the 1990s. On several waters, such as Wilcox and Bennett Lakes, the construction of fish barrier dams followed by reclamation would significantly aid in the removal of non-native fish species and the maintenance of a brook trout monoculture.

Access to the fisheries in the WLWF is reasonably good. Many of the popular lakes and ponds have designated trails to them, although several waterbodies that are stocked with brook trout, such as Eagle Pond, Little Joe Pond, New Lake, and Shiras Pond, are not accessed by formal trails. Additionally, the Department has worked to procure public fishing rights on Mill Creek in the Town of Johnsburg, arguably the best coldwater stream fishery within the WLWF planning area. This combination of developed and undeveloped access to the unit's fisheries provides a variety of opportunities for users, ranging from roadside fishing at Garnet Lake and The Glen Creek to short, easy hikes via designated trails at Wilcox Lake and Kibby Pond to true backcountry fishing requiring a substantial bushwhack at New Lake and Shiras Pond.

Despite the popularity of fishing in the WLWF, data regarding the use of the unit's fisheries are severely lacking. While anecdotal accounts suggest many of the unit's ponds and lakes receive substantial fishing pressure during early trout season, trailhead register data do not generally support these observations, probably indicating a failure to sign-in at registers by this user group. Additionally, no surveys have been conducted to determine if the current level of recreational fishing pressure in the WLWF is negatively impacting the unit's fisheries.

Water chemistry data collected on the unit's waters suggest that acid deposition has not significantly impacted the unit's fisheries. Only two water bodies associated with the unit, Lens Lake and Albia Pond, have a pH of less than 5.7. However, much of this data is several decades old and should be updated. When necessary, pond liming has been identified as an available technique for mitigating the effects of acidification.

In contrast to the ponds and lakes in the WLWF, inventory and water chemistry data for the unit's streams and rivers are conspicuously absent. Little is known about the quality of the unit's stream fisheries or the level of use they receive.

Objectives:

- To maintain, enhance, and perpetuate an array of diverse, high-quality fishing opportunities in the WLWF in accordance with sound biological management practices.
- To maintain brook trout populations in the unit's waters that currently support these fisheries through reclamation and stocking. Reintroduce brook trout to waters where conditions are conducive to trout survival.
- To maintain and enhance the unit's warmwater fisheries in those waters that will not support a brook trout fishery.
- To continue monitoring water chemistry throughout the unit for the effects of acidification.
- To ensure that other management proposals and activities do not negatively affect the unit's fish populations.

Management Actions:

- Build fish barrier dams at Wilcox and Bennett Lakes. Following the construction of the dams, reclaim these waters with rotenone to remove non-native fish species and restore their native brook trout populations. Appropriate locations for these structures have been identified on the outlets of both lakes.
- Reclaim Murphy and Middle Lakes with rotenone to remove non-native fish species and restore their native brook trout populations. Both lakes have natural fish barriers that will prohibit natural recolonization by undesirable fish species.
- Monitor the unit's brook trout fisheries periodically for the presence of non-native fish species and reclaim if and when non-native species become established. Special attention should be given to Eagle, Kibby, Lizard, and Crane Mountain Ponds. When reclamation of any of these ponds is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.
- Maintain existing regulations and signage making use and possession of live bait illegal on specific unit waters with native fisheries that could be negatively impacted by introduced fish species. Develop new regulations making use and/or possession of live bait illegal on those unit waters with native fisheries where such regulations do not currently exist and establish the appropriate signage to support these restrictions.
- Examine whether special regulations on any of the unit's waters will protect or enhance those specific fisheries. Give careful consideration to establishing special regulations on the unit's waters that may support trophy brook trout fisheries to perpetuate these resources.
- Monitor water chemistry periodically across the unit and apply lime to waterbodies when pH falls below 5.0.
- Improve fishing access to Wilcox Lake by developing a formal parking area on Bakertown Road where motor vehicle access ends.
- Improve fishing access to Little Joe and Eagle Ponds by formally marking the existing herd paths as DEC trails.
- Develop and implement methods to improve the collection of fishermen use data. These methods may include improved signage at trailheads stating the importance of signing in at trail registers, angler surveys, creel surveys, etc.
- Repave the Saratoga County Boat Launch ramp and extend lakeward to facilitate launching

at lowest anticipated water levels. Construct and implement a steel skid dock to provide docking facilities for this site. A bulkhead is not anticipated to be necessary for this type of docking facility. Make toilet facility accessible for persons with disabilities.

B. LAND AND CULTURAL RESOURCES

1. Administration (Funding/Budgeting/Staffing)

Present Conditions:
The Department's programs in the WLWF are funded through the state's general fund, the Environmental Protection Fund, and bond acts. Additionally, Division of Fish, Wildlife and Marine Resources functions are supported by the Conservation Fund, generated through the sale of fishing, hunting, and trapping licenses. Historically, management of the resources of the unit, and Forest Preserve lands in general, have been divided along the lines separating the program divisions. Additionally, personnel jurisdictions did not always reflect unit boundaries but were instead tied to county or regional boundaries. In recent years, there has been an attempt to improve coordination and cooperation between the different divisions responsible for managing the various resources encompassed by a Forest Preserve unit. The current unit management planning process reflects this change in the Department's approach to Forest Preserve management; the Unit Management Planning Team is comprised of various Department staff who provide input in their area of expertise to the primary planner.

Objectives:
- To maintain adequate funding levels to assure proper management and maintenance of the unit's facilities.
- To improve communication and coordination between Department Divisions, other state agencies, local municipalities, and volunteers.

Management Actions:
- Designate a unit manager for the WLWF who would coordinate all Department activities within the unit.
- Reach out to non-profit organizations and volunteer groups to develop AANR agreements for many of the unit's most popular resources to help defray some of the maintenance costs associated with these heavily-used resources.
- Conduct annual meetings of the Planning Team to ensure continued cooperation and opportunity for input from the Department's various divisions.
- Through the UMP process, the public has raised the issue of ongoing resource degradation on Sand Island in the Great Sacandaga Lake resulting from overuse and improper sanitation. Sand Island, like the other islands in the lake, is under the jurisdiction of the Hudson River/Black River Regulating District (HRBRRD), not DEC. However, DEC will continue to encourage HRBRRD to address these issues and may provide assistance, where possible.

2. Open Space/Land Acquisition

Present Conditions:
The overall framework for land protection in New York State is described in the 2006 New York State Open Space Conservation Plan (NYSDEC and OPRHP). The plan is built from the bottom up from the work of nine regional committees, representing the spectrum of open space advocates, natural resource and recreation professionals, local government, and concerned citizens. This plan ensures that the State of New York conserves its open space resources as part of ongoing efforts to improve the economy and the quality of life in New York communities.

Certain areas within the WLWF planning unit will be given a high priority for protection when acquisition by the state is being contemplated. These areas include the following:

1. Private in-holdings surrounded by state-owned lands.
2. Private properties that create significant accessibility limitations to state land.
3. Threatened and endangered species habitat.
4. Property that help solve management problems (e.g. linking to an existing trail system).
5. Areas containing designated wild, scenic, or recreational rivers.

Although no specific parcels within the unit have been identified as priorities for protection in the State Open Space Conservation Plan, appropriate opportunities for land acquisition are regularly evaluated as they become available (NYSDEC and OPRHP 2006).

Objectives:
- To enhance resource protection or recreational use of the WLWF in accordance with the recommendations of the State Open Space Conservation Plan.
- To minimize any adverse impacts of public land acquisition on private landowners and local municipalities.

Management Actions:
- Continue to identify and evaluate land protection opportunities as they arise.
- Pursue conservation or public access easements as alternatives to fee acquisition when appropriate and desirable.
- Identify scenic areas as priorities for land protection.

3. Cultural/Historical/Archaeological Sites

Present Conditions:
The Adirondack Park and the WLWF contain numerous cultural resources related to their history and occupation by Native Americans and European settlers. The unit includes former mines, logging camps and tanneries, as well as cemeteries and roads. Management of these cultural resources is mandated by Section 106 of the National Historic Preservation Act, Section 14.09 of the State Historic Preservation Act, and the State Environmental Quality Review Act (SEQRA). None of the sites identified in the inventory of cultural resources appear to be under any

significant threat. There are no existing programs or signage within the WLWF that identify and describe historic features.

Objective:
- To protect, to the extent practicable, any and all historic and archeological sites within the WLWF.
- To provide opportunities for the public to learn the history of the WLWF.

Management Actions:
- Consider providing opportunities for historic interpretation at the trailheads of high use areas (e.g. Wilcox Lake, Hadley Mountain, and Crane Mountain) to educate the public on the general history of WLWF and any specific features within the area. Trails that are improved for universal accessibility may receive greater use than under present conditions and may become good locations for disseminating historical information.
- Continue the current method of protection for cultural resources, which is non-disclosure of locations. This practice appears to be effective given the low levels of use and should be continued.
- Continue to maintain records of the location of known cultural resources and consult mapping whenever management actions are implemented to ensure known resources are not inadvertently damaged.

C. MAN-MADE FACILITIES – MAINTENANCE, REHABILITATION, REMOVAL, AND DEVELOPMENT

1. Boundary Maintenance

Present Conditions:
The WLWF is made up of numerous parcels of Forest Preserve land ranging from 13 acres to over 111,500 acres in size. The parcels that comprise the unit have approximately 364 miles of boundary line that must be marked and maintained with some regularity. State land boundaries have traditionally been marked with yellow painted blazes applied to tree trunks along the property line. These markings fade over time and require periodic remarking. Department policy regarding boundary line maintenance dictates that this remarking should occur every seven years. The job of boundary marking was formerly the responsibility of the Forest Rangers working on the unit. Currently, however, boundary marking is not a part of the Rangers' job description and is being conducted by seasonal work crews or by the Rangers on an unofficial basis. Because of a lack of manpower and coordination, some boundaries in the unit are no longer being maintained on a regular basis. This lack of maintenance could present the need for reestablishment of Forest Preserve boundary markings by survey in certain areas. Many of the land parcels within the WLWF have been in state ownership for over 100 years and their boundaries have never been formally surveyed by the state. Thus, their reestablishment through survey would be a costly and time consuming undertaking. Regular maintenance of the boundaries is a much more cost-effective alternative.

As an example of the ongoing boundary line deterioration in the unit, backlogged survey requests over the last 25 years were compiled for the Towns of Hadley and Stony Creek by Forest Ranger S. Guenther and are shown in Table 14. Undoubtedly, similar lists could be produced for most towns in the unit. Because the initial, and often times only, survey of many of the unit's lots was completed nearly 100 years ago, the difficulty and cost of resurveying them will only increase as time goes on and evidence from past surveys, such as old blazes and monuments, is lost.

Table 14. Backlogged survey requests for Forest Preserve parcels in the Towns of Hadley and Stony Creek over the last 25 years, generated from Forest Preserve Boundary Maintenance Cards kept by Forest Ranger S. Guenther.

Lot Location*
Town of Hadley, Saratoga County
Palmer's Purchase, River Division, Great Lot II, 8 Acs.
Town of Stony Creek, Warren County
Palmer's Purchase, Middle Division, Great Lot II, Lots 12, 13
Palmer's Purchase, Middle Division, Great Lot III, Lots 3, 4 ,5
Palmer's Purchase, Rear Division, Great Lot I, Lots 4, 10, 26, 35, 37
Palmer's Purchase, Rear Division, Great Lot II, Lots 43, 44, 45, 46, 47
Palmer's Purchase, Rear Division, Great Lot IV, Lot 20, 21
Dartmouth Patent, Great Tract, R-3, Lots 5, 7
Dartmouth Patent, Great Tract, R-4, Lots 5, 7
Dartmouth Patent, Great Tract, R-5, Lot 8
Dartmouth Patent, Upper River Division, Lots, 4, 5, 6

*From NYSDEC Adirondack State Land Map, April 30, 1983

The abandonment of boundary marking is not an appropriate alternative. Marked boundaries are important in preventing unintended impacts to the Forest Preserve such as unauthorized timber harvest, motorized vehicle trespass, and other inappropriate or otherwise prohibited activities.

Objective:

- To provide well-marked WLWF unit boundaries for administrative and public use purposes.

Management Actions:

- Assess the unit's boundaries, through physical inspection, deed research, and examination of past Department records, to determine resurvey and maintenance needs. This assessment

should also include a compilation of a list of backlogged survey requests for all the towns in the unit, such as the one shown above for the Towns of Hadley and Stony Creek. Special priority should be given to these lots. Undertake maintenance activity to ensure all boundaries are identified and marked within the five-year implementation of this plan. Brush, paint, and sign all boundary lines at least once every seven years.

- Monitor boundaries for unauthorized activities, such as illegal motor vehicle and ATV entry and timber trespass.
- Sign unit boundaries with boundary signs identifying the Wild Forest classification of the unit.
- Correct apparent mapping error(s) in the APA's State Land Map with respect to WLWF and the Sacandaga Campground. Specifically, an 8,000 gallon cement water reservoir used by the campground is located east of State Route 30 on lands erroneously shown as Wild Forest.

2. Trails

Present Conditions:

Trails are arguably the most prominent man-made feature of the WLWF. The unit's trail system encompasses approximately 80 miles of trails, generally designated for snowmobile and/or foot travel. Trails designated for snowmobile use comprise the vast majority of the trail mileage in the unit and offer the greatest diversity of uses based on APSLMP guidelines; snowmobile trails support all the recreational activities that occur on foot trails in addition to snowmobiling and are typically better suited to all-terrain bike (ATB) use and horseback riding than foot trails. Designated foot trails, while open to ATB use, are typically better suited to non-mechanized uses such as snowshoeing and nordic skiing in addition to hiking because of their narrow width and frequent placement on steep slopes. Designated foot trails constitute only a small percentage of the unit's total trail mileage; currently there are only five designated foot trails in the WLWF – the Crane Mountain Trail system, the Tenant Creek Falls Trail, the Hadley Mountain Trail, the Kibby Pond Trail, and the St. John Lake Connector Trail, totaling slightly over 8 miles.

For snowmobile trails, the overall goal of management is typically to improve the connectivity of the trail system as a whole. By looking at the big picture and determining if a trail provides some useful connection between two points of interest (typically local communities), sensible long distance snowmobile routes can be developed and enhanced and snowmobilers and local communities will benefit. In recognition of the increasing popularity of snowmobiling in the Adirondack Park and the benefits this activity brings to local economies as well as the environmental impacts which snowmobile trails can have, the DEC has prepared a Snowmobile Plan for the Adirondack Park. The vision of the Snowmobile Plan is to:

> *"Develop and maintain an integrated snowmobile trail system on public and increasingly on private land in the Adirondack Park that will provide snowmobilers with an experience that is consistent with the spirit and letter of Article XIV of the State Constitution while also striving to enhance the vitality of the Park's citizens by providing trail linkages between local communities within the Park."*

Three caveats accompany this vision that require the consideration of the protection of the Park's natural and cultural resources and Wild Forest character, the provision of a safe and enjoyable snowmobiling experience, and the evaluation of opportunities for increased tourism and economic development. The linkages between local communities referenced in the Snowmobile Plan are commonly referred to as "Community Connectors" and/or "trails to facilitate snowmobile access between communities" and are recognized by the State as important routes for recreation and economic development. Because of the economic importance of these connections and public interest surrounding the routes, the establishment of two such connections that use the unit's trail system, the Warrensburg to Speculator connection and the Wells to Northville connection, have been considered at length in this plan.

Once developed, all trails must receive some degree of maintenance; otherwise their condition deteriorates, resulting in accelerated soil erosion, water quality impacts, and a potential decline in user safety and satisfaction. Currently, the need for trail maintenance in the unit is substantially greater than the maintenance resources the Department has to offer, resulting in a backlog of unmet trail maintenance and reconstruction projects on most of the unit's trails. This lack of maintenance resources has resulted in localized poor conditions on some trails in the unit, specifically those that receive high levels of use. In addition to DEC Operations staff, the Department relies on user groups (e.g. snowmobile and hiking clubs), contractors (typically the Student Conservation Association), and other organizations (Boy Scouts, Girl Scouts, etc.) to assist with trail maintenance. Contributions come in terms of labor, materials, and planning assistance. Other programs, such as cost-sharing and Adopt-a-Natural-Resource agreements (AANRs) also help. The use of volunteers and contractors, although effective, has associated costs and other limitations. For example, DEC personnel must devote time to planning and coordination, training, supervision, and logistical support to volunteers. While volunteer help is greatly appreciated, it is no substitute for regular maintenance performed by trained professionals.

Despite the need for significant maintenance and rehabilitation on a few select trails in the unit, most trails are in fair to good condition with occasional periodic trouble spots. The rolling topography of the unit creates sections of trail in good condition on the high ground and marshy conditions around stream crossings and along stream corridors and wetlands. Beaver activity can significantly add to these problems. Additionally, trails that were initially laid out as snowmobile trails and proceed along the base of mountains and hills, while providing good conditions in the winter for snowmobiling, are typically wet and present challenges to hikers and bikers in the summer months. Examples include the western end of the Oregon and Cod Pond Trails and places on the Cotter Brook Trail.

Erosion is common and will become a problem for certain sections of trail over time if not addressed with maintenance. Soils on steep slopes within the WLWF are highly susceptible to erosion. Evidence of erosion is present but not significant in most cases at this time. However, as runoff continues to channel down trail sections, conditions will worsen. Examples of trails that have become stream beds include several stretches of the Kibby Pond Trail, the south end of the Murphy-Middle-Bennett Lakes Trail, the middle portion of the Hadley Mountain Trail, and

several portions of the Crane Mountain Trail network. In the southern portion of the Arrow Trail, steep slopes to the east of the trail have resulted in washouts and very poor trail conditions.

The unit's trails are generally suitable for multiple uses, but no data have been specifically collected to assess the intensity of non-hiking and non-snowmobile uses. Mountain bike (ATB) use is currently allowed on all the trails in the WLWF and probably occurs regularly on some of the unit's snowmobile trails. At this time, no surveys have been conducted to quantify the level of mountain bike use on the unit's trail system or determine what, if any, impacts this use may have on the trail conditions. However, despite this lack of data, it is believed that overall mountain bike use in the unit and the impacts associated with this use are low based on informal observations by Department staff. Wet and marshy areas, rocky terrain, and old corduroy sections on trails often preclude the average bike rider but may present challenges enjoyed by expert mountain bikers. According to ATB guidebooks for the Adirondacks, several of the unit's better mountain bike routes include the Murphy-Middle-Bennett Lakes Trail, the Pine Orchard Trail, and the Wilcox Lake-Willis Lake Trail (Thomann 2001).

Skiing, snowshoeing, and horseback riding also occur on the unit's trails. However, no monitoring of these uses has occurred in the unit and the extent to which they contribute to overall trail usage and impact is unknown.

Objectives

- To maintain trails to appropriate standards.
- To work with user groups to support current stewardship efforts and promote and foster new partnerships.
- To identify the need for trail relocations/closures and/or for new trails.
- To continue to provide a unique backcountry recreational experience by keeping physical and visual trail and resource impacts to a minimum.
- To provide a unified system of trail signage and markers on WLWF lands.
- To evaluate snowmobile routes in accordance with the recommendations of the Snowmobile Plan for the Adirondack Park (Snowmobile Plan) and develop preferred alternatives for the trails to facilitate snowmobile access between Warrensburg and Speculator and Wells and Northville while recognizing the restrictions imposed by the APSLMP.

Management Actions

General

- Formally adopt, as a matter of Department policy, the trail classification and standards systems proposed in Appendix G for all trail management activities. Under these systems, all developed trails will be maintained, relocated, or reconstructed to the standards specific to their classification. In general, Wild Forest trail maintenance will emphasize resource protection and visitor safety rather than user convenience or comfort.
- Adopt the snowmobile trail classifications in the Snowmobile Plan.
- Consider using the Universal Trail Assessment Process (UTAP) as a mechanism for evaluating several appropriate trails in the unit to more accurately define level of difficulty. This information could be posted at the trailhead. Prospective candidate trails for UTAP

include the Pine Orchard Trail and western end of the Wilcox Lake-Willis Lake Trail.
- Undertake trail construction, relocation, or reconstruction activities only in compliance with an approved trail project plan.
- Consult the APA on any trail management activities in wetlands and in areas adjacent to wetlands to determine if an Agency wetlands permit is required.
- Minimize potential on-trail user conflicts by providing adequate signage at all trailheads.
- Continue to provide for trail maintenance through AANRAs, contractual agreement, and volunteer trail maintenance agreements, etc., approved by DEC. Specifically, continue working with the local snowmobile clubs, including the Thurman Connection and Algonquin Sno-Blazers, to maintain existing trails. Encourage other snowmobile clubs to become more involved in trail maintenance.
- Monitor site conditions on trail-less peaks such as Baldhead Mountain and Mount Blue and other trail-less locations such as New Lake and Nate Davis Pond. Increased use of currently trail-less areas may warrant future trail designation to protect the resources at these locations.
- Continue information and education efforts to promote safety and reduce trail-related impacts.
- Repair and reroute trails as necessary to provide a safe and enjoyable snowmobiling experience in accordance with the vision and goals of the Snowmobile Plan.
- Ensure that there is "no material increase" in snowmobile trail mileage over pre-1972 levels, as per APSLMP guidelines. Based on the available sources, pre-1972 snowmobile trail mileage for the area encompassed by the WLWF was calculated to be 64.1 miles. Currently, the total snowmobile trail mileage in the unit is 71.9 miles. Following the adoption and implementation of this UMP and its 4.8 miles of proposed new snowmobile trail, 16.9 miles of proposed snowmobile trail closures, and several proposed trail reroutes, total snowmobile trail mileage in the unit will be 59.8 miles. A more detailed discussion of this topic can be found in Appendix I.

Trails to Facilitate Snowmobile Access Between Communities

- Warrensburg to Speculator *(See detailed alternatives discussion in Appendix I)*
  Interim Route: Although the ultimate preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator goes through the village of Wells to allow for the closure of the existing snowmobile trail through the Forks Mountain Primitive Area, recognizing that the route via Wells is not currently suitable for a trail of this importance, an interim connector that maintains the Forks Mountain Primitive Area Corridor is proposed. This proposed interim route within the unit is as follows. Starting in Warrensburg, the route crosses the Hudson River via the Route 418 bridge. From the Delaware & Hudson railroad tracks on the western side of the river, the route uses existing trails across private lands in the towns of Stony Creek and Thurman, heading in a westerly direction to West Stony Creek Road. This section of the route has been secured by the local snowmobile club, the Thurman Connection, and will generally not use Forest Preserve lands. The exception to this is a short section of new trail across Forest Preserve land paralleling Kidder Brook north from Tucker Road at the base of Baldhead Mountain. This short segment of new trail (approximately 0.9 miles) provides a good connection between Tucker Road and the existing trail network while avoiding a private landholding where snowmobiling is no

longer permitted.

From West Stony Creek Road, the proposed route uses the Baldwin Spring Spur Trail to connect with the Oregon Trail. The route continues westward to the Cod Pond Trail, which is followed southward to the junction with the Georgia Creek-Moose Mountain Trail. From this point, the route heads southward on the Georgia Creek-Moose Mountain Trail and a new trail segment to be constructed parallel to Route 8 (some of which may be over private lands, with permission from landowners), connecting to the Girards Sugarbush Trail 1.3 miles southwest of its divergence with the Georgia Creek-Moose Mountain Trail. From the Girards Sugarbush Trail, the Griffin Connector Trail is followed to Griffin, where the route crosses the Teachout Road bridge over the East Branch of the Sacandaga River and continues west through the Forks Mountain Primitive Area Corridor. At the western end of this corridor, existing snowmobile trails across public and private lands link to Speculator. In addition to the new sections of trail along Kidder Brook and Route 8 totaling 1.9 miles on Forest Preserve lands, other trail improvements may be necessary and are identified and discussed below in the management actions for each individual trail segment.

Ultimate Preferred Route: Within the WLWF, the ultimate preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator involves much of the same route recommended for the interim connection. The divergence occurs at the Girards Sugarbush Trail. Instead of following the Griffin Connector Trail, the route heads southeast along the Girards Sugarbush Trail to the Pine Orchard Trail, then heads southward past the Dorr Road connection to Pumpkin Hollow Road. After crossing Pumpkin Hollow Road, the route continues on the Murphy-Middle-Bennett Lakes Trail for a short distance, avoiding the private in-holding south of Pumpkin Hollow Road. Once the corner of the inholding is skirted, the route heads southeast on a new 1.6-mile trail segment across Forest Preserve (1.1 miles) and private lands to reach Route 30 just north of its intersection with Pumpkin Hollow Road. From this point, the route crosses Route 30 and connects with the road system in the Sacandaga Public Campground. The route then follows the unplowed main campground road northward, crossing the Sacandaga River on the campground bridge, until it reaches the southern end of Karuth Road. From this point, a permanent route through private lands will be established by the local snowmobile clubs in cooperation with the Department, eventually connecting with the Wells to Speculator connection proposed in the Jessup River Wild Forest (JRWF) UMP.

The ultimate preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator will require a total of 3.0 miles of new snowmobile construction in the WLWF (the Kidder Brook Trail, the trail section paralleling Rte. 8, and the new sections of trail around Pumpkin Hollow Road) and should not be considered as a primary snowmobile connection until these sections of trail, along with the new trail proposals in the JRWF UMP, are constructed and/or designated for snowmobile use and the connections across private land are secured.

- Wells to Northville: *(See detailed alternatives discussion in Appendix I)*
  From Wells, the preferred Community Connector route heads south via private lands to connect with the road system in the Sacandaga Campground, taking advantage of the campground's bridge over the Sacandaga River. After exiting at the southern end of the campground, the route crosses Route 30 and enters the unit in the vicinity of the hamlet of Pumpkin Hollow. The route then continues in a generally northeasterly direction via a newly-constructed trail, including 1.1 miles of trail on Forest Preserve and 0.5 miles of trail on private land, eventually connecting to the Murphy-Middle-Bennet Lakes Trail. The route then follows this trail south to Creek Road near Hope Falls.

  From the southern end of the Murphy-Middle-Bennett Lakes Trail, the route parallels Creek Road to the southeast, crossing East Stony Creek on the road bridge, to the hamlet of Hope Falls. This segment requires approximately 0.4 miles of roadside travel and/or new trail construction, possibly crossing several small parcels of private land.

  From Hope Falls, the route follows Hope Falls Road east for a short distance before heading south via a private roadway into Lyme Timber Company land. The route then traverses existing haul roads across Lyme Timber Company land, where a snowmobile trail easement is being acquired, southward over Mason Hill to private lands north of the village of Northville.

Snowmobile Trails – New Trail Proposals, Designations, and Reroutes

- Designate 1.2 miles of Old Armstrong Road between Bartman Road and Armstrong Road as a Class A snowmobile trail. By designating this trail for snowmobile traffic, snowmobilers can avoid a steep, winding, plowed section of Bartman Road that is currently resulting in unsafe conditions. Designation of this trail requires the construction of two small bridges with 10 to 15-foot spans and installation of a gate on Armstrong Road at the eastern end of the trail to prevent illegal use by ATVs.
- Construct a new 0.9-mile Class A snowmobile trail north from Tucker Road parallel to Kidder Brook to the Forest Preserve boundary. At the boundary, this trail will connect to the existing trail network on private land located northwest of Tucker Road along the foot of Baldhead Mountain. Designation of this trail may require the construction of two small bridges and installation of a gate at each end of the trail to prevent illegal ATV use. This snowmobile trail is part of the preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator discussed previously.
- Construct approximately 1.3 miles of new Class A snowmobile trail (1.0 miles on Forest Preserve and 0.3 miles on private lands) parallel to Route 8 linking the Georgia Creek-Moose Mountain Trail and the Girards Sugarbush Trail. This trail is part of the preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator discussed previously. If permission to cross the private lands south of the Georgia Creek-Moose Mountain Trailhead is not obtained, it may be possible to use a short segment of the Cotter Brook Trail to avoid these properties. This proposal may require the construction of a large bridge over Georgia Creek.
- Construct/designate 1.6 miles of Class A snowmobile trail (1.1 miles on Forest Preserve and

0.5 miles on private land) in the vicinity of Pumpkin Hollow Road to link the Murphy-Middle-Bennett Lakes Trail to the road system in the Sacandaga Campground. This proposal requires the construction of 0.6 miles of new trail on Forest Preserve, construction of 0.2 miles of new trail on private lands, designation of 0.3 miles of old wagon road on Forest Preserve, designation of 0.2 miles of utility right-of-way on Forest Preserve, designation of 0.3 miles of utility right-of-way on private land, and the use of the Pumpkin Hollow Road bridge over Coulombe Creek. This section of new trail is part of both the Warrensburg and Speculator and the Wells to Northville connections discussed previously. This proposal may require the installation of a gate on the south side of where the trail crosses Pumpkin Hollow Road. Additionally, construction of the Forest Preserve portion of the trail will not begin until the private land connections have been established.

- Construct 0.6 miles of Class A snowmobile trail parallel to the northern shore of Round Pond that connects the two segments of the Round Pond Trail and avoids the necessity of an ice crossing of Round Pond.
- Construct, if necessary, a short segment(s) of new Class A snowmobile trail across Forest Preserve lands adjacent to Lyme Timber Company's Farrell Farm Tract where the Department is currently in the process of acquiring a non-development easement with limited public recreation rights. Included in these limited recreational rights is a snowmobile trail corridor paralleling the boundary of the tract. However, due to severe terrain constraints on the Lyme-owned lands in the area where the new snowmobile corridor is proposed, this trail may be required to cross the lands of the WLWF for one or more short segments to allow for a safe and enjoyable snowmobiling experience. New trail construction on Forest Preserve lands in this area will be minimized and/or avoided if reasonably possible.
- Relocate a portion (approximately 0.6 miles) of the Oregon Trail along Stewart's Creek, between Cod Pond and North Bend.
- Reroute approximately 0.15 miles of Pine Orchard Trail along Coulombe Creek. This section is too steep and unsafe for snowmobile use. The trail should be shifted downslope, closer to the creek.
- Reroute two sections of the Murphy-Middle-Bennett Lakes Trail between Willis Lake and Murphy Lake. Both relocations are necessary to address swampy conditions that significantly inhibit both hiking and snowmobile use. The western reroute is approximately 0.3 miles in length and the eastern reroute (in the vicinity of Murphy Lake) is approximately 1.3 miles in length.
- Reroute approximately 1.6 miles of Murphy-Middle-Bennett Lakes Trail between Bennett Lake and Creek Road to avoid a section of trail that is severely eroded and swampy in places. The proposed reroute utilizes an old logging road that will limit the impacts of new trail construction.
- Reroute two sections of the Wilcox Lake-Willis Lake Trail (about 1.6 miles total length) approximately midway between Willis Lake and Wilcox Lake, west of the Wilcox Lake Outlet. Both sections of existing trail are steep and eroded. Continued use of these would exacerbate current soil erosion problems and cause unsafe conditions for hiking and snowmobiling. The eastern proposed reroute loops southward along the Wilcox Lake Outlet and an unnamed tributary of the Wilcox Lake Outlet to take advantage of flatter terrain, while the western reroute takes advantage of flatter terrain south of the existing trail and

north of Pine Mountain.

Snowmobile Trails – Proposed Trail Closures

- Close 2.4 miles of the East Stony Creek Trail to snowmobile use from the Brownell Camp inholding (at the northern terminus of Hope Falls Road) to the proposed accessible lean-to (on the northern side of Dayton Creek) due to poor conditions, better alternative routes, and lack of use. This trail should be repaired and designated for pedestrian use only. Although this trail is part of several of the alternatives considered for the snowmobile connection between Wells and Northville, there is another viable and preferred alternative that would achieve the desired connection and would better meet the vision and goals of the Snowmobile Plan. This proposed closure includes the installation of permanent rock barriers north of the Brownell Camp inholding and north of Dayton Creek.
- Close the southern branch of the Tenant Creek Falls Trail to snowmobile use. The length of snowmobile trail closure resulting from this proposal is 1.8 miles. This trail provides no connection with other trails because of private land at both ends, with no agreements to cross these properties in place. Furthermore, leaving the trail open encourages trespassing by hikers on private land along Creek Road. Consideration should be given to placing barriers at the Forest Preserve boundary at both ends of the trail to prevent unauthorized use.
- Close the Cotter Brook Trail to snowmobile traffic when the new snowmobile trail paralleling Route 8 between the Georgia Creek-Moose Mountain Trail and Girards Sugarbush Trail becomes available for use. At that time, the Cotter Brook Trail will be unnecessary for a snowmobile connection and, due to poor conditions and safety concerns, should be closed. However, the trail will remain open as a foot trail. Snowmobile access will be eliminated with the installation of permanent rock barriers at both ends of the trail. The length of snowmobile trail closure resulting from this proposal is 2.2 miles.
- Close the Indian Pond Trail to snowmobiles due to the availability of more suitable routes to the same destination. Snowmobile access will be eliminated with the installation of permanent rock barriers at both ends of the trail. The length of snowmobile trail closure resulting from this proposal is 1.7 miles.
- Close the Bartman Junction Trail to snowmobiles due to more suitable routes to the same location. Snowmobile access will be eliminated with the installation of permanent rock barriers at both ends of the trail. The length of snowmobile trail closure resulting from this proposal is 2.2 miles.
- Close the Louis Waite Trail (extending southward from the southern end of Louis Waite Road in the Towns of Stony Creek and Hadley) to snowmobiles. Although it is unclear whether this trail is used very often, this UMP will officially close it to snowmobile traffic. It provides no useful connection and the limited use that it might receive does not justify the maintenance investment. Snowmobile access will be eliminated with the installation of permanent rock barriers at both ends of the trail. The length of snowmobile trail closure resulting from this proposal is 0.9 miles.
- Close Fodder Brook Trail (extending from the southern end of Fodder Brook Road in the Town of Stony Creek to the private land north of Hadley Hill Road in the Town of Day) to snowmobiles. This trail provides no useful connection and continuing use of it might encourage illegal motor vehicle use during non-winter periods. Snowmobile access will be

eliminated with the installation of permanent rock barriers at both ends of the trail. The length of snowmobile trail closure resulting from this proposal is 3.2 miles.

- Close the Griffin Connector Trail to snowmobile traffic if and when the appropriate snowmobile connections are established that allow the closure of the Forks Mountain Primitive Corridor. Currently, the sole purpose of the Griffin Connector Trail is to link the WLWF's snowmobile trail network to the Teachout Road bridge and the Forks Mountain Primitive Corridor. Closure of the Griffin Connector Trail and the Forks Mountain Primitive Corridor is contingent on the approval and implementation of both this UMP and the current Draft Jessup River Wild Forest UMP. The length of snowmobile trail closure resulting from this proposal is 1.3 miles.

Foot and Ski Trails

- Designate the existing herd paths to Eagle Pond and Little Joe Pond as Class III foot trails. Both ponds are popular brook trout fishing destinations and have primitive tent sites. Length of the proposed Eagle Pond Trail is 1.5 miles and length of the proposed Little Joe Pond Trail is 1.3 miles.
- Develop a Class III foot trail leading south from the Harrisburg Road parking lot northeast of Harrisburg Lake through the 100-foot wide, state-owned corridor to the large, contiguous block of Forest Preserve land surrounding Thompson Mountain. Total length of proposed new trail construction is 0.5 miles.
- Develop a Class V foot trail linking the Sacandaga Campground with the summit of Moose Mountain in the Town of Wells. This trail will be a nested loop and avoid steep grades or otherwise challenging sections where possible. A crosswalk with appropriate signage may be necessary where the trail crosses Route 30. This trail may include interpretive signs, a kiosk, maps, and other improvements to encourage use. If parking for the trail cannot be furnished at the campground, a parking area on Route 30 adjacent to the trailhead may be required. Total length of proposed new trail construction is 3.9 miles.
- Develop a Class III foot trail along the top of the cliffs on Rand Mountain. This trail will head southwest from the eastern end of the Tenant Creek Falls Trail, following the former snowmobile trail for approximately 0.7 miles. After leaving the former snowmobile trail, the trail climbs the gentler, eastern slopes of Rand Mountain before skirting the top of the cliffs along the mountain's southeastern, southern, and southwestern faces. The trail then follows a tributary of Tenant Creek north, rejoining the Tenant Creek Falls Trail 0.2 miles east of the Brownell Camp inholding. Total length of the proposed new trail is 3.0 miles with about 2.3 miles of new trail construction. Construction of this trail should not begin until a formal public access agreement or easement is in place for the Tenant Creek Falls Trail across the Brownell Camp inholding.
- Develop a Class III foot trail from the Round Pond Trail to the designated tent site on the peninsula at the eastern end of the pond. Although the campsite is only a short distance from the trail, the existing herd path is difficult to follow due to blowdown and requires the crossing of a beaver dam. Therefore, the proposal also includes a short stretch, approximately 20 to 30 feet, of bog bridging. Length of the proposed trail at this location is less than 0.2 miles.
- Consider developing a Class VIII ski trail on the Old Fodder Brook Road Trail. Because this

trail is being closed to snowmobile use in this UMP, this trail will allow the segregation of these two conflicting uses and presents one of the few locations in the unit where nordic skiers can use a suitable ski trail that is closed to snowmobiling. Additionally, the existing characteristics of the trail make it attractive from a nordic skiing perspective. Besides putting up appropriate trail markers and signage, designation of this trail will require very little in the way of trail construction and maintenance because of the fact that it was an old road. Total length of the proposed trail is 3.6 miles. Access will be provided from the south via private and/or county lands.

- Reroute the foot trail to the lean-to on the western side of Wilcox Lake to avoid several wet spots and develop a new Class III foot trail (using the existing herd path where appropriate) to the lean-to on the eastern side of Wilcox Lake when it is relocated. Total mileage of foot trail along the Wilcox Lake shoreline will be 0.7 miles.
- Reroute approximately 0.3 miles of the Cotter Brook Trail, north of Cotter Swamp, because of swampy conditions that make it unsuitable for foot traffic. As previously stated, this section of trail will be closed to snowmobiles upon the completion of a new section of snowmobile trail parallel to Route 8.
- Designate the segment of the East Stony Creek Trail closed to snowmobile use by this UMP (Hope Falls Road to Dayton Creek) as a Class VIII ski trail and maintain it to appropriate standards, as identified in Appendix G. This trail will help facilitate the segregation of snowmobiling and nordic skiing because it presents one of the few locations in the unit where skiers can use a suitable ski trail that is closed to snowmobiles. Additionally, the existing characteristics of the trail make it attractive from a nordic skiing perspective. Total length of this proposal is 3.4 miles.
- Designate the 0.1-mile Mud Pond Trail as a Class III foot trail. There will be a primitive tent site where the trail reaches the pond.

Mountain Bike Trails

- Close the Hadley Mountain, Crane Mountain, and Tenant Creek Falls Trails to mountain bikes and prohibit mountain biking on the proposed Moose Mountain and Rand Mountain foot trails. The combination of steep slopes, erodible soils, and high levels of foot traffic on these trails creates unsuitable conditions for mountain biking in terms of the impact this use could have on the resource and on recreational experience of other users.
- Monitor mountain bike use of all trails in the unit over the life of this UMP. Special attention should be given to the Arrow, Georgia Creek-Moose Mountain, Indian Pond, and Kibby Pond Trails. These trails may be more susceptible than other trails in the unit to damage resulting from mountain bike use. Additional trail closures to mountain biking will be considered if deemed appropriate from the perspective of resource protection.
- Encourage mountain bike use of the Murphy-Middle-Bennett Lakes Trail, Pine Orchard Trail, and Wilcox Lake-Willis Lake Trail by maintaining these trails to appropriate mountain bike standards, identified in Appendix Q, and directing mountain bikers to use these trails. If any mountain biking organizations express interest in entering into an AANR agreement or other stewardship agreement for any of the trails in the unit, direct their efforts to these three trails.

Bridges

- Construct the bridges required for the new trail construction described above. These bridges will probably include, at minimum, one over Georgia Creek on the proposed Route 8 Trail, two on the proposed Old Armstrong Road Trail, and two on the proposed Kidder Brook Trail.
- Extend or rebuild the snowmobile bridge on the Oregon Trail at North Bend to fully span the creek channel. Install running boards on this bridge to reduce damage from snowmobile tracks.
- Construct a new snowmobile bridge, approximately 25 feet long, along the Wilcox Lake-Willis Lake Trail at an unnamed tributary of the Wilcox Lake Outlet. There is no bridge currently at this location and traversing the stream can be difficult and is jeopardizing the resource.
- Replace the existing 20-foot long snowmobile bridge over a small ravine along the Pine Orchard Trail, approximately 1 mile north of Willis Lake.
- Construct a new snowmobile bridge, approximately 15 feet long, across an unnamed tributary of Mill Creek, on the Pine Orchard Trail near the Pine Orchard. A beaver dam is currently used as the trail crossing for this creek.
- Construct a new snowmobile bridge, approximately 20 feet long, across an unnamed tributary of the East Branch of the Sacandaga River, on the Girards Sugarbush Trail. There is no bridge currently at this location and traversing the stream can be difficult and is jeopardizing the resource.
- Replace the bridge over Georgia Creek on the Cotter Brook Trail. The current bridge is too short and is often submerged 6-12 inches during periods of high water. Because this trail is proposed to be closed to snowmobile use following the construction of the new trail paralleling Route 8, the proposed bridge at this location is a foot bridge. However, if an alternative crossing of Georgia Creek for the new trail segment cannot be found closer to Route 8, a short section of the Cotter Brook Trail, including this stream crossing may have to be retained as a snowmobile trail in which case the new bridge at this location would be designed to accommodate snowmobiles.
- Construct a new snowmobile bridge midway between Baldwin Spring and North Bend along the Oregon Trail where the trail is currently swampy due to beaver activity.
- Modify two existing bridges on the Pine Orchard Trail to allow for safer snowmobiling. The first bridge north of Dorr Road needs to be realigned and the bridge over Mill Creek should be lowered to prevent snowmobiles from catching on the lip of the bridge.
- Widen the East Stony Creek bridge on the Wilcox Lake Trail. Currently, the bridge is 6-12 inches too narrow for most snowmobiles, forcing many snowmobilers to attempt an ice crossing of East Stony Creek downstream of the bridge.
- Repair abutment on snowmobile bridge over Tenant Creek near Brownell Camp.

Trailheads

- Erect a trail register for the Pine Orchard Trail at Pumpkin Hollow Road.
- Mark the existing trailhead off Harrisburg Road (in the Thompson Mountain/Little Pond area) with appropriate signage and possibly a trail register.
- Mark the trailheads for the proposed Little Joe Pond and Eagle Pond Trails on Route 8 with

appropriate signage. Initially, these trails will not have formal parking areas or trail registers.

- Develop a formal trailhead at the existing Mud Pond Trail parking area if the Mud Pond Road is closed to motor vehicles beyond this point. This trailhead should include a trail register and possibly a map of the area.
- Develop a new trailhead at the western end of Bakertown Road. This trailhead will provide access to the foot and snowmobile trail to Wilcox Lake and the newly-designated East Stony Creek CP-3 route. Along with adequate parking, the trailhead area could include the existing trail register, appropriate signage, an informational kiosk, and maps to various facilities/resources available from this trailhead.
- Develop an accessible horse trailhead at Fox Lair, complete with a mounting platform. This trailhead will serve as an access point to the Cook Brook Horse Trail in the Siamese Ponds Wilderness Area.
- Improve the Baldwin Spring Trailhead to include an informational kiosk and maps that highlight the accessible facilities in the area. This location will serve as the sign-in location for the Oregon Trail and Fish Ponds Road CP-3 routes.
- Improve the East Stony Creek/Tenant Creek Falls Trailhead to include a kiosk with a map of the nearby trails and facilities. This area receives 2,500 to 3,000 visitors per year and future visitation may increase with the construction/designation of the Rand Mountain Trail.

Other Trail Features

- Maintain access to the Tenant Creek Falls Trail by formalizing the agreement with the private landowners at the Brownell Camp or by purchasing a trail easement. If a permanent access agreement cannot be finalized, consideration will be given to constructing a new trail segment that avoids this inholding.
- Maintain access to the Pine Orchard Trail at Dorr Road by formalizing the agreement with the private landowners of the last inholding on the road or by purchasing a trail easement through this inholding. Currently, this landowner allows visitors to park and cross their property.
- Improve access to the Arrow Trail for snowmobiles by encouraging the Thurman Snowmobile Club to formalize its agreement with the private landowners at the southern end of the trail to cross their property or by purchasing a snowmobile trail easement across this property. Close the Oxbow Trail to snowmobile traffic if a permanent agreement or easement can be secured at this location. If this closure is accomplished, permanent rock barriers will be installed at both ends of the Oxbow Trail to eliminate motorized access.
- Work with Lyme Timber Company, Saratoga County, and other stakeholders to provide public foot access to the existing foot trail to the state-owned fire tower on Spruce Mountain in the Town of Corinth. A re-route of the foot trail across state and private lands may be necessary to minimize trail length across one or more private parcels.
- Maintain and/or improve the interpretive trail program for the Hadley Mountain Trail in cooperation with the Hadley Mountain Fire Tower Association volunteers. Improvements may include the placement of additional interpretive signage along the trail. In order to lessen erosion, construct a re-route in the middle portion of the trail.

3. Campsites

Present Conditions:
Existing camping regulations require camping to occur at primitive tent sites or locations that are at least 150 feet or more from a road, trail or water (6 NYCRR 190.3(b)). The latter is commonly referred to as the "150-foot rule" which permits "at-large" camping subject to those requirements. There are currently no other regulations to restrict tent camping in the unit.

Primitive tent sites, commonly referred to as designated campsites, are identified by a DEC permissive sign or disk, provide space for not more than three tents, and are designed to accommodate a maximum of eight people on a temporary or transient basis. The APSLMP mandates that primitive tent sites are located out of sight and sound of each other (generally one-quarter mile apart) or, in areas where severe terrain constraints do not allow for the one-quarter mile separation distance, out of sight and sound from one another and generally 500 feet apart. The WLWF has a total of approximately 75 primitive campsites. Most of these sites are adjacent to roadways or near the unit's numerous water bodies, such as Garnet Lake, Crane Mountain Pond, Middle Lake, and Kibby Pond. Generally, the primitive tent sites in the WLWF are in good condition and provide ample camping opportunities for individuals and small groups.

The APSLMP also allows for "small groupings" of primitive tent sites in Wild Forest units that are designed to accommodate a maximum of 20 people under group camping conditions. Individual campsites within the small grouping do not need to meet the separation distance guidelines that primitive tent sites are generally subjected to. These small groupings of campsites must be widely dispersed (generally a minimum of 1 mile apart), and located in such a manner as to blend in to the surrounding environment and have a minimum impact on the wild character of the unit. Currently, no such small groupings have been designated in the WLWF.

Fireplaces have been provided at a number of the primitive tent sites in the WLWF. Inventory data indicate the presence of fireplaces at 17 designated campsites. The APSLMP allows the maintenance and rehabilitation of fireplaces "to the extent essential to the administration and/or protection of state lands or to reasonable public use thereof but new construction will not be encouraged." Therefore, although fireplaces are currently present in the unit, no future efforts are anticipated to provide these structures at designated campsites.

Over the years, local forest rangers have made significant efforts to eliminate campsites not in compliance with the APSLMP separation distance guidelines. For example, Forest Ranger S. Ovitt has closed over half of the campsites along Route 8, concentrating use at the best and most environmentally resilient locations while simultaneously providing adequate spacing between the remaining sites. However, several areas in the unit still have designated campsites that do not meet the general APSLMP "sight and sound" separation requirements and have not been designated as "small groupings" of primitive tent sites. Locations where primitive tent sites are not currently meeting separation distance guidelines include Bakertown Road, Hope Falls Road, Middle Lake, Fox Lair, Kibby Pond, Crane Mountain Pond, Garnet Lake, Garnet Lake Road, Murphy Lake, Little Joe Pond, and Wilcox Lake.

Objectives:

- To comply with the APSLMP primitive tent site standards to disperse use and protect natural resources.
- To provide camping opportunities to accommodate user demand in the unit that is consistent with the recreational carrying capacity of the unit and perpetuates a level of uncrowdedness consistent with the Wild Forest character.
- To reduce, eliminate, or mitigate the adverse effects on natural resources that result from improperly located campsites.

Management Actions:

- Monitor LAC indicators for vegetation at the unit's primitive tent sites and if standards for these indicators are exceeded, take appropriate action.
- Direct campers to use appropriately-located designated campsites whenever possible to concentrate use on already disturbed areas where conditions can support this type of use, limit adverse impacts to other resources, and minimize undesired contact with other campers. This may include signage and maps at trailheads, trail junctions, and other appropriate locations indicating where near-by designated campsites are located.
- Bring designated campsites that do not comply with separation distance guidelines put forth by the APSLMP into compliance through campsite closure where appropriate and/or designation of small groupings of campsites. Recommendations for each area include:
  - Bakertown Road, north and east of the Moosewood Club inholding – There are currently five designated campsites adjacent to the road north and east of the Moosewood Club in-holding. From the east, the first three sites are adequately spaced (generally one-quarter mile apart), appropriately located, and will remain open. Near the Harrisburg Lake Outlet ford, there are two primitive tent sites, one on the eastern side of the ford and one on the western side, which are less than one-quarter mile apart. The site on the eastern side of the ford is in good condition and will remain open at its present location. The campsite on the western side of the ford will be moved to a location on the north side of Bakertown Road approximately 250 feet east of the Moosewood Club inholding to meet the APSLMP separation distance guidelines.
  - Crane Mountain Pond – There are currently three primitive tent sites at Crane Mountain Pond. Registered overnight use of Crane Mountain is minimal (100-300 visitor-nights per year out of 4,000 total visitors); as a result, the campsites at the pond are in relatively good condition. However, the site south of the pond's outlet, which is somewhat poorly located and is thought to be the most popular of the three sites, is showing some signs of overuse. Because the pond is small and demand for campsites is fairly low, two campsites were deemed to be appropriate for this area. Therefore, two of the existing campsites, one on the east side of the pond and one north of the pond outlet, will remain open and the site south of the outlet will be closed. The two remaining sites are separated by 900 feet and generally out of sight and sound of one another. Severe terrain constraints associated with the shore of the pond makes the relocation of either of these sites prohibitive and not required by the APSLMP. Because the Department has never received any complaints about overuse of the campsites at Crane Mountain Pond, providing two campsites in this area seems to be consistent with the social carrying

capacity of the location.

- Fox Lair – The Fox Lair area currently has six primitive tent sites, all of which are in good condition. The northernmost site, near the confluence of Mary's Brook and the East Branch of the Sacandaga River, is more than one-quarter mile from any of the other sites and will remain open. South of this, there is a cluster of three sites. Because of the level nature and heavily compacted soils of this area, there is little need from a resource protection standpoint to close any of these sites. Additionally, it is more desirable to concentrate camping and horse pasturing by equestrian users accessing the Cook Brook Horse Trail in the Siamese Ponds Wilderness Area at this previously disturbed and already hardened location that can easily be upgraded to meet accessibility guidelines than attempt to disperse use by developing camping and horse pasturing opportunities in other areas where providing accessible facilities might require significant alteration of the natural character. Therefore, a small grouping designation encompassing these three sites in their current configuration is recommended. As per the APSLMP requirements (page 37), this small grouping is widely dispersed from other small groupings (5.5 miles from the proposed small grouping on Garnet Lake Road discussed later), located in a manner the blends in with the surrounding environment, and has a minimum impact on the Wild Forest character and natural resource quality of the area. Additionally, no new, relocated, or reconstructed tent sites are proposed for this grouping; therefore, APSLMP water setback requirements for individual sites within small groupings are not applicable at this location. Continued monitoring and enforcement will be necessary to ensure that overuse or inappropriate use problems do not develop at this location. If problems do develop in the future, consideration will be given to campsite closures at that time. South of this grouping, there are two additional sites, one on each side of Route 8, approximately 0.2 miles apart. Both sites are generally one-quarter mile from the proposed small grouping and are in good condition with little evidence of overuse. Because these sites are clearly out of sight and sound of one another and the condition of the surrounding resources suggests they are consistent with the carrying capacity of the area, both will remain open. They will provide additional camping opportunities for equestrian users of the Cook Brook Horse Trail.
- Garnet Lake – There are six boat-accessible designated campsites on Garnet Lake; all of which are popular destinations during the summer months and are generally in good condition. Monitoring of these sites, through LAC standards as mentioned above, will continue in order to ensure that adjacent shoreline areas are protected. If standards are exceeded, appropriate actions may include shoreline stabilization, revegetation, temporary closure and/or relocation. (Erosion is currently occurring at the northernmost site, where the campsite is accessed from the water, and will be addressed through slope stabilization work and/or revegetation). Clearly, when Garnet Lake is looked at as a whole, the presence of six campsites on a 302-acre lake spread over 4.2 miles of state-owned shoreline is consistent with the carrying capacity of the area. The three sites on the western side of the lake are less than one-quarter mile but greater than 500 feet apart and are generally out of sight and sound from one another. Because severe terrain constraints in the form of wetlands and steep slopes associated with the lakeshore make relocation of these sites impossible, it was decided that they should remain open. The two

northernmost sites on the eastern side of the lake are also less than one-quarter mile apart. However, once again, these sites are greater than 500 feet apart and out of sight and sound; therefore, because terrain constraints would make relocating these sites difficult, they will remain open. The southernmost site on Garnet Lake is greater than one-quarter mile from the other sites and will also remain open. There are also four former campsites on Garnet Lake which have already been closed by DEC in order to conform with APSLMP campsite separation distance guidelines and to protect the shoreline. These sites are accessed via Garnet Lake Road and now serve as day-use sites; existing signage at each site indicates that camping is prohibited. The day-use sites are located north of and near to the Garnet Lake hand carry and may also be used for the launching of canoes on weekends when the main parking area is full. Trailered launching from these sites is probably not occurring due to the presence of obstacles and difficult terrain.

- Garnet Lake Road (Maxam Road) – There are three campsites along Garnet Lake Road located less than one-quarter mile apart. The eastern two sites are also within sight and sound of each other. These primitive tent sites provide camping opportunities for recreational users at Garnet Lake that may lack the opportunity to use the boat-accessible sites discussed previously. Because these sites are fairly popular but do not exhibit signs of serious overuse, a small grouping designation is proposed at this location and all three sites will remain. This small grouping is widely dispersed from the proposed Fox Lair small grouping (as previously discussed) and is generally located in such a manner that blends in with surrounding environment. The southernmost campsite is experiencing unnecessary impacts from motor vehicles. Boulders will be installed to delineate the parking area from the campsite and additional fill (i.e., soil) may be added to the campsite. Continued monitoring and enforcement will be necessary to ensure that the small grouping has a minimum impact on the Wild Forest character and natural resource quality of the area. If overuse or resource abuse problems do arise at some point in the future, consideration will be given to closure of sites along this stretch of road.
- Hope Falls Road – There are currently about six designated primitive campsites along Hope Falls Road south of the Brownell Camp inholding. From the south, the first roadside site is less than a one-quarter mile from a cluster of three sites further north near East Stony Creek and will be closed. Additionally, the cluster of sites near the creek will be trimmed down to a single primitive tent site. The next two designated campsites to the north are out of sight and sound of both the site near the creek and one another and are generally one-quarter mile apart. Therefore, they will both remain open for a total of three campsites along this stretch of road.
- Kibby Pond – Currently there are three designated campsites on Kibby Pond. The southern site is over one-quarter mile from the northern two sites and will remain open. The two northern sites are 800 feet apart; therefore, the northernmost site will be closed.
- Little Joe Pond – There are two designated campsites on Little Joe Pond, one on the north shore and one on the south shore, within one-quarter mile of one another. Because the northern site is more commonly used, it will remain open while the southern site will be closed. Monitoring of camping activity at this location should occur throughout the life of this UMP to ensure that no significant impacts are occurring to this pristine resource following the official designation of the trail to the pond.

- Middle Lake – There are currently five designated primitive tent sites on Middle Lake. This number will be reduced to three sites with the closure of two sites on the eastern side of the lake. The remaining three sites are out of sight and sound from each other and generally one-quarter mile apart.
- Murphy Lake – There are three designated primitive campsites and one lean-to on Murphy Lake. All three of the designated sites are located within one-quarter mile of the lean-to and will have to be closed as per APSLMP guidelines. However, two new designated campsites are proposed for Murphy Lake, including one on the western side and one on the northern end, which will be greater than one-quarter mile from one another and the lean-to.
- Route 8 (excluding Fox Lair) – There are eleven designated campsites along Route 8, excluding the six sites at Fox Lair. Generally, these sites are separated by at least one-quarter mile; however, there are several exceptions. South of Fox Lair, there are three sites in close proximity, one on the western side of Route 8 and two on the eastern side. The site closest to the road on the eastern side of Route 8 will be closed because it is in poor condition and is much too close to the adjacent site and the road. The other two sites will remain open because they are clearly out of sight and sound of each other, being separated by Route 8 and sufficiently buffered from the roadway. The presence of two campsites at this location appears to be consistent with the carrying capacity of the area – no significant resource impacts appear to be occurring at either site. Continuing south on Route 8, there are four sites north of the Cod Pond/Oregon Trailhead, all of which are in good condition. The middle two sites are within one-quarter mile of one another; therefore, the northern of these two sites will be closed.
- Wilcox Lake – Currently, there is a designated campsite slightly north of the western lean-to at Wilcox Lake. This campsite will need to be closed because it is within the one-quarter mile separation distance of the lean-to.

- Restore closed campsites to a natural condition through revegetation. To the extent practical, remove fire rings, tree stumps and other evidence of past use. Because the process of closing and revegetating a campsite typically takes seven to ten years (Forest Ranger S. Ovitt, personal communication), continued enforcement of these closures will be necessary to ensure that illegal camping at these locations does not occur.
- Incorporate campsite maintenance and rehabilitation into annual work plans.
- Designate the existing camping location at Boom Pole Knoll, south of the Dog ‘n Pup Club off the Arrow Trail, as a primitive tent site.
- Designate the existing camping location on New Lake north of the outlet as a primitive tent site or find and designate a more suitable location for a primitive tent site somewhere on New Lake.
- Designate a new primitive tent site on the southern shore of Wilcox Lake following the relocation of the eastern lean-to to the eastern side of the lake. This campsite will be slightly east of the current location of the eastern lean-to.
- Designate two new primitive tent sites on Murphy Lake, one at the northern end and one on the western side.
- Designate a new primitive tent site at the south end of Bennett Lake.
- Designate a new primitive tent site in the clearing at the western end of Mud Pond Road once

the derelict buildings are removed, if the road is closed at the Mud Pond Trail parking area. No campsites will be established at this location unless the road is closed.
- Designate a new primitive campsite on the northern shore of Round Pond near where the Round Pond Trail from Garnet Lake reaches the pond.
- Designate a new primitive tent site on Mud Pond, immediately west of where the trail reaches the pond.
- Designate a new accessible primitive tent site at the northern terminus of Fish Ponds Road (southern Bartman Trail) if this route is designated for CP-3 use.
- Convert existing primitive tent sites to accessible campsites where practical and desirable along roads and trails available for use by persons with disabilities. In general, these sites will include more support facilities than typical designated campsites. Several good locations for possible accessible campsites include the primitive tent site east of Baldwin Spring, several primitive tent sites along Bakertown Road, and several primitive tent sites at Fox Lair.
- Place a boulder on the Kibby Brook bridge to eliminate motor vehicle access to the southern campsite at Fox Lair.
- Remove fireplaces associated with primitive campsites as they fall into disrepair. These structures will be replaced with stone fire rings.
- Ensure that the location of all new designated primitive tent sites complies with APSLMP guidelines.

4. Signs

Present Conditions:
Signs are provided throughout the WLWF to orient trail users, provide directions, mark trails, minimize impacts, provide safety information, and inform users of Department and Wild Forest regulations. Signage should be kept to a minimum to avoid interfering with the Wild Forest experience, but should also provide adequate orientation and education to users of the unit.

Currently, the Department's Divisions of Lands and Forests; Operations; Fish, Wildlife, and Marine Resources; and Forest Protection and Fire Management all post signs in the unit. However, directional/orientation signs on the roads around the unit are somewhat lacking. Known signs are in Hope, directing people to the Tenant Creek Trail at Brownell Camp and to the Bennett/Middle/Murphy Lakes Trail, at the junction of Ski High and Garnet Lake Roads, directing people to the Crane Mountain Trailhead, and at the junction of Hadley Hill and Tower Roads, directing people to the Hadley Mountain Trailhead. At some trailheads and along some of the unit's boundary, signage is not adequate. Interior signage is typically limited to trail markers, directional signs at trail junctions, and regulatory signs, especially in those areas with special regulations.

Objectives:
- To improve the quality and quantity of signs in the unit that provide information about access to, and orientation within, the WLWF.
- To encourage compliance with regulations, good stewardship of the unit's resources, user

safety, and resource protection through appropriate signage at trailheads and facilities.
- To ensure that current and future signs comply with Wild Forest standards (e.g. made of rustic materials and limited in number) (APSLMP, 2001, Page 22).

Management Actions:
- Update the sign inventory for the WLWF annually.
- Coordinate and review all sign needs through a single unit manager.
- Erect signs with directional arrows and distances at locations where they are currently lacking and necessary. Wording should be kept to a minimum.
- Maintain existing signs and informational kiosks, on a regularly scheduled basis.
- Maintain and improve interpretive signage that highlights the cultural and natural resources along the trail to Hadley Mountain.
- Work with local towns to place directional signs to the unit's popular destinations in nearby hamlets and at select road intersections. These potential locations for these signs include the hamlets of Stony Creek, Northville, and Wells. Road intersections to consider for signage include Harrisburg Road and Wolf Pond Road in the Town of Stony Creek, Route 30 and Creek Road in the Town of Hope, and Route 30 and Pumpkin Hollow Road in the Town of Wells.
- Establish a boundary signage program in conjunction with annual boundary line maintenance. This would provide more opportunities to enforce infractions for illegal timber trespass, illegal ATV use, and trespass on isolated holdings
- Sign trailheads, trails and other entrances to the WLWF with specific signage identifying the unit's designation and allowable uses, including large visible signs making it clear that ATV use is illegal on Department-managed roads and trails.
- Install kiosks with large, easily interpretable maps and possibly brochures at popular trailheads where visitation dictates that these type of structures are desirable. Such locations might include the Crane Mountain Trailhead, the East Stony Creek/Tenant Creek Falls Trailhead on Hope Falls Road, and one or more of the important snowmobile access points to the unit including Baldwin Spring, Bakertown Road, or Pumpkin Hollow Road.
- If an access agreement is secured for the large parcel of Forest Preserve east of Davignon Road, establish appropriate signage at the existing Palmer Lake parking area informing the public to park at this location and access the parcel on foot. Place appropriate signage at the road intersections along the way.

5. Lean-tos

Present Conditions:
Prior to the advent of lightweight backpacking tents, lean-tos were erected in many areas of the Adirondacks for user convenience and to provide shelter from inclement weather. The structures were often built immediately adjacent to trails and close to water and firewood sources. They were sometimes clustered in scenic areas to accommodate increased visitor demand and to facilitate maintenance. Many were equipped with stone and/or concrete fireplaces, pit privies, and picnic tables.

There are four lean-tos in the WLWF; two on Wilcox Lake, one on Lizard Pond and one on Murphy Lake. A privy and fireplace are provided with all of the unit's lean-tos. During the spring and fall seasons, these lean-tos are primarily used by groups of fishermen and hunters. Summer use is often comprised of larger groups of campers. Use of these facilities by large groups can result in damage to the structures and the surrounding area. However, over-use or lack of adequate lean-tos are not generally problems within the unit, and all of the lean-tos in the WLWF are currently in good condition with the exception of the eastern lean-to on Wilcox Lake, where use and old age have led to the need for some structural repairs.

The APSLMP recognizes lean-tos as conforming structures in Wild Forest units, provided they meet minimum setback distances (100 ft.) from water and have proper sight and sound separation distances from adjoining campsites (APSLMP 2001, Page 21). All four of the lean-tos in the WLWF are located within the 100-foot setback distance.

Objectives:
- To conform to APSLMP guidelines regarding placement of lean-tos.
- To maintain existing lean-tos and construct new lean-tos, where appropriate, to assure a quality Adirondack camping experience for all users of the WLWF.

Management Actions:
- Repair or replace the eastern lean-to on Wilcox Lake and relocate it to an existing level site located further from the water's edge on the eastern side of the lake, to comply with setback requirements. Provide a pit privy and fireplace at the new location.
- When major repair or replacement is required for the western lean-to on Wilcox Lake, relocate it so it meets the APSLMP setback requirement.
- When major repair or replacement is required for the Murphy Lake lean-to, relocate it so it meets the APSLMP setback requirement.
- When major repair or replacement is required for the Lizard Pond lean-to, relocate it so it meets the APSLMP setback requirement.
- Construct an accessible lean-to at the southern end of the proposed East Stony Creek Trail CP-3 route, north of Dayton Creek.
- Construct an accessible lean-to at the primitive tent site at North Bend if the section of the Oregon Trail between Baldwin Spring and North Bend is closed to public motor vehicle use and opened to CP-3 access. If this road segment remains open to public motor vehicle use or the proposed CP-3 route is not approved, no lean-to will be constructed at this location.

6. Sanitation

Present Conditions:
Improper waste disposal can affect the environment and the health and safety of Wild Forest visitors. Most overnight use is concentrated around lakes and streams. As use increases in these areas, proper sanitation becomes increasingly important. Users have the potential for contraction of giardiasis from consuming drinking water sources contaminated with the freshwater protozoan, *Giardia lamblia*. Improper disposal of human waste near water sources, coupled with

high concentrations of users, compounds this problem. Soaps, shampoos, and other wastes also affect the delicate chemical/biological balance of area waters. Soapsuds and leftover food scraps can occasionally be found on the shores of lakes and streams adjacent to designated campsites and lean-tos within the unit.

Public cooperation with the "Carry-It-In, Carry-It-Out" policy for trash removal has helped considerably in keeping the unit litter-free. However, litter remains a problem at Snake Rock (located on River Road in Thurman), which has occasionally been used as a local party spot and receives substantial day-use during the summer months. Broken glass and unburned refuse are expensive and time consuming to clean-up and are a safety risk to Department staff and volunteers cleaning up these areas.

Proper human waste disposal is of critical importance in regularly visited places. The Department provides pit privies (outhouses) in areas where use levels are usually high and adequate dispersal of "cat holes" (buried wastes) is difficult. The APSLMP requires that all pit privies be located a minimum distance of 150 feet from water (APSLMP, 2001, page 21). Thirteen pit privies were identified in the WLWF during the facilities inventory. Of these privies, four were identified in poor condition. One privy located at North Bend on the Oregon Trail has been completely torn down (scrap condition).

Objectives:

- To prevent or mitigate the adverse chemical/biological and visual impacts associated with the improper disposal of human waste and litter.
- To provide a quality camping experience that balances user convenience/comfort with a backcountry experience.

Management Actions:

- Information and education efforts and "Leave-No-Trace" programs will stress proper treatment of drinking water and the need for proper human waste disposal.
- Place renewed emphasis on the "Pack-It-In, Pack-It-Out" policy. Provide information at trailheads and high-use areas that recommends all garbage be bagged and packed out and discourages burning trash in fire rings.
- Provide informational material at appropriate trailheads that indicate that the use of any soap or detergent, or the disposal of food scraps in any waters is prohibited by regulation.
- Locate new designated campsites where waste disposal will not be a problem (e.g. set back from water, where soil is deep).
- Repair or replace and maintain the four existing pit privies identified as being in poor condition. They are located as follows: one at the Crane Mountain Trailhead; one associated with the western lean-to on Wilcox Lake; one at the summit of Hadley Mountain; and one associated with a primitive campsite on Bennett Lake.
- Provide a Port-a-John at the Hadley Mountain Trailhead and parking area due to the high number of visitors to this site.
- Construct accessible pit privies at the proposed accessible designated campsites at Dayton Creek, North Bend (which will replace the existing dilapidated privy at this location), and the

northern end of the Fish Ponds Road.

- Construct another pit privy along Hope Falls Road, south of the Brownell Camp, to serve the northernmost roadside campsite and Tenant Creek Falls/East Stony Creek Trailhead.
- Construct pit privies at each of the Garnet Lake boat-accessible designated campsites (total of six privies). These sites are becoming increasingly popular and because of their location on the shoreline of this fairly pristine waterbody, it is important to encourage proper waste disposal.
- Construct two accessible pit privies at Fox Lair to serve the designated campsites at this location. These privies will also serve the proposed accessible horse trailhead at this location.
- Construct a pit privy at Middle Lake. This location has multiple designated campsites in close proximity to the water.
- Construct a pit privy at the primitive tent site on eastern side of Round Pond. Also, consider installing privies at the existing primitive tent site on the southern side of Round Pond and the proposed designated campsite on the northern shore of the pond.
- Construct an accessible pit privy at the designated campsite on Bakertown Road immediately west of the Arrow Trail.
- Construct an accessible pit privy at the designated campsite on Bakertown Road east of the Harrisburg Lake Outlet ford. This privy will also serve the parking area east of the ford.
- Construct an accessible pit privy at the designated campsite on Bakertown Road east of the Wilcox Lake Trail snowmobile bridge over East Stony Creek. This privy will also serve the trailhead for the East Stony Creek Trail CP-3 route.
- Construct an accessible pit privy at the designated campsite east of Baldwin Spring.
- Consider the use of box toilets in place of pit privies where appropriate. Trail locations for the use of box toilets in the unit might include Middle Lake, Murphy Lake, Garnet Lake, Round Pond, and the proposed accessible campsite at the northern end of Fish Ponds Road. Because of their substantially lower cost and ease of installation, box toilets might be a good way of providing sanitary facilities at a greater number of locations in the unit for a minimal financial investment. Additionally, the universal design of box toilets makes them fully accessible.
- Monitor other trailheads and campsites within the unit to determine if improved sanitary facilities are required.
- Provide signage at high-use areas directing visitors to pit privy locations.
- Place no littering signs at roadside campsites.

7. Roads

Present Conditions:

Public motor vehicle access and use is permitted within Wild Forest-classified lands, but only on designated roads. Management of the unit's road system is complicated by the fact that it is comprised of town, private, and DEC roads.

Within the unit, the Department has clear jurisdiction over eight road segments totaling 5.2 miles in length. These segments include the Oregon Trail between Baldwin Spring and North Bend, Fish Ponds Road (Bartman Trail) between Baldwin Spring and the barrier about one mile north,

the Lizard Pond Trail between the Bartman Trail and the Indian Pond Trail, the Baldwin Spring Spur between West Stony Creek Road and Baldwin Spring, Bakertown Road south of the Moosewood Club to the Wilcox Lake snowmobile bridge, Wilcox Lake Road between Bakertown Road and the Wilcox Lake Trail, Pumpkin Hollow Road (Wilcox Lake Trail) east of the last inholding to Doig Creek, and Ski Hi Road from the Forest Preserve boundary to the Crane Mountain Trailhead and parking lot. In general, these roads have received very little maintenance over the years, which has resulted in generally poor conditions on many of them. None of the roads, with the exception of Ski Hi Road, is passable without a high-clearance vehicle and on some of them, travel is difficult or impossible even with a four-wheel-drive. Notably poor conditions are found on Wilcox Lake Road, especially on the hill west of the East Stony Creek ford. This road, although only slightly over 0.5 miles in length, shows symptoms of severe soil erosion and has extensive braiding in several sections. Additionally, the ford and very steep slopes west of the ford make maintaining this short stretch of road impossible without a substantial input of Department resources. For these reasons, the Wilcox Lake Road was posted as closed to motor vehicles in 2004. Permanent closure is proposed in this UMP.

Numerous town roads traverse the unit; these roads can be divided into several categories - roads that pass through the unit in the process of connecting two other roads, roads that end at a private inholding within the unit, and roads that end within the unit but not at an inholding. Town roads connecting two other roads that pass through the unit include Armstrong Road (Town of Johnsburg) and Creek Road (Town of Hope). In general, these roads receive regular maintenance and are in reasonably good shape. Town roads leading to private inholdings in the unit include Bakertown Road from the Forest Preserve boundary west of Harrisburg to the Moosewood Club inholding, West Stony Creek Road from the Forest Preserve to the Dog n' Pup Club inholding, Garnet Lake Road (Maxam Road) from the Forest Preserve boundary to the large inholding on the east side of the lake, Dorr Road from the Forest Preserve boundary to the last inholding, Hope Falls Road from the Forest Preserve boundary to the Brownell Camp inholding, Pumpkin Hollow Road from the Forest Preserve boundary to the last inholding, Bartman Road from the Forest Preserve boundary to the inholding, and River Road from the Forest Preserve boundary to the last inholding. Several town road segments in the unit do not access inholdings but end within the Forest Preserve. These include West Stony Creek Road (Arrow Trail) from the Dog 'n Pup inholding to the Town of Thurman line and the Mud Pond Road from the Forest Preserve boundary to the gate at the beginning of the Round Pond Trail. The conditions of the town roads in the unit vary greatly. For example, Mud Pond Road and Pumpkin Hollow Road are in good condition and are passable with a two-wheel-drive vehicle with minimal ground clearance. Alternatively, Bakertown Road and West Stony Creek Road often require four-wheel-drive vehicles and are generally in poor conditions with ruts, mud holes, and exposed rocks protruding 8-10 inches above the roadway surface.

Private roads also occur in the WLWF; there are numerous instances of private access roads or driveways that cross Forest Preserve lands in the unit. These private roadways include a driveway that leaves Bartman Road approximately 0.2 miles north of the inholding and traverses Forest Preserve land for 0.8 miles, the extension of Davignon Road south of the end of town maintenance which crosses Forest Preserve land twice for a total of 0.6 miles, Mason Road east

of Fox Hill Road which crosses Forest Preserve land for 0.3 miles, two driveways that leave Lake Desolation Road at the same point and have a total length of 0.9 miles of length across Forest Preserve land, a Lyme Timber Company haul road that crosses Forest Preserve land for 0.1 miles northwest of Greenfield Pond in the Town of Day, a Lyme Timber Company haul road that crosses a small parcel of Forest Preserve for 0.5 miles south of Ohmer Mountain in the Town of Day, the extension of Steve Kathan Road Part 1 which crosses a small parcel of Forest Preserve in the Town of Day for 0.1 miles, Reynolds Road which crosses a Forest Preserve parcel east of Davignon Road in the Town of Edinburg for 0.3 miles, and four road segments in the parcel of Forest Preserve land on South Shore Road in the Town of Day totaling 1.4 miles in length. The legal status of these private roadways has not been adequately researched nor has the public's right to use these roads across Forest Preserve lands been properly addressed.

Regardless of jurisdiction or ownership, the road system within the WLWF is in serious need of maintenance. Periodic general maintenance such as filling of holes, crowning, and provision of proper drainage is necessary on all the roadways within the unit. In addition to routine maintenance, two town roads in the unit, Bakertown Road and West Stony Creek Road, are in extremely poor condition and are in need of serious reworking. However, the Department does not have maintenance responsibilities on these sections of road.

Objectives:

- To ensure that the Department roads within the WLWF that remain open for public use are accessible to all public users and are maintained in a manner that allows reasonable vehicular access and minimal resource damage.
- To encourage local municipalities to properly manage and maintain the town roads that provide access to the resources of the WLWF.
- To minimize impact of road use and maintenance on the natural resources of the unit through continued monitoring and TRP issuance.
- To consider closure of roads in the unit where poor layout and design, overuse, or lack of maintenance have resulted in conditions that pose a significant public health risk and/or have become a source of resource degradation.
- To determine the legal status of the private roads and driveways in the unit and manage these resources appropriately.

Management Actions: *(See Appendix J for Roads Alternatives Discussion)*

- Discuss seasonal or periodic closures of the ford across Harrisburg Lake Outlet on the Bakertown Road with the Town of Stony Creek and the members of the Moosewood Club. Although this ford is appropriately located, during wet periods, high water can pose a serious safety threat if a vehicle becomes stuck or stalls out when in the stream. Additionally, environmental impacts associated with the ford are more pronounced when soils are saturated. Closure of this ford will cut off motor vehicle access to the Moosewood Club inholding and to the East Stony Creek CP-3 route, although allowing ATV access across the snowmobile bridge at this location to these two user groups may be appropriate and allowable if the ford is closed. If a closure of this ford is agreed upon, the installation of a gate east of the ford to enforce this closure and a gate across the snowmobile bridge to

prevent illegal ATV access may be desirable.

- Close Bakertown Road permanently to public motor vehicle access at the old clearing approximately halfway between Wilcox Lake Road and the Wilcox Lake Trail snowmobile bridge. This closure will eliminate some need for road maintenance responsibilities beyond this point and add mileage to the East Stony Creek ATV CP-3 route that will be designated from this point to a new lean-to at Dayton Creek. The roadway beyond this point is generally in poor condition and illegal ATV use could become a problem on this stretch, especially since the Town of Stony Creek opened their section of the Bakertown Road to ATVs. The clearing provides a good location for a parking area with adequate space for accommodating all anticipated levels of future use in this area. This closure will include the installation of a barrier that will allow continued snowmobile and CP-3 use beyond this point.
- Permanently close Wilcox Lake Road east of the East Stony Creek ford by installing a permanent rock barrier on the western side of the East Stony Creek ford and appropriate signage on the eastern side of the ford. This road has been closed to the public since 2004, due to steep grades and excessive erosion.
- Close the East Stony Creek ford on the Baldwin Spring Spur road east of Baldwin Spring permanently. Closure of this ford will effectively end public motor vehicle access to the Oregon Trail, Bartman Trail (Fish Ponds Road), and Lizard Pond Trail. Although it is proposed that the first two roads remain open to qualified persons with disabilities as ATV CP-3 routes, access for these users will be provided via the snowmobile bridge south of Baldwin Spring.
- Close Pumpkin Hollow Road (Wilcox Lake-Willis Lake Trail) to motor vehicle access except snowmobiles beyond the last private inholding. The road mileage between the last inholding and Doig Creek provides no additional useful access to the public. Install a gate at the eastern boundary of the inholding to ensure compliance with this closure. Construct a small parking area (three vehicle capacity) at this location.
- Work with the Town of Thurman to close the Mud Pond Road at the Mud Pond Trailhead parking lot. Closing the road at this point will discourage illegal use of the cleared area at the western end of the road and allow for the designation of a primitive campsite at that location. The roadway beyond this point will remain open to snowmobile traffic.
- Work with the Town of Thurman to close the Arrow Trail beyond the southern boundary of the Dog ‘n Pup Club in-holding to motor vehicles except snowmobile traffic. If and when this closure becomes effective, install a gate at this location.
- Work with the local towns to develop a seasonal maintenance schedule for the road network within the WLWF, in an effort to minimize resource damage, maintain reasonable road conditions, and ensure safe access. Focus maintenance efforts on West Stony Creek and Bakertown Roads.
- Monitor the condition of Ski Hi Road regularly and whenever necessary, provide routine maintenance to ensure easy access for low-clearance, two-wheel drive vehicles to the Crane Mountain Trailhead. This location is one of the unit’s most popular destinations and access should not be denied to users without an off-road vehicle.
- Work with towns to establish a maintenance schedule for the road network supporting facilities (i.e. barriers, signage, etc.) within the WLWF.
- Require TRPs for all road maintenance (private, town, county, and state) that impacts the

natural resources of the unit. Tree cutting on Forest Preserve lands as a part of road maintenance is unacceptable without a TRP.
- Install permanent rock barriers around gravel pit on east side of Creek Road adjacent to the Murphy-Middle-Bennett Lakes Trail.
- Monitor roads in the unit for illegal use and take corrective measures when appropriate.
- Conduct deed research to establish the legality of the private roads in the unit for which Department records do not show a legal right-of-way. Address whether public motor vehicle use is allowed or appropriate on the Forest Preserve sections of these roadways. If public access is not allowable or desirable, consider installing barriers that restrict access to authorized persons. Special consideration should be given to the four road segments on the Forest Preserve parcel on South Shore Road in the Town of Day. None of these road segments provides the only access to nearby private properties.

8. Parking Areas

The WLWF is endowed with a wealth of well-placed and adequately maintained parking areas. These parking lots are generally located on Forest Preserve land although several of the parking areas along Route 8 are within the NYS Department of Transportation (DOT) right-of-way. In addition to formal parking lots, a number of one and two-car spaces are provided along town roads that traverse the unit's lands. These spaces serve to disperse use during hunting and fishing seasons and are an important and probably underappreciated resource in the unit.

Several areas in the unit have occasional parking problems. The most obvious example of this is at Garnet Lake, where the parking lot at the end of the town roads provides spaces for six to seven vehicles. With six boat accessible campsites on the lake and frequent day use, this amount of parking is inadequate on many summer weekends. This problem is compounded by the presence of vehicles with boat trailers. In response to the lack of parking, people have occasionally begun to park along the road northeast of the parking lot. However, the road in this area is narrow and cannot accommodate a parked vehicle and two moving vehicles. Another area where parking is reasonably limited in the unit is at the Kibby Pond Trailhead where there is currently space for only two to three vehicles.

Objectives:
- To provide adequate parking at select locations in the WLWF while at the same time not encouraging overuse of the unit's resources by providing parking for more users than is consistent with the carrying capacity of the resources.
- To minimize resource degradation at parking areas.

Management Actions:
- Increase the capacity of the Garnet Lake parking lot by one to two vehicles. Encourage the Town of Thurman to post No Parking signs along the road immediately north of the parking lot. Also, investigate the feasibility of increasing parking opportunities further north along the road, including one or more pull-offs for vehicles with boat trailers. This parking lot expansion was deemed to be consistent with the carrying capacity of the area. Garnet Lake is

302 acres and has over 4 miles of state-owned shoreline and six boat-accessible designated campsites. This parking lot also serves as the trailhead for the northern end of the Round Pond Trail, which receives light use and is in very good condition, and one of the access points for the Lizard Pond Trail, which leads to the lean-to at Lizard Pond. Clearly, the combined recreational resources accessed from this lot can support more users than the existing six-car parking lot provides space for. Additionally, landowners attempting to access their private holdings beyond the parking area have complained about congestion at this location. These complaints have typically arisen from one or two inappropriately-parked vehicles, a situation which will hopefully be alleviated with the provision of several additional parking spaces.

- Increase the parking capacity at the Kibby Pond Trailhead by two vehicles to provide off-road parking for most users at this location. Kibby Pond is a 41-acre waterbody that will have two designated campsites following the implementation of this UMP. Based on informal observations, a single group of campers can often have two vehicles. Therefore, even if the only users of the parking area are two groups camping at the pond with two vehicles each, the current capacity of the parking area (two to three vehicles) will be exceeded. Conditions on the trail and at the campsites do not generally suggest overuse; thus, it is felt that adding two additional parking spaces is consistent with the carrying capacity of the area.
- Increase the parking capacity at the East Stony Creek/Tenant Creek Falls Trailhead by two or three vehicles, if possible. This area receives 2,500 to 3,000 visitors a year and the current lot capacity of six vehicles is insufficient, especially at times during the summer months when use is highest. Conditions on the trails and around the waterfalls that this trailhead provides access to suggest that current levels of use are not resulting in significant resource impact. With the construction/designation of the Rand Mountain Trail, use of this area may increase but it will be dispersed over a greater amount of trail mileage, preventing overuse. Therefore, it is believed that the provision of three additional parking spots is consistent with the carrying capacity of the area.
- Construct a five-vehicle parking lot with two accessible spaces that can accommodate vehicles with ATV trailers along West Stony Creek Road where the Baldwin Spring Spur Trail snowmobile bridge crosses East Stony Creek. Because the East Stony Creek ford north of the bridge is being closed to motor vehicle use in this UMP, this bridge will provide the only access to the Baldwin Spring Trailhead area without wading across East Stony Creek. Access to the Oregon Trail and the southern Fish Ponds Road ATV CP-3 routes will also be obtained at this location. In the past, when the ford was in better shape, most users probably forded East Stony Creek and parked at the Baldwin Spring trailhead area or drove to the terminus of one of the three road segments. Now, as the ford has deteriorated, the available parking on the east side of the creek has become inadequate. Clearly, the provision of five parking spaces at this location to replace the lost parking opportunity at Baldwin Spring is consistent with the carrying capacity of this area, which is one of the primary access points to thousands of acres of forests in the interior of the unit and many miles of little-used trails.
- Construct a six-car parking lot at the southern terminus of the Bakertown Road. Because this location will serve as the trailhead for the East Stony Creek ATV CP-3 route, which will provide access to the proposed lean-to at Dayton Creek, the lot will need to have two

accessible spaces that can accommodate vehicles with ATV trailers. This location will also serve as one of the access points to Wilcox Lake, a popular fishery. This parking lot will replace the parking opportunity at the western end of Wilcox Lake Road, which is being permanently closed to motor vehicles as part of this UMP. The provision of six parking spaces at this location is consistent with the carrying capacity of an area that has a 130-acre brook trout fishery (Wilcox Lake) and will, following the implementation of this UMP, contain three lean-tos and three designated campsites.

- Increase the capacity of the parking area east of the ford of Harrisburg Lake Outlet on Bakertown Road by two vehicles. This parking area serves as the access point to Wilcox Lake and the East Stony Creek Trail for users not wishing to cross the ford and with the implementation of this UMP, might also be the end of public motor vehicle access during some times of the year if a seasonal closure of this ford can be agreed upon by the stakeholders. Provision of two accessible spaces that can accommodate vehicles with ATV trailers may be necessary at this location because it may serve as a possible access point for persons with disabilities seeking to use the East Stony Creek ATV CP-3 route when the ford is closed.
- Increase the size of the parking lot at the Mud Pond Trailhead by three spots if Mud Pond Road is closed to public motor vehicle use at this point. With the designation of primitive tent sites at the former Mud Pond Road inholding, Mud Pond, and the north shore of Round Pond, the completion of the trail segment providing an overland connection between the two existing sections of the Round Pond Trail, and the designation of a foot trail to Mud Pond, this location might see significantly more use in the future. Clearly, the current configuration of the parking area, which would accommodate two or three vehicles if the road was closed, is inadequate and the proposed provision of five parking spots is consistent with the carrying capacity of the area and its several miles of trail and three to five designated campsites.
- Consider constructing an eight to ten-car parking area at the southern end of the Murphy-Middle-Bennett Lakes Trail at the old gravel pit following the completion of the proposed reroute for this part of the trail. This parking area will serve as an in-kind replacement of the current parking area which is approximately 0.3 miles from where the new trailhead will be following the completion of the proposed reroute of the Murphy-Middle-Bennett Lakes Trail.
- Construct a two-car parking area on Forest Preserve land south of the last inholding on River Road. This parking lot will serve as an access point for the Silver Lakes Wilderness. The Silver Lake Wilderness is an 108,270-acre with a very limited number of improved facilities. Because there are no facilities near the proposed River Road parking area to concentrate use in any given location, overuse at this location is not anticipated. Therefore, it was decided that the construction of a small parking lot at this location is consistent with the carrying capacity of the area.
- Construct an eight-car parking area at Fox Lair as listed under Management Actions related to access for persons with disabilities.

9. Fishing and Waterway Access Sites

Present Conditions:

A canoe-launch/hand-carry exists on the eastern side of the 302-acre Garnet Lake, at the end of Garnet Lake Road in the Town of Thurman. Garnet Lake has roughly six miles of shoreline,

two-thirds of which is state-owned. The launch/carry consists of a short, gentle, natural, gravel slope down into the lake from the Town road and an adjacent parking area large enough for 6-7 cars. The site also includes a trailhead register. This site provides public access to the lake for fishing and boating, as well as access to the six designated water-access campsites around the lake and the Lizard Pond trailhead on the southwest shore of the lake.

In the parlance of the Adirondack Park State Land Master Plan, this site is intended to serve as a "fishing and waterway access site". The APSLMP defines a fishing and waterway access site as "a site for fishing or other water access with attendant parking facilities which does not contain a ramp for or otherwise permit the launching of trailered boats". The APSLMP differentiates such a site from a boat launching site, which is defined as "a site providing for the launching of trailered boats, with ramp and attendant parking facilities". APSLMP guidelines further state that "[b]oat launching sites will only be provided on large lakes regularly used by motorboats. A large lake is defined as a lake approximately 1,000 acres or more in area".

At present, it appears that the Garnet Lake hand carry is being used by some as a "boat launching site", as defined by the APSLMP. However, at just 302 acres, Garnet Lake is not large enough to have a boat launching site, according to APSLMP guidelines.

Objectives:
- To conform to APSLMP guidelines regarding Fishing and Waterway Access Sites

Management Actions:
- Modify the Garnet Lake hand carry so that it meets the APSLMP definition of a "fishing and waterway access site" while not reducing accessibility of the site for people with disabilities. The Department will consult with the APA in this modification.

D. USE AND ACCESS

1. Public Access and Use

Present Conditions:
The primary public uses of the WLWF include hunting, fishing, camping and various trail-oriented activities (hiking, snowmobiling, horseback riding, nordic skiing and snowshoeing). Most of these activities are undertaken by individuals and small groups (less than eight). However, some activities (e.g. hunting camps, boy scout outings) are undertaken by larger groups. Many visitors consider large groups inappropriate and undesirable outside of designated areas within the Forest Preserve. Aside from behavioral factors, the potential to cause impact varies with party size and the type of use. Parties larger than eight people have been documented to cause greater impacts to certain environmental and sociological resources than the equivalent number of people divided into smaller groups (Cole 1987, 1989; Hendee *et al.* 2002, and USDA Forest Service 1994). Furthermore, the APSLMP defines a primitive tent site as "a designated tent site... designed to accommodate a maximum of eight people...". DEC regional practice currently limits camping group size in Wild Forest areas to no more than 20 persons per party.

Forest Rangers issue the permits and are given the authority to lower this ceiling depending on campsite suitability, time of desired use, and location. There are a number of large party permits issued during hunting season in the WLWF, but no significant problems resulting from this practice have been identified.

In general, the type and level of allowable public use that the WLWF receives is not causing significant environmental damage or reducing the quality of visitor experience. However, some specific areas are experiencing impacts, particularly to environmental resources, as a result of motor vehicle access. For example, the ford at Baldwin Spring provides motor vehicle access to the Oregon Trail, the Bartman Trail, and Lizard Pond Trail. Vehicular access to these trails provides no particular service other than possible campsite access. Further, these trails are much more suited to hiking and biking. Continued public motor vehicle access only creates potential for user conflicts and adverse environmental impacts. Additionally, the ford at Baldwin Spring is often unsafe to cross and presents opportunity for water pollution, soil erosion, and siltation. Another example of where motor access has created resource degradation problems is Wilcox Lake Road, primarily the East Stony Creek ford and the steep slopes to the west of this ford. Use of this area is highest during the spring when water levels are highest and soils are saturated and unstable. The result has been significant rutting of the road to the extent that access is nearly impossible, even for some four-wheel-drive vehicles on the existing roadway, resulting in road braiding and further expansion of impacts. For these reasons, the road was posted as closed in 2004. Permanent closure is proposed in this UMP.

Public use of ATVs on trails and roads under the Department's jurisdiction in the WLWF is not permitted as it conflicts with state law and/or the APSLMP Wild Forest guidelines. However, illegal ATV use of both the unit's roads and trails occurs with some frequency, despite signs, barriers, and enforcement intended to eliminate this use. When considering the provision of access to DEC programs for persons with disabilities as required by the 2001 ADA settlement (Consent Decree), highly regulated ATV use on a few specific routes within the unit may be preferable to access with full-sized automobiles because by virtue of their smaller size and weight, ATVs potentially result in less disturbance to the driving surface and have lower surface maintenance requirements. The option of allowing access for persons with disabilities to the WLWF at certain points via ATV is discussed in greater detail under the heading Access for Persons with Disabilities. However, it is important to consider that such use could present user conflicts and would require significant controls, not only to prevent illegal ATV use by those who are not disabled but also to educate those individuals qualified for this use about trail safety, conflict avoidance, and appropriate use.

There are no restrictions limiting day use – groups of any size may enter the WLWF. Day use groups exceeding 20 persons are not common but do occur, primarily at Fox Lair and Snake Rock. These areas are occasionally used by local residents and youth as "party spots," although recent enforcement activities have curtailed this type of use. Snake Rock contains one site that has been used for overnight camping although it does not meet setback requirements from the road. Noise from parties at this site has impacted nearby residents in the past. There have also been incidents of underage drinking.

Data on use within the WLWF are limited and sporadic as noted in Section II. Although an attempt is made to collect data systematically at many trailheads, a lack of register sheets, vandalism, and failure of users to sign in, particularly during fishing, hunting, and snowmobiling seasons, make drawing sound conclusions from register data difficult, if not impossible, for many locations and the unit as a whole. Additionally, direct access from Routes 8 and 30 and numerous town roads present opportunities for Forest Preserve use in areas where no registers are available. Based on the available data and observations by Forest Rangers and other DEC staff, the WLWF does not receive the level of use that some other units, such as the High Peaks Wilderness Area or nearby Lake George Wild Forest, receive, although visitation at a few locations within the WLWF rivals these units. Future use within the unit is difficult to project and dependent upon many social, economic, and physical (e.g., weather) factors. This uncertainty emphasizes the importance of collecting and retaining better visitation data and monitoring resource condition.

Easements across private lands are occasionally necessary and beneficial to allow public access to the Forest Preserve. In most cases throughout the WLWF, easements are unnecessary as access is obtained directly from a public roadway. However, in a few instances, easements have been established to permit public access. These locations include the St. Johns Lake Trail and the East Stony Creek Trail. However, there is no formal easement to access the Tenant Creek Falls Trail and the Pine Orchard Trail at Dorr Road. Additionally, a more direct snowmobile route from the Arrow Trail to the Bakertown Road has been informally established by snowmobilers across Sweet Lumber Company property, but the Department does not have an easement or agreement with the landowners for this access.

Objectives:

- To continue to encourage the appropriate uses and levels of use in the WLWF while trying to minimize the impacts of visitation on natural resources and the experiences of all visitors, consistent with the concept of Wild Forest as described by the APSLMP.
- To provide adequate public access to the resources of the unit.
- To eliminate illegal uses in the unit, particularly ATV use, to protect the unit's resources and reduce user conflicts.
- To establish a more accurate means of collecting and monitoring public use data.
- To achieve the objectives of the Consent Decree for access for persons with disabilities.

Management Actions:

- Encourage both overnight and day users to keep groups small and establish desirable maximum group sizes.
- Adopt regulations to limit the maximum number of persons per designated primitive tent site to eight.
- Consider day-use group size restrictions if large groups pose a threat to the Wild Forest character of the unit.
- Provide appropriate opportunities for access and use in the unit for persons with disabilities. Further discussion of this is contained in the next sub-section.
- Eliminate motor vehicle access in the WLWF where this use is impacting the unit's natural

resources and poses a safety hazard to users (e.g. fords). Further discussion of motor vehicle access is provided in the Management Actions – Roads subsection.

- Provide appropriate signage informing users that ATV use is illegal on all roads and trails under the Department's jurisdiction. Continued vigilance in enforcing this regulation is required if illegal ATV use is to be eliminated in the unit. This enforcement will include monitoring throughout the unit to locate new ATV incursions. If and when these illegal incursions are discovered, install barriers promptly to eliminate this use.
- Formalize trail agreements with private landowners at appropriate locations in the unit to provide access across their properties. Further discussion of easements and access agreements is provided in the Management Actions – Trails subsection. In addition to trail easements or agreements, seek public access for portions of the unit without adequate access. These locations include Davignon Road, Old Fodder Brook Road, the Louis Waite Road parcel, and possibly other, unidentified locations. Foot access to these parcels is beneficial from a recreational perspective. Appropriate signage will be necessary to inform users of this access.
- Increase the amount of visitation data collected in the unit with the installation of new trail registers. Possible locations for new trail registers might include the Girards Sugarbush Trailhead, the Pine Orchard Trailhead on Dorr Road, the Harrisburg Road parking area, and the Round Pond Trailhead on Mud Pond Road.
- Improve the collection of visitation data within the unit. In general, efforts should focus on improving trail register maintenance and data collection through timely, regular replacement of register sheets. In addition, visitation data verification and/or adjustment through the use of trail counters or surveys of users at select parking areas, trailheads and destination points may be desirable. In particular, focus on areas that receive the highest levels of use including Hadley Mountain, Crane Mountain, Baldwin Spring, and Wilcox Lake. Special attention should also be given to improving visitation data for user groups that are typically under-represented in trail register data because they often do not sign in at registers; these users include snowmobilers, hunters, and fishermen.

2. Access for Persons with Disabilities

Present Conditions:

Some limited opportunities for access to recreational programs by persons with disabilities may currently exist in the WLWF. Many of the unit's roadside designated campsites, canoe and fishing access points, and scenic vistas can be directly accessed by passenger cars and/or four-wheel-drive vehicles; these locations include campsites along Route 8, West Stony Creek Road, Bakertown Road, and Pumpkin Hollow Road and boat access at Garnet Lake. However, it is important to note that although these facilities may outwardly appear to be accessible, none of them has been evaluated under the guidelines put forth by the ADA and it is likely that few, if any, would fully comply with those requirements. Furthermore, road access to these facilities is rough in places, particularly along West Stony Creek and Bakertown Roads. Therefore, although some limited access for persons with disabilities to Department programs may be available in the WLWF by motor vehicle and some facilities in the unit seem to be barrier-free, at least superficially, the WLWF presents the opportunity to improve recreational access opportunities

for persons with disabilities.

In a 1998 legal proceeding, a group of plaintiffs sued the Department, the Adirondack Park Agency, the New York State Governor's Office, and the State of New York under the Americans with Disabilities Act (ADA). In July 2001, a settlement providing additional access to Forest Preserve land and Department programs in the Adirondack Parks for persons with disabilities was announced. Under the settlement, hereafter referred to as the Consent Decree, the Defendants in the case agreed to improve access to Department programs for people with disabilities.

Nearly 60 specific projects were identified in the Consent Decree to provide motorized access to the outdoor recreational programs offered by the Department on Forest Preserve lands for persons with disabilities. Of these, two trail rehabilitation projects to allow access for persons with disabilities by motor vehicle (automobile or ATV) were identified in the WLWF. These access routes included the Arrow Trail (4 miles) and the trail to Upper Fish Pond (2.1 miles). Further review of the potential use of the Arrow Trail revealed that this trail was inappropriate for a motorized access route for persons with disabilities due to its rugged condition and the lack of any good access to recreational programs, such as fishing areas and campsites. The Arrow Trail contains numerous mud holes and the middle section of the trail has been eroded to such an extent that boulders and cobbles protrude 12"-24" above the trail, generally precluding any safe ATV use. Further review of the trail to Upper Fish Pond revealed that it, too, was inappropriate for development as a motorized access route due to its rugged condition, numerous stream crossings, and the presence of steep grades between the saddle and the bridge over an inlet of Upper Fish Pond. Grades in this stretch (15-24%) and a number of problematic wet areas would necessitate changes to the trail that would likely result in a significant change in the character of the trail. One additional project identified in the Consent Decree involves making the existing Saratoga County Bout Launch vault toilet accessible for persons with disabilities.

Based on these constraints, the DEC has proposed the development of substitute CP-3 routes in this unit and others[3]. These routes offer greater opportunities for access to recreational programs offered by the Department and therefore a more enjoyable recreational experience than the original Consent Decree projects. In addition, the existing conditions on these routes are such that they could be more easily maintained to provide access for persons with disabilities via ATV.

Specifically, the East Stony Creek Trail from Bakertown Road to Dayton Creek is an old road that is currently designated as a snowmobile trail and is accessed via Bakertown Road. The motor vehicle access on Bakertown Road currently ends north of the snowmobile bridge across East Stony Creek in the Town of Stony Creek. There are no designated campsites along the approximately one mile of trail that could be considered for use by persons with disabilities. However, there is a level site near Dayton Creek that could be developed with an accessible

[3] Opening two miles of the Roosevelt truck trail for people with disabilities was approved in the 2005 Vanderwhacker Mountain Wild Forest UMP.

lean-to. Based on USGS topographic mapping, grades along this trail are generally 0-3% with a small ravine (approximately 50 feet across) where the grades increase to 6-7%. These grades are acceptable under ADA guidelines. Access to the beginning of this route requires a four-wheel-drive vehicle because Bakertown Road is not well maintained. Furthermore, the existing ford of Harrisburg Lake Outlet along this route presents a potential safety and environmental hazard, especially if persons with disabilities were to become stuck in the ford. Consideration is being given to closing this ford seasonally. Therefore, a possible alternative would be to establish a parking area before the ford and using the existing snowmobile bridge at this location for access during periods of high water levels.

In addition to the East Stony Creek trail, two road segments in the unit – the Oregon Trail between Baldwin Spring and North Bend (1.6 miles) and the Fish Ponds Road (south end of the Bartman Trail) north from Baldwin Spring (1.0 miles) – show promise as potential ADA accessible routes. Their closure to the public motor vehicle use is proposed elsewhere in this UMP. Both of these roads are currently accessed by motor vehicle (high clearance pick-ups and SUVs; ATV use is not allowed due to the Vehicle & Traffic Law prohibition against ATV use and automobile use on the same section of road) from West Stony Creek Road by the crossing the East Stony Creek ford east of Baldwin Spring. However, the poor condition of this ford precludes continued public motorized use because of resource protection and safety considerations. The ford can be avoided by users on foot by crossing East Stony Creek on the snowmobile bridge south of the ford; this bridge could also provide ATV access to persons with disabilities to these CP-3 routes following the closure of the ford. The potential Oregon Trail CP-3 route terminates at the primitive tent site at North Bend; although facilities at this site are not accessible, they could easily be upgraded to meet ADAAG. The other road segment ends at an old clearing, which has probably functioned as a campsite for hunters and others over the years. Other locations to develop access to recreational programs exist along both routes. While portions of these trails probably meet the ADAAG for recreational trails, which are intended to address uses under an individual's own power such as a wheelchair, surface conditions and a few steep grades generally preclude use of this type. Therefore, ATV access for persons with disabilities is the preferred alternative for these routes.

In addition to these proposed CP-3 routes, there are other potential opportunities for persons with disabilities to experience the recreational resources and programs of the WLWF. As previously mentioned, roadside designated campsites at Fox Lair, along Bakertown Road, and near Baldwin Spring could be improved to meet ADAAG. Other facilities, after assessment with ADA standards, could be improved to comply with ADAAG if desirable.

Objectives:

- To the extent practicable, provide opportunities for persons and groups of persons with disabilities to access recreational programs in the WLWF in ways similar to other users.
- To comply with the July 5, 2001 Consent Decree, which concerns maintaining and expanding motorized access to Forest Preserve resources and programs, recognizing that both of the agreed upon ADA-accessible routes in the unit, the 4-mile Arrow trail and the 2.1 mile Upper Fish Pond trail, are not feasible options and require replacement.

Management Actions: *(See Appendix K for Access for Persons with Disabilities Alternatives Discussion)*

- Conduct trail improvements along the East Stony Creek Trail, Oregon Trail and southern Fish Ponds Road (the Bartman Trail) to provide motorized access to recreational programs by persons with disabilities. Provision of access for persons with disabilities is required to meet the conditions of the Consent Decree. Specific actions should include the following:
  - Based on a detailed trail condition inventory, maintain these trails to acceptable standards for safe ATV use for persons with disabilities (i.e., width, surface materials, slope, sight distance). Input should be sought from the ADA community to arrive at the appropriate standards for these trails.
  - Develop opportunities to access Department programs along each of these motorized routes. The accessible facilities that will be provided at the end of each proposed CP-3 route include a level campsite at the northern terminus of Fish Ponds Road and lean-tos at Dayton Creek and North Bend. Each site will have a fire ring/hearth, picnic table and privy. All support facilities will meet ADA specifications.
  - Designate accessible parking spaces for two vehicles with trailers at the parking areas that provide access to these CP-3 routes. Where appropriate, provide accessible sanitary facilities at these sites.
- Incorporate signage at trailhead access points to identify accessible trails and other facilities and explain any rules and restrictions associated with the use of these facilities.
- Adopt seasonal and/or periodic closures on the unit's proposed CP-3 routes to prevent use during wet periods when ATV traffic would result in negative trail impacts.
- Provide a universally accessible horse trailhead with a mounting platform, accessible parking, and two nearby accessible designated campsites with privies, fire rings, and picnic tables at Fox Lair to facilitate program access for persons with disabilities on horses to the Cook Brook Horse Trail in the adjacent Siamese Ponds Wilderness Area. The trailhead will include a parking area for eight vehicles with two accessible spaces, a trail register, and a kiosk.
- Upgrade the existing conditions at the designated campsite on Bakertown Road immediately west of the western end of the Oxbow Trail, the designated campsite on Bakertown Road north of the Harrisburg Lake Outlet ford, the designated campsite north of the Wilcox Lake Trail snowmobile bridge over East Stony Creek, and the designated campsite east of Baldwin Spring to make these facilities universally accessible.
- Consider installing an accessible Port-a-John at some point along Garnet Lake Road to make this location universally accessible. Because the mobility impaired public will probably benefit most from this facility if it is provided at or adjacent to the parking area, every effort will be made to locate it there if it can be accommodated without restricting parking.

SECTION V – SCHEDULE FOR IMPLEMENTATION AND ESTIMATED BUDGET

The following tables outline a schedule for implementation of the proposed management actions and their estimated costs. Accomplishment of these management actions is contingent upon sufficient staffing levels and available funding. The estimated costs of implementing these projects are based on historical costs incurred by the Department for similar projects. Values for some projects are based on projected costs for service contracting.

Annual Maintenance and other Activities	**Estimated Annual Cost**
Boundary line maintenance on a 7-year schedule (52 miles/year @ $500/mi).[1]	$26,000
Basic facility maintenance – mainly blowdown removal and drainage clearing on trails.[2] Target trail maintenance to heavily-used, highly-eroded trails such as the Hadley Mountain Trail and Crane Mountain Trail systems.	$20,500
Routine boat launch maintenance, including: mowing, paving repairs, installation and removal of docks, and operation of toilet facilities.	$10,000
Surveys of vegetation LAC indicators at the unit's campsites.	$12,000
Biological and chemical surveys of selected unit waters to assess fisheries management needs and to determine progress towards management objectives. [3]	$20,000
Annual ED/RR surveys for invasive plant species.	$5,000
Annual control program for invasive plants.	$5,000
Annual cost of a Port-a-John at the Hadley Mountain Trailhead.[4]	$500
Monitor campsite conditions at Crane Mountain Pond for overuse.	$200
Annual meetings of the Planning Team	-
Annual cost of an accessible Port-a-John at Garnet Lake.[5]	$750
Total Cost – Annual maintenance and other activities.	**$99,950**

[1] With 364 miles of Unit boundary, 52 mi/year need to be maintained within the standard 7-year boundary line maintenance interval.

[2] This estimate assumes 16 miles of trail maintenance per year @ a cost of $1,000/mile, 1 mile of road/CP-3 route maintenance per year @ a cost of $3,000/mile, maintenance of 15 campsites a year @ a cost of $100/campsite, and current stewardship agreements remain in place.

[3] This estimate assumes surveys are performed by a senior biologist and an assistant dedicated quarter-time to WLWF survey issues over the five-year period of the plan. Estimate reflects 2006 rates.

[4] Cost of Port-a-John rental and pumping estimated to be $100/month for 5 months per year, May-October. Estimate reflects 2006 rates.

[5] Cost of accessible Port-a-John rental and pumping estimated to be $150/month for 5 months per year, May-October. Estimate reflects 2006 rates.

Year 1 (SFY 2007)	**Estimated Cost**
Develop LAC indicators and standards for vegetation at primitive tent sites.	$2,000
Develop and print a WLWF brochure.	$5,000

Year 1 (SFY 2007)	Estimated Cost
Assess the current conditions of the future ATV CP-3 routes in the unit by conducting a detailed inventory of the appropriate sections of the East Stony Creek Trail, Oregon Trail, and Fish Ponds Road (5 miles @ $500/mile).	$2,500
Convert the existing designated campsite at North Bend to an accessible campsite that includes a fire ring/hearth, picnic table, and pit privy.	$1,250
Construct an accessible campsite at Dayton Creek including a fire ring/hearth, picnic table, and pit privy.	$1,500
Construct an accessible campsite at the northern terminus of Fish Ponds Road including a fire ring/hearth, picnic table, and pit privy.	$1,500
Construct a five-vehicle parking lot along West Stony Creek Road near the existing snowmobile bridge over East Stony Creek that includes two reserved accessible spaces with room for vehicles with ATV trailers.	$2,500
Install a permanent rock barrier on the Baldwin Spring Spur road west of the East Stony Creek ford with appropriate signage on the eastern side of the ford if the road is closed to motor vehicle use beyond this point.	$500
Construct a fish barrier dam on Wilcox Lake.	$20,000
Designate Old Armstrong Road as a snowmobile trail.	$100
Construct/designate a new 1.0-mile snowmobile trail parallel to Kidder Brook off Tucker Road.	$3,000
Construct/designate a new 1.3-mile snowmobile trail parallel to Rte. 8 (1.0 miles on Forest Preserve, 0.3 miles on private land) that will replace the Cotter Brook Trail, including a bridge over Georgia Creek.	$8,900
Install a permanent rock barrier at the eastern end of Wilcox Lake Road, west of the East Stony Creek ford, and appropriate signage on the eastern side of the ford informing the public that the road is permanently closed.	$500
Designate the existing herd paths to Eagle and Little Joe Ponds as Class III foot trails.	$200
Repair the existing snowmobile bridge on the Oregon Trail at North Bend.	$1,000
Expand the Garnet Lake parking lot by providing space for two additional vehicles. Construct several other parking spaces further north along the road to provide parking for the designated campsites and day-use areas and accommodate vehicles with trailers if possible. Work with the Town of Thurman to post No Parking signs along the road immediately north of the parking lot.	$4,000
Install a gate on Mud Pond Road at the Mud Pond Trailhead parking area.	$500
Construct/designate a Class III foot trail from the existing St. John Lake Trailhead on Harrisburg Road to the base of Thompson Mountain. Install a register box at this parking lot.	$800
Close the non-compliant designated campsites in the unit.	$500

Year 1 (SFY 2007)	**Estimated Cost**
Designate six new primitive tent sites including one on Round Pond, two on Murphy Lake, one on Bennett Lake, one at Boom Pole Knoll along the Arrow Trail, one at Mud Pond, and one on New Lake.	$600
Install an accessible pit privy at Fox Lair	$1,000
Install signage signifying the closure of Bakertown Road to motor vehicles beyond the old clearing midway between Wilcox Lake Road and the Wilcox Lake Trail snowmobile bridge and Pumpkin Hollow Road just beyond the last inholding.	$50
Install a permanent rock barrier on the East Stony Creek Trail north of the Brownell Camp inholding closing this trail to snowmobile use.	$500
Close the Bartman Junction Trail, Indian Pond Trail, the southern branch of the Tenant Creek Falls Trail, the Fodder Brook Trail, and the Louis Waite Trail to snowmobile use. Remove snowmobile trail disks and put up appropriate signage informing the public of these closures.	$250
Install pit privies at the Crane Mountain Trailhead and the western lean-to on Wilcox Lake to replace existing privies in poor condition.	$1,000
Place a Port-a-John at the Hadley Mountain Trailhead.	-
Mark/post trails according to ATB-use designation.	$400
Surplus the buildings at the former Mud Pond Road inholding.	$20,000
Close the primitive tent site south of the outlet of Crane Mountain Pond per APSLMP guidelines regarding separation distances.	$50
Repair abutment on bridge over Tenant Creek near Brownell Camp.	$1,000
Place boulder on Kibby Brook bridge at Fox Lair.	$200
Total Cost – Year 1	**$82,900**

Year 2 (SFY 2008)	**Estimated Cost**
Using the inventory data collected in Year 1, bring the conditions of the unit's CP-3 routes up to appropriate standards for ATV use by persons with disabilities.	$25,000
Install a gate on Bakertown Road at the old clearing midway between Wilcox Lake Road and the Wilcox Lake Trail snowmobile to enforce the closure of the road beyond this point to public motor vehicle use. This gate will be equipped with a combination lock that will allow access to the East Stony Creek Trail CP-3 route. Construct an six-vehicle parking lot at this location with two accessible spaces large enough to accommodate vehicles with trailers. Move the existing trail register to this location.	$6,600
Construct an accessible lean-to at the Dayton Creek designated campsite. Install a permanent barrier north of Dayton Creek closing the East Stony Creek Trail to any motorized use, including snowmobiles, south of this point.	$8,000

Year 2 (SFY 2008)	**Estimated Cost**
Install an ATV/snowmobile bridge on the Oregon Trail between Baldwin Spring and North Bend.	$5,000
Repair/replace two bridges on the Georgia Creek-Moose Mountain Trail.	$4,000
Reroute a 0.15-mile section of the Pine Orchard Trail near Coulombe Creek..	$600
Reroute a 0.3-mile section of the Murphy-Middle-Bennett Lakes Trail west of Murphy Lake.	$900
If closure of the Arrow Trail beyond the Dog ‘n Pup Club to motor vehicles is agreed upon, install a gate at the southern boundary of the inholding. If the closure cannot be agreed upon, install a gate at the Thurman town line.	$500
Install permanent rock barriers on both ends of the Bartman Junction Trail to enforce the closure of this trail to snowmobiles.	$1,000
Repair the pit privy at the summit of Hadley Mountain. Install a pit privy at Bennett Lake to replace an existing privy in poor condition.	$700
Install a new pit privy at Middle Lake.	$500
Construct a bridge on the proposed Old Armstrong Road snowmobile trail 0.2 miles east of Bartman Road.	$5,000
Install two pit privies and picnic tables at designated campsites on Garnet Lake.	$1,500
Convert one of the existing designated campsites at Fox Lair to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Convert the existing designated campsite east of Baldwin Spring to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Install a trail register at the Girards Sugarbush Trailhead.	$225
Install gate on the Bartman Trail (Fish Ponds Road) immediately north of proposed accessible designated campsite accessed from the south.	$750
Install a trail register at the southern end of the Arrow Trail where the trail across private lands and the private land bypass trail meet.	$225
Construct a fish barrier dam on Bennett Lake.	$7,000
Reclaim Wilcox Lake with rotenone.	$40,000
Reclaim Murphy Lake with rotenone.	$15,000
Designate a primitive tent site at the clearing at the former inholding on Mud Pond Road.	-
Relocate/replace the existing lean-to on the eastern side of Wilcox Lake to the existing designated campsite further east. Replace the pit privy associated with the lean-to. Designate a campsite on Wilcox Lake between the two lean-tos. Reroute the foot trail to the lean-to on the western side of the lake to avoid several wet spots	$9,000
Total Cost – Year 2	**$134,000**

Year 3 (SFY 2009)	Estimated Cost
Construct 0.6 miles of new snowmobile trail connecting the two existing sections of the Round Pond Trail.	$1,800
Install permanent rock barriers at the Forest Preserve boundary at both ends of the Old Fodder Brook Road Trail.	$1,000
Construct/designate 1.1 miles of new snowmobile trail linking the Murphy-Middle-Bennett Lakes Trail to the hamlet of Pumpkin Hollow.	$3,300
Reroute a 1.3-mile section of the Murphy-Middle-Bennett Lakes Trail around the northern end of Murphy Lake.	$3,900
Reroute two sections of the Wilcox Lake-Willis Lake Trail midway between Wilcox and Willis Lakes totaling 1.6 miles in length.	$4,800
Construct/designate a new Class V foot trail linking the Sacandaga Campground with Moose Mountain. Install a trail register at the trailhead.	$5,000
Construct a bridge across an unnamed tributary of the East Branch of the Sacandaga River on the Girards Sugarbush Trail.	$5,000
Construct a new bridge across an unnamed tributary of Mill Creek on the Pine Orchard Trail.	$5,000
Construct a new bridge across an unnamed tributary of the outlet of Wilcox Lake on the Wilcox Lake-Willis Lake snowmobile trail	$5,000
Replace an existing bridge on the Pine Orchard Trail one mile north of Willis Lake.	$5,000
Install two pit privies and picnic tables at designated campsites on Garnet Lake.	$1,500
If public access is possible, designate Old Fodder Brook Road as a Class VIII ski trail.	$350
Construct a universally accessible horse trailhead at Fox Lair complete with mounting platform. This trailhead will include a parking area for eight vehicles with two accessible spaces, a trail register, and a kiosk.	$15,000
Convert the existing designated campsite along Bakertown Road east of the Harrisburg Lake Outlet ford to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Reclaim Bennett Lake with rotenone.	$15,000
Reclaim Middle Lake with rotenone.	$11,000
Install boulders around gravel pit on east side of Creek Road to prevent illegal motor vehicle use.	$1,000
Close the Cotter Brook Trail to snowmobiles. Remove the snowmobile trail disks and put up appropriate signage.	$150
Repave the Saratoga County Boat Launch ramp and extend lakeward to facilitate launching at lowest anticipated water levels. Construct and implement a steel skid dock to provide docking facilities for this site. A bulkhead is not anticipated to be necessary for this type of docking facility. Upgrade toilet facility to make accessible for persons with disabilities.	$20,000

Year 3 (SFY 2009)	Estimated Cost
Total Cost – Year 3	**$105,050**

Year 4 (SFY 2010)	Estimated Cost
Reroute 0.6 miles of the Oregon Trail between North Bend and the Cod Pond Trail.	$1,800
Widen the bridge over East Stony Creek on the Wilcox Lake Trail.	$15,000
Install a trail register on the Pine Orchard trail at Pumpkin Hollow Road	$225
Install permanent rock barriers at both ends of the Cotter Brook Trail to enforce its closure to snowmobiles.	$1,000
Repair two existing bridges on the Pine Orchard Trail to facilitate safe snowmobile travel.	$2,000
Reroute a 1.6-mile section of the Murphy-Middle-Bennett Lakes Trail between Bennett Lake and Creek Road.	$4,800
Install permanent rock barriers at both ends of the Indian Pond Trail to enforce its closure to snowmobiles.	$1,000
Increase the capacity of the Mud Pond Trailhead parking area by four vehicles. (Increase in parking lot size is contingent on the closure of Mud Pond Road discussed previously).	$4,000
Install two pit privies and picnic tables at designated campsites on Garnet Lake.	$1,500
Construct a three-vehicle parking area on River Road, south of the last inholding.	$3,000
Convert the existing designated campsite along Bakertown Road north of the Wilcox Lake Trail snowmobile bridge over East Stony Creek to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Convert an existing designated campsite at Fox Lair to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Construct an accessible lean-to at the primitive tent site at North Bend.	$7,500
Install a gate east of the Harrisburg Lake Outlet ford on Bakertown Road if a seasonal and period closure of this ford can be agreed upon by the stakeholders. A device should also be installed in front of the snowmobile bridge at this location to selectively limit ATV access. Increase the capacity of the parking area east of the ford by two vehicles.	$1,000
Designate/construct a Class III foot trail to the cliffs on Rand Mountain. Total length of new trail construction is 2.3 miles. Increase parking capacity at the trailhead by two or three vehicles, if possible	$2,300
Total Cost – Year 4	**$47,625**

Year 5 (SFY 2011)	Estimated Cost
Update and reprint the WLWF brochure.	$5,000
Install permanent rock barriers at the Forest Preserve boundary at both ends of the southern branch of the Tenant Creek Falls Trail to enforce the closure of this trail to snowmobiles.	$1,000
Install permanent rock barriers at the Forest Preserve boundary at both ends of the Louis Waite Trail to enforce the closure of this trail to snowmobiles.	$1,000
Reroute a 0.3-mile of the Cotter Brook Trail north of Cotter Swamp.	$500
Relocate the gate on the Wilcox Lake-Willis Lake Trail from Doig Creek to just beyond the last inholding on Pumpkin Hollow Road. Construct a small parking area (three vehicle capacity) at this location.	$3,500
Construct an eight to ten-car parking lot at the abandoned gravel pit at the southern end of the Murphy-Middle-Bennett Lakes Trail on Creek Road following the completion of the reroute of this section of trail. Reclaim the remainder of the gravel pit to appropriate standards. Move the trail register to this location.	$15,000
Convert the existing designated campsite along Bakertown Road west of the Oxbow Trail to an accessible site, complete with a privy, hearth/fire ring, and picnic table.	$1,250
Increase the capacity of the Kibby Pond Trailhead parking area by two vehicles.	$2,000
Develop a Class III foot trail from the Round Pond Trail to the designated tent site on the peninsula at the eastern end of the pond, including approximately 30 ft of bog bridging	$1,000
Install directional signage at appropriate locations on the roads and in the villages around the unit.	$2,000
Total Cost – Year 5	**$32,250**

COST SUMMARY

Annual recurring costs:	$99,750
Five year annual total:	$401,825
Total cost of management:	**$901,575**

Other Activities (to be completed as soon as possible)

1. Complete land title and boundary line surveys as needed across the unit.

2. Work with Town of Thurman to close the Mud Pond Road to public motor vehicle use beyond the Mud Pond Trailhead.

3. Work with the Town of Thurman to close the Arrow Trail to motor vehicle use beyond the Dog ‘n Pup Club inholding.

4. Work with the stakeholders to institute a seasonal and/or periodic closure of the Harrisburg Lake Outlet ford on Bakertown Road.

5. Secure a formal agreement to allow public access to either the northern or southern end of the Old Fodder Brook Road Trail.

6. Secure an agreement allowing public use of the private stretch of Davignon Road to access the large parcel of Forest Preserve land east of the road.

7. Secure a formal agreement allowing public access to the Forest Preserve parcel accessed by Louis Waite Road.

8. Secure a permanent snowmobile trail easement to cross private property at the southern end of the Arrow Trail.

9. Formalize the access agreement for the Tenant Creek Falls Trail across the Brownell Camp inholding or purchase a trail easement at this location.

10. Formalize the access agreement for the Pine Orchard Trail across the last inholding on Dorr Road or purchase a trail easement at this location.

11. Seek an agreement to allow snowmobile access across the parcels of private land along Route 8 south of the Georgia Creek-Moose Mountain Trailhead.

12. Seek an agreement to allow snowmobile access across the parcels of private land in and around the hamlet of Pumpkin Hollow to facilitate the connection between the unit's trail system and the Village of Wells.

13. Secure a formal agreement allowing public access to the Spruce Mountain fire tower.

14. Conduct surveys for Spruce Grouse and evaluate the distribution and quality of potential Spruce Grouse habitat. Based on results of the surveys and habitat assessment, consider reintroducing this species.

15. Conduct deed research on private road status.

16. Conduct a survey of hunters and trappers that use the unit.

17. Inventory boreal forest habitats within the unit.

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SECTION VII – APPENDICES

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APPENDIX A: RESPONSE TO PUBLIC COMMENTS

To be added following the public comment period.

APPENDIX B: TRACTS AND PARCELS

- Bergen's Purchase
  - portions of Patents 2, 3, and 4
  - Patent 5
    - portions of Lots 5 and 6
  - Patent 6
    - North ½
      - Lots 1 and 2
      - portions of Lots 3 and 5
    - South ½
      - Lots 1, 2 and 3
      - portions of Lots 4, 5, 6 and 7
  - Patent 7
    - Lot 2
      - portion of Sub-lot 2
    - Lot 4
      - Sub-lots 7 and 9
    - Lots 5 and 6
  - Patent 8 & 9
    - Lots 7, 8, 9, 12, 13, 14, 15, 17 and 18
    - portions of Lots 3, 4, 11, and 16
  - Patent 10
    - Lots 5 and 6
  - Patent 11
    - Lot 5
    - portion of Lot 6
  - Patent 12
    - Lot 8
    - portions of Lots 10 and 11

- Dartmouth Patent
  - Great Tract
    - Range 3
      - Lot 7
      - portions of Lots 4 and 5
    - Range 4
      - Lots 4, 5 and 7
    - Range 5
      - Lots 3, 4, 5, 7, 8, 11, 12 and 13
    - Range 6
      - Lots 5, 6, 7, 11, 12 and 13
    - Range 7
      - Lots 5, 6, 9, 10, 11, 12 and 13

Range 8
Lots 5, 6, 7, 8, 9, 10, 11, 12 and 13
Range 9
Lots 5, 6, 7, 8, 9, 10, 11, 12 and 13
Range 10
Lots 6, 7, 9, 10, 11, 12 and 13
portions of Lots 5 and 8
Small Tract
Range 1
portion of Lot 1
Range 2
Lot 9
Range 4
Lots 3 and 4
portion of Lot 5
portion of Range 11
Upper River Division
portions of Lots 5 and 6

Glen and Yates Patent
Lots 6, 7, and 16
portions of Lots 13 and 21

Gore Between Township 11 and Dartmouth Patent
Lots 1, 2, 3, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18, 24, 25, 26, 28, 33, 34, 35, 36 and 39
portions of Lots 27, 40 and 43

Gore Between Township 12 and Hyde Township
West of River
Lots 5, 8, 13, 26, 30 and 31
portion of Lot 1

Hyde Township
Lot 37
Sub-lots 1 and 2
portions of Lots 17, 35 and 39

John Glen and 44 Others Patent
Lot 39
portions of Lots 51, 53, 54, and 112
Lots 85, 86, 87, and 88
Sub-lots 3, 6, 7, 9, and 10

Kayaderosseras Patent, 24th Allotment

- Great Lot 1
  - Lot 1
    - portions of Sub-lot B
  - Lot 2
    - portions of Sub-lots 1 and 2
- Great Lot 2
  - Lot 1
    - portions of Sub-lots A and 1
- Great Lot 3
  - Lot 1
  - Lots A, B, and C
- Great Lot 4
  - Lot 1
    - Sub-lot 2
- Great Lot 5
  - portion of Lot 2
- Great Lot 6
  - portions of Lots 1 and 2
- Great Lot 8
  - portion of Lot 2

Palmer's Purchase

- General Allotment
  - Lot 1
    - Sub-lot 2
    - portion of Sub-lot 3
  - Lot 2
    - Sub-lots 4, 5, 6 and 7
    - portions of Sub-lots 1 and 3
  - Lot 3
    - Sub-lots 6, 7 and 8
  - Lot 4
    - Sub-lots 5, 7, 8, 9 and 10
    - portions of sub-lots 5 and 6
  - Lots 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22 and 23
  - portions of Lots 20 and 21
  - Lot 24
    - Sub-lots 1 and 5
    - portion of Sub-lot 2
  - Lot 25
    - Sub-lots 2, 3, 4 and 5
    - portion of sub-lot 1
  - Lots 26 and 27
  - portions of Lots 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44 and 45

Lot 47 & 48
portion of Sub-lot 7
Middle Division
Remsen Lot
portion of the Livingston Lot
Great Lot 1
Lots 2, 3, 4, 8, 9 and 10
portions of Lots 5, 6 and 7
Great Lot 2
portions of the East Part
West Part, Bruce Tract
Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19 and 20
Great Lot 3
Lots 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35
portions of Lots 21, 22 and 23
portion of H.T.P.
Rear Division
Great Lot 1
Lots 1, 2, 3, 4, 10, 11, 12, 26, 27, 34, 35, 37, 38, 39, 40, 45, 46, 47, 48, 49, 50, 51, 52, 57, 58, 59, 60, 61, 62, 64, 69, 70, 73, 74, 75,76, 81, 82, 83, 84, 85, 86, 87 and 88
portions of Lots 63, 71 and 72
Great Lot 2
Lots 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59 and 60
portion of Great Lot 3
Great Lot 4
H.T.P.
Great Lot 6
H.T.P.
Leffert's Tract
North ½
Range 1
Lots 4, 5,6,7,8, 9 and 10
Range 2
Lots 3, 6, 7, 8, 9 and 10
Range 3
Lots 2, 3, 4, 6, 7, 8, 9 and 10
portion of Lot 5
Range 4
Lots 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10
major portion of the South ½

River Division
portions of Great Lots 2 and 3
portion of Lefferts 903 Acre Lot

Peckham Tract
Lots 5 and 10

Sacandaga Patent
portion of Lot 3

Sanders Patent
Lots 1, 15, 17, 21, 22, 29, 30, 31, 32, 33, 34, 35, 37, 44, and small lot 3
portion of Lot 23

Totten and Crossfield's Purchase
Township 10
portions of Lots 8, 9, 10, 11, 12, 13, 14 and 15
Township 11
Lots 6, 7, 8, 9, 10, 11, 12, 56, 57, 58, 59, 60, 61, 62, 63, 64, 78, 81, 82, 83 and 84
portions of Lots 37, 38, 39, 40, 42, 55, 65, 66, 67, 68, 77 and 80
Township 29
portions of Lots 16, 17, 18, 19 and 20
portions of the Russell Tract
portions of the unallotted sections of the Township

APPENDIX C: POND DESCRIPTIONS

Pond Management Classifications:

Adirondack Brook Trout Ponds – Adirondack Zone ponds which support and are managed for populations of brook trout, sometimes in company with other salmonid fish species. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Coldwater Ponds and Lakes – Lakes and ponds which support and are managed for populations of several salmonids. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Other Ponds and Lakes – Fishless waters and waters containing fish communities consisting of native and nonnative fishes which will be managed for their intrinsic ecological value.

Two-Story Ponds and Lakes – Waters which simultaneously support and are managed for populations of coldwater and warmwater game fishes. The bulk of the lake trout and rainbow trout resource fall within this class of waters. Management may include stocking.

Unknown Ponds and Lakes – Waters which could not be assigned to the subprogram categories specifically addressed in this document due to a lack of or paucity of survey information.

Warmwater Ponds and Lakes – Waters which support and are managed for populations of warmwater game fishes and lack significant populations of salmonid fishes. Management may include stocking.

Individual Pond Descriptions:
This list of ponded waters in and around the Wilcox Lake Wild Forest was obtained from the NYS Biological Survey. The water bodies listed are either contained entirely within the unit or bordered partially by lands in the unit.

1. **Albia Pond** (UH-P138)
Albia Pond is a 4-acre pond. Based on a report in a 1967 DEC survey, it contains native-but-widely-introduced brown bullhead and pumpkinseed; and, nonnative chain pickerel. The same species reported in 1967 were collected during the 1932 biological survey. The pond was stocked with brook trout in 1968 but the policy was discontinued in 1969. Albia Pond is located on a isolated small parcel of state land and its outlet flows across private land.

Albia Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

2. **Bennett Lake** (UH-P182)
Bennett Lake is a 37-acre pond. Based on a 1987 Adirondack Lakes Survey Corporation (ALSC) survey, it has a fish community consisting of brook trout and blacknose dace; and, nonnative golden shiner and killifish. The 1932 biological survey collected brown bullhead, creek chub, yellow perch and killifish. Bennett Lake was reclaimed on July 20, 1954. Brook trout were stocked in 1955 following the reclamation. A survey in 1969 found a brook trout monoculture sustained by stocking. A 1993 reconnaissance survey established that the outlet does not have a natural fish barrier dam, but several sites were found where one could be constructed. A road crosses the outlet 100 yards from the mouth.

Bennett Lake will be managed as an Adirondack brook trout pond. A fish barrier dam will be constructed on the outlet. After the construction of the fish barrier dam, Bennett Lake will be reclaimed to enhance and restore a native fish community.

Management Class: Adirondack brook trout

3. **Black Pond** (UH-P128)
Black Pond is a 52-acre pond. Based on a 1987 ALSC survey, it contains native-but-widely-introduced brown bullhead and creek chub; and nonnative golden shiner, yellow perch, and smallmouth bass. The same species collected in 1987 were observed during the 1932 biological survey, except for creek chub. The pond was stocked once in 1928 with brook trout. Smallmouth bass were stocked in 1928 and 1929.

Black Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

4. **Cod Pond** (UH-P286)
Cod Pond is a shallow, 50-acre pond with abundant floating aquatic vegetation. Based on a 1987 ALSC survey, it contains native-but-widely-introduced brown bullhead and pumpkinseed; and, nonnative chain pickerel and golden shiner. Chain pickerel and brown bullhead were collected during the 1932 biological survey. White sucker (native) were added to the list of species present in 1959. Largemouth bass were introduced to Cod Pond in 1994 by DEC. An angling survey conducted in 1998 captured no bass, and none were observed. The marginal pH of Cod Pond may be below the threshold for suitability for largemouth bass. Cod Pond has a large wetland on its outlet which precludes effective treatment with rotenone.

Cod Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

5. **Crane Mountain Pond** (UH-P519)
Crane Mt. Pond is a 14-acre pond with a history of trout management. Brook trout were stocked before the 1932 biological survey. Although only brown bullhead (NBWI) were collected during a daylight gill net set in 1932, brook trout were reported up to 3.5 pounds. A survey in the summer of 1981 collected brook trout, brown bullhead, white sucker (native) and golden shiner (nonnative). The pond was reclaimed in the fall of 1981. A 1988 survey collected only brook trout. Good catches of brook trout were observed in 1983 and continued through 1992. A DEC ranger reported observing golden shiner at Crane Mtn. Pond during the summer of 1994. The pond was gill netted in 1996 and brook trout, golden shiner and creek chub (NBWI) were collected. The pond was again reclaimed in the fall of 1998 and restocked with brook trout shortly thereafter. The outlet of Crane Mt. Pond has a natural fish barrier. The brook trout population in this water is sustained by stocking. Crane Mountain Pond was most recently surveyed in August of 2004. This survey showed that the pond is currently a brook trout monoculture that has significant natural reproduction of brook trout. Quite possibly, natural reproduction will increase overtime and hopefully the pond will establish a self-sustaining population of brook trout.

Crane Mt. Pond will be reclaimed upon the establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey.

Management Class: Adirondack brook trout

6. **Eagle Pond** (UH-P290a)
Eagle Pond is a 5-acre pond. Based on a 1987 ALSC survey, it has a fish community consisting of brook trout and native-but-widely-introduced brown bullhead. Eagle Pond was not surveyed before 1987. Anglers reported catching small brown bullhead in 1974. Brook trout stocking was initiated in the fall of 1975 and by May of 1977, anglers reported good brook trout catches sustained by stocking. Good brook trout fishing continued from 1977 through 1987, but fishing was reported to be "slow" for smaller trout in 1993 and 1994. The outlet of Eagle Pond has a natural fish barrier.

Eagle Pond will be reclaimed upon the establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey.

Management Class: Adirondack brook trout

7. **Fish Ponds (Lower)** (UH-P287)
Lower Fish Pond is a 19-acre pond. Based on a 1987 ALSC survey, it has a fish community consisting of white sucker; native-but-widely-introduced brown bullhead and pumpkinseed; and, nonnative chain pickerel. The pond was not netted in 1932 but pickerel were reported. In 1953,

white sucker and chain pickerel were collected. The outlet of Lower Fish Pond flows approximately 3 miles to the East Branch of the Sacandaga River. The outlet is a slow meandering stream with extensive wetlands along its entire length. There is no known location to construct a fish barrier on the outlet of Lower Fish Pond.

Lower Fish Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

8. **Fish Ponds (Upper)** (UH-P288)
Upper Fish Pond is an18-acre pond which connects to Lower Fish Pond via a 0.5-mile long outlet. Based on a 1987 ALSC survey, it has a fish community consisting of white sucker; native-but-widely-introduced brown bullhead and pumpkinseed; and nonnative chain pickerel. The outlet of the pond has extensive wetlands. Survey notes taken in 1953 indicate that it would be difficult to construct a fish barrier on the outlet of Upper Fish Pond and that reclamation would be difficult. The survey in 1953 collected brook trout, white sucker, brown bullhead and chain pickerel.

Upper Fish Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

9. **Garnet Lake** (UH-P520)
Garnet Lake is a 302-acre lake. Based on a 1963 DEC survey, it has a fish community consisting of native-but-widely-introduced brown bullhead, pumpkinseed, native redbreast sunfish and, nonnative chain pickerel, yellow perch, largemouth bass, smallmouth bass, northern pike, rock bass and killifish. Smallmouth bass, chain pickerel, white sucker (native), golden shiner and yellow perch were collected during a survey in 1932. By 1951, creek chub (NBWI), brown bullhead (NBWI), pumpkinseed (NBWI) and rock bass (nonnative) were added to the species list. Smallmouth bass were stocked in 1957 and in 1961 there was a transfer of largemouth bass. A 1961 survey collected chain pickerel, brown bullhead, yellow perch, pumpkinseed, and golden shiner and smallmouth bass; northern pike and rock bass were reported.

Garnet Lake will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

10. **Greenfield Lake** (UH-P 205)
Greenfield Lake is a 4-acre lake that has never been netted, and thus has an unknown fish community. The lake was reported to be a bog pond that was "filling in" in 1932.

Greenfield Lake will be managed to preserve the species present for their intrinsic value.

Management Class: Unknown

11. **Kibby Pond** (UH-P291)
Kibby Pond is a 41-acre pond. Based on a 1993 DEC survey, it has a fish community consisting of brook trout and native-but-widely-introduced brown bullhead and creek chub, and nonnative banded killifish. In 1932, the lake was reported to be a good brook trout pond, but only brown trout were collected along with creek chub and killifish. Brook trout, white sucker, brown bullhead and golden shiner (nonnative) were collected and creek chub and killifish were observed in 1960. In 1985, brook trout, brown bullhead, creek chub, golden shiner and killifish were collected. The pond was reclaimed with rotenone in1987 and excellent brook trout angling was reported through 1990. A 1993 survey collected brook trout (sustained by stocking), brown bullhead, creek chub and killifish. Kibby Pond was most recently surveyed in July of 2005. Creek chubs and banded killifish were again captured, but the brook trout population remains strong with quality size fish. Apparently the successful elimination of golden shiner and white sucker has allowed the brook trout to do well in this pond.

The outlet of Kibby Pond has a natural fish barrier, but difficult to treat tributaries flowing into the outlet beaver flow complicate effective treatment. Another rotenone treatment of Kibby Pond may be undertaken in the future, but is not anticipated during the current planning period.

Kibby Pond will be managed as an Adirondack brook trout pond to preserve its native fishes in the presence of a nonnative species.

Management Class: Adirondack brook trout

12. **Lens Lake** (UH-P332)
Lens Lake is a 68-acre lake. Based on 1969 DEC survey, it has a fish community consisting of white sucker; native-but-widely-introduced brown bullhead; and nonnative golden shiner. In 1932 brook trout, white sucker and brown bullhead were collected. In 1963, brook trout, brown trout, golden shiner, brown bullhead and white sucker were collected. Brook trout were stocked from about 1962 through 1975 but stocking was discontinued in 1975 because of poor survival. Lens Lake has large wetlands which precludes effective treatment with rotenone. Lens Lake will be experimentally stocked with brown trout to see if this species can utilize the fish forage base and provide a fishery.

Lens Lake will be managed as a two-story pond to preserve its native fishes in the presence of nonnative species and historically associated species. It may be experimentally stocked with largemouth bass.

Management Class: Two story.

13. **Little Joe Pond** (UH-P282a)

Little Joe Pond is a 6-acre pond. Little Joe Pond was not netted during the 1932 biological survey. Good brook trout fishing was reported in the 1950's by Conservation Officer Morehouse. A 1959 survey collected brook trout and unidentified minnows. Numerous brook trout up to 14" were caught by anglers in 1983 and a survey in that year collected brook trout and northern redbelly dace and nonnative golden shiners. A 1993 reconnaissance survey found a natural fish barrier on the outlet, 100 feet downstream from the pond. The reconnaissance survey indicated that the pond could be successfully reclaimed with rotenone to restore a native fish community. Little Joe Pond was reclaimed in 1996 to enhance and restore a native fish community and was restocked with brook trout. Little Joe Pond was most recently surveyed in July of 2003. This survey showed that Little Joe Pond remains a brook trout monoculture since the reclamation. The brook trout population in this water is sustained by stocking.

Little Joe Pond will be reclaimed upon the establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey.

Management Class: Adirondack brook trout

14. **Little Pond** (UH-P333)
Little Pond is a 5-acre, shallow pond. Based on a 1993 DEC survey, it contains only native-but-widely-introduced brown bullhead. The pond was not studied during the 1932 biological survey but brook trout and native-but-widely-introduced brown bullhead were reported present. The trailhead to Little Pond is private and posted. One-half of the pond is privately owned and half of the pond is on state land. Brook trout and brown bullhead were collected in 1970. In 1993 only brown bullhead were collected because stocking had been discontinued due to lack of public access. The 1993 survey determined that the pond is surrounded by a tall grass wetland with standing pockets of water that could not be effectively treated with rotenone.

Little Pond will be managed to preserve its native fish community.

Management Class: Other

15. **Lizard Pond** (UH-P197)
Lizard Pond is a 24-acre pond. Based on a 1993 DEC survey, it has a fish community consisting of brook trout. In 1932 white sucker, native-but-widely-introduced pumpkinseed and nonnative yellow perch were collected. In 1973 white sucker, nonnative golden shiner, pumpkinseed, brown bullhead (NBWI) and yellow perch were collected. Lizard Pond was reclaimed in fall of 1973. In 1975 brook trout up to 16 inches were collected. Good brook trout fishing was reported in 1979, 1981, and 1987. An ALSC survey collected only brook trout in 1987. This pond has remained a brook trout monoculture, sustained by stocking, for almost thirty years following its reclamation in 1973. Although the location of a natural fish barrier on the outlet is not known, its presence is assured by the long standing success of the reclamation project. The lack of extensive

wetlands or significant tributaries make this pond a good reclamation candidate if competitive species should again become established. Its outlet flows to Garnet Lake. Lizard Pond was most recently surveyed in July of 2005. This survey reaffirmed that Lizard Pond remains a brook trout monoculture.

Lizard Pond will be reclaimed upon the establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey.

Management Class: Adirondack brook trout

16. **Middle Flow** (UH-P 211A)
Middle Flow is a 37-acre pond that has never been surveyed, and thus its fish community is unknown. Middle Flow is bounded by a parcel of state land along its western shore, but the majority of the pond is located on private and posted land.

Middle Flow will be managed to preserve the species present for their intrinsic value.

Management Class: Unknown

17. **Middle Lake** (UH-P184)
Middle Lake is a 31-acre lake. Based on a 1987 ALSC survey, it has a fish community consisting of historically associated brown trout and nonnative golden shiner. A 1932 survey collected native-but widely-introduced brown bullhead and pumpkinseed, and nonnative yellow perch. The lake was reclaimed in 1954. A 1962 survey collected only brook trout. A 1969 confirmed that nonnative golden shiners had become established. A 1975 survey collected brook trout, brown trout (sustained by stocking) and golden shiner. A 1993 reconnaissance survey located a natural fish barrier on the outlet of Middle Lake about 3/4 mile downstream from the pond. The 1993 survey also established that the pond could be effectively treated with rotenone.

Middle Lake will be reclaimed to enhance and restore a native fish community.

Management Class: Adirondack brook trout

18. **Mud Pond** (UH-P522)
Mud Pond is a 16-acre pond. Based on 1954 DEC survey, it has a fish community consisting of native-but-widely-introduced pumpkinseed; and nonnative northern pike and yellow perch. The 1954 survey established that a large wetland bog surrounded the pond and outlet that precludes effective treatment with rotenone.

Mud Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

19. **Murphy Lake** (UH-P213)
Murphy Lake is a 33-acre lake. Based on a 1987 ALSC survey, it has a fish community consisting of brook trout; native-but-widely-introduced creek chub; and nonnative golden shiner. When surveyed in 1932 the pond was dominated by nonnative yellow perch and smallmouth bass and also contained native-but-widely-introduced pumpkinseed and brown bullhead. A similar fish community was found in a 1950 survey. The lake was reclaimed in 1954. The brook trout population in this water is sustained by stocking. By 1987, nonnative golden shiner and creek chub (NBWI) had become reestablished. A 1993 reconnaissance survey established that most of the pond has a hard shoreline and that the pond could be effectively treated. A sparse band of emergent vegetation occurs around the shoreline, most of which is arrowhead. A natural fish barrier exists on the outlet of Murphy Lake 100 yards downstream from the pond.

Murphy Lake will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack brook trout

20. **New Lake** (UH-P 187)
New Lake is a 23-acre lake. Based on a 1987 ALSC survey, it has a fish community consisting of white sucker and blacknose dace; native-but-widely-introduced creek chub and brown bullhead and nonnative golden shiner. The 1932 biological survey collected white sucker and reported that the lake was stocked with brook trout from 1925-1931. The survey recorded that good trout fishing was reported from 1930-32. A 1956 survey collected brook trout and white sucker. In 1973 DEC crews collected brook trout, white sucker, golden shiner and brown bullhead. Brown trout were introduced in 1993 and are sustained by stocking. A 1988 reconnaissance survey could not locate a site for a fish barrier dam that would assure effective treatment with rotenone.

New Lake will be managed as a coldwater pond to preserve its native fishes in the presence of a nonnative species.

Management Class: Coldwater

21. **Palmer Lake** (UH-P 127b)
Palmer Lake is a 10-acre lake. Based on a 1994 DEC survey, it has a fish community consisting of white sucker; native-but-widely-introduced bluntnose minnow, creek chub, and brown bullhead; and nonnative golden shiner and brown trout (historically associated). The 1932 biological survey collected white sucker, creek chub and blacknose dace and reported that occasionally brook trout were caught by anglers. Public access to Palmer Lake is across lands owned by the Mettowee Lumber Company and is permitted seasonally via a Fish and Wildlife Management Area agreement. A 1985 survey collected white sucker and brown bullhead. In 1985 it was determined that no site existed for a fish barrier dam and that large wetlands

preclude effective treatment with rotenone. A 1994 survey collected brown trout (sustained by stocking), white sucker, golden shiner, brown bullhead, creek chub and bluntnose minnow.

Palmer Lake will be managed as a coldwater pond to preserve its native fishes in the presence of a nonnative species.

Management Class: Coldwater

22. **Round Pond** (UH-P521)
Round Pond is a 83-acre pond. Based on 1985 DEC survey, it has a fish community consisting of white sucker; native-but-widely-introduced creek chub and pumpkinseed; and, nonnative yellow perch, rock bass and golden shiner. A 1932 biological survey collected northern pike, yellow perch, pumpkinseed and golden shiner. A 1954 survey collected brown bullhead, yellow perch and pumpkinseed. A 1969 survey collected white sucker, pumpkinseed, brown bullhead, yellow perch, rock bass, and golden shiner. The 1969 survey reported that northern pike were not collected or observed. Brown trout stocking commenced in 1978 but was discontinued because a 1985 survey found no evidence of brown trout survival. A1985 survey collected white sucker, pumpkinseed, creek chub, yellow perch, golden shiner and rock bass. Largemouth bass were introduced to Round Pond in 1994 by the DEC.

Round Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

23. **Shiras Pond** (UH-P282)
Shiras Pond is a 7-acre pond. Based on a 1987 ALSC survey, it has a fish community consisting of brook trout and northern redbelly dace. Shiras Pond was not netted during the 1932 biological survey. Brook trout stocking began in about 1964. In 1973 anglers reported catching brook trout sustained by stocking, up to 3.5 pounds. Shiras Pond was most recently surveyed in 1998 by DEC. This survey again documented the presence of large brook trout and redbelly dace. Creek chubs (NBWI) were also present. This survey documented a suitable site to build a barrier dam if the need should arise to reclaim Shiras Pond. No reclamation is anticipated during the planning period. Shiras Pond will be managed as an Adirondack brook trout pond to preserve its native fishes in the presence of a native-but-widely-introduced species.

Management Class: Adirondack brook trout

24-47. **Unnamed Ponds**
Twenty-four unnamed ponds located within the unit range in size from 0.7 acres to 22 acres and comprise a total of 91.8 acres. Although these ponds have never been surveyed, they probably contain native and nonnative fish communities. All of the unnamed ponds except two, have either large wetlands or no barrier dam site, or both; which precludes consideration for restoration by reclamation with rotenone.

Six-acre Unnamed Pond (5297) and six-acre Unnamed Pond (196A) have potential fish barrier dam sites and no wetlands are shown on the USGS quadrangle. Both of these unnamed ponds will be scheduled for surveys to determine their suitability for further management.

For the planning period the unnamed ponds will be managed to protect the fish species present for their intrinsic value.

Management Class: Unknown

48. **Wilcox Lake** (UH-P188)
Wilcox Lake is a 133-acre lake. Based on a 1987 ALSC survey it has a fish community consisting of brook trout, redbreast sunfish and common shiner; native-but-widely-introduced white sucker, creek chub, brown bullhead, and nonnative golden shiner. The 1932 biological survey reported that brook trout were stocked from 1925 through 1931 and that the lake had a history of excellent brook trout angling. In 1932, brook trout, cutlips minnow, creek chub, white sucker, redbreast sunfish, and golden shiner were collected. A 1956 survey added common shiner (native) to the species list. Surveys in 1973 and 1987 collected the same species. Brook trout are sustained by stocking in this water. A 1993 reconnaissance survey documented that the pond could be effectively treated with rotenone and that suitable site to construct a fish barrier exists on the outlet immediately downstream of the pond.

Wilcox Lake will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community. A fish barrier dam will be constructed prior to the reclamation.

Management Class: Adirondack brook trout

49. **Willis Lake** (UH-P215)
Willis Lake is a 36-acre pond which has both private and public ownership. Based on a 1987 ALSC survey it has a fish community consisting of native-but-widely-introduced pumpkinseed and brown bullhead and nonnative largemouth bass and yellow perch. The 1932 biological survey reports that smallmouth bass were stocked from 1922-26 and in 1929. The 1932 survey collected brown bullhead, yellow perch, chain pickerel (nonnative) and smallmouth bass. A 1969 survey collected the same species. Largemouth bass are probably a relatively recent introduction because they were not collected in 1932 or in 1969.

Willis Lake will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

]Management Class: Warmwater

Note: For purposes of this plan, only waters officially recognized (those with P numbers) by the NYS Biological Survey are included. The Wilcox Lake Wild Forest contains a number of small (less than 1 acre) wetland/beaver ponds which have not been assigned P numbers. In some years these pond/wetland complexes may be a nearly dry wetland, while during some wet years or

during years when beaver are active they contain a small impoundment. These pond/wetlands will be managed to preserve and protect the existing fish communities for their intrinsic value.

Table 1. Physical Inventory Data for Ponded Waters in the Wilcox Lake Wild Forest

Name	Pond #	Wshed	File #	County	Quad Name	Area (acres) NYSBU	Max Depth (m)	Mean Depth (m)	Management Class
Albia Pond	P138	UH	277	Saratoga	Edinburg	4.4	9.1		Warmwater
Bennett Lake	P182	UH	346	Hamilton	Hope Falls	37.3	9.1	4.4	Adirondack brook trout
Black Pond	P128	UH	258	Saratoga	Porter Corners	52.1	11	2.4	Warmwater
Cod Pond	P286	UH	519	Warren	South Pond Mountain	49.9	1.9	0.9	Warmwater
Crane Mtn. Pond	P519	UH	891	Warren	Johnsburg	13.8	6.1	2.2	Adirondack brook trout
Eagle Pond	P290A	UH	525A	Warren	Bakers Mills	4.9	8.8	3.3	Adirondack brook trout
Fish Ponds (Lower)	P287	UH	520	Warren	Bakers Mills	19.3	4.5	2.5	Warmwater
Fish Ponds (Upper)	P288	UH	521	Warren	Bakers Mills	18.3	4.3	1.9	Warmwater
Garnet Lake	P520	UH	893	Warren	Bakers Mills	301.7	7.6	-	Warmwater
Greenfield Lake	P205	UH	383	Saratoga	Hope Falls	4.0	-	-	Unknown
Kibby Pond	P291	UH	527	Warren	Bakers Mills	41.0	11	3.2	Adirondack brook trout
Lens Lake	P332	UH	602	Warren	Harrisburg	67.7	2.4	-	Two-story
Little Joe Pond	P282A	UH	525A	Warren	South Pond Mountain	8.0	6.9	3.9	Adirondack brook trout
Little Pond	P333	UH	607	Warren	Harrisburg	4.9	4.9	-	Adirondack brook trout
Lizard Pond	P197	UH	370	Warren	Bakers Mills	23.2	4	1.3	Adirondack brook trout
Middle Flow	P211A	UH		Warren	Harrisburg	37.1	-	-	Unknown
Middle Lake	P184	UH	348	Hamilton	Hope Falls	31.3	7.3	3.3	Adirondack brook trout
Mud Pond	P522	UH	895	Warren	Johnsburg	16.1	-	-	Warmwater
Murphy Lake	P213	UH	400	Hamilton	Hope Falls	32.6	12.2	5.1	Adirondack brook trout
New Lake	P187	UH	354	Warren	Griffin	23.2	7	4.5	Coldwater
Old Pond	P204	UH	382	Saratoga	Hope Falls	6.4	-	-	Unknown
Palmer Lake	P127B	UH	255	Saratoga	Porter Corners	9.6	6.4	2.7	Coldwater
Round Pond	P521	UH	894	Warren	Johnsburg/ Bakers Mills	83.3	12.2	-	Warmwater
Russell Pond	P281B	UH	511B	Warren	Griffin	-	-	-	Other

Shiras Pond	P282	UH	512	Warren	Griffin	7.4	3.7	2.2	Adirondack brook trout
Unnamed Water	P194A	UH		Warren	Bakers Mills	1.0	-	-	Unknown
Unnamed Water	P194	UH		Warren	Bakers Mills				Unknown
Unnamed Water	P196A	UH		Warren	Bakers Mills	5.9	-	--	Unknown
Unnamed Water	P196	UH		Warren	Bakers Mills	2.9	-	-	Unknown
Unnamed Water	P204A	UH		Saratoga	Hope Falls	3.5	-	-	Unknown
Unnamed Water	P204B	UH		Saratoga	Hope Falls	1.2	-	-	Unknown
Unnamed Water	P208B	UH		Saratoga	Hope Falls	0.7	-	-	Unknown
Unnamed Water	P281A	UH		Hamilton	Griffin	4.9	-	-	Unknown
Unnamed Water	P288A	UH		Warren	Bakers Mills	2.2	-	-	Unknown
Unnamed Water	P5163	UH		Fulton	Galway	0.7	-	-	Unknown
Unnamed Water	P5172	UH		Saratoga	Porter Corners	22.4	-	-	Unknown
Unnamed Water	P5228	UH		Warren	South Pond Mountain	2.9	-	-	Unknown
Unnamed Water	P5270	UH		Saratoga	Hope Falls	2.0	-	-	Unknown
Unnamed Water	P5286	UH		Hamilton	Griffin	1.2	-	-	Unknown
Unnamed Water	P5287	UH		Warren	Harrisburg	5.2	-	-	Unknown
Unnamed Water	P5288	UH		Warren	Harrisburg	9.8	-	-	Unknown
Unnamed Water	P5289	UH		Warren	Harrisburg	1.9	-	-	Unknown
Unnamed Water	P5290	UH		Warren	Harrisburg	4.7	-	-	Unknown
Unnamed Water	P5297	UH		Warren	Bakers Mills	5.7	-	-	Unknown
Wilcox Lake	P188	UH	355	Warren	Griffin	133.0	15.1	5.45	Adirondack brook trout
Willis Lake	P215	UH	405	Hamilton	Hope Falls	36.1	2.7	1.8	Warmwater

Table 2. Chemical and Biological Survey Data for Ponded Waters in the Wilcox Lake Wild Forest.

Name	Pond #	Wshed	Most Recent Chemical Survey					Most Recent Biological Survey		
			Date	Source	ANC (ueq/l)	pH	Conduc-tivity	Year	Source	Fish Species and Number Caught*
Albia Pond	P138	UH	10/13/67	DEC		5.50		1967	DEC	BB (observed), PKS and PKL reported by ranger.
Bennett Lake	P182	UH	06/24/03	DEC	25.4	6.54	16.1	2003	DEC	ST(22). No minnow gear set. BND, GS and BKF present.
Black Pond	P128	UH	09/25/97	DEC	63.8	6.86	22.6	1997	DEC	BB(59), GS(5), SMB(6).
Cod Pond	P286	UH	07/21/98	DEC	89.8	7.08	23.6	1987	ALSC	PKS(2), PKL(16),GS(2), BHC(18).
Crane Mtn Pond	P519	UH	08/10/04	DEC	58.2	6.9	19.0	2004	DEC	ST(25).
Eagle Pond	P290A	UH	09/18/97	DEC	30.54	6.38	19.1	1997	DEC	BB(106).
Fish Ponds (Lower)	P287	UH	08/12/87	ALSC	149.9	7.18	28.1	1987	ALSC	PKL(10), WS(9), BB(12), PKS(5).
Fish Ponds (Upper)	P288	UH	08/12/87	ALSC	198.3	7.36	31.5	1987	ALSC	PKL(14), WS(1), BB(5), PKS(5).
Garnet Lake	P520	UH	06/27/51	DEC	-	7.20	-	1963	DEC	PKS(96), YP(12), PKL(19), LMB(1), BB(10), GS(53), RB (21), YP(140), WS.
Greenfield Lake	P205	UH	-	-	-	-	-	-	-	-
Kibby Pond	P291	UH	07/13/93	DEC	33.1	6.59	35.27	2005	DEC	ST(31), CC(146), BKF(130).
Lens Lake	P332	UH	06/12/69	DEC	-	6.0	-	1969	DEC	GS(7), BB(27), WS (82).
Little Joe Pond	P282A	UH	07/29/03	DEC	51.12	6.81	19.7	2003	DEC	ST(14).
Little Pond	P333	UH	07/14/93	DEC	19.25	5.76	13.84	1993	DEC	BB (102).
Lizard Pond	P197	UH	07/13/93	DEC	157.54	7.31	29.12	2005	DEC	ST(87).
Middle Flow	P211A	UH	-	-	-	-	-	-	-	-
Middle Lake	P184	UH	08/12/87	ALSC	29.1	6.51	17.6	1987	ALSC	GS (181), BT(23).
Mud Pond	P522	UH	06/07/54	DEC	-	6.81	-	1954	DEC	NP(7), PKS(1), YP(24).
Murphy Lake	P213	UH	08/12/87	ALSC	27.9	6.28	18.5	1987	ALSC	ST(19), GS(447), CC(19).

New Lake	P187	UH	09/25/96	DEC	66.0	6.96	22.6	1996	DEC	BT(3), ST(1), GS (59), CC(61), WS (56), BB(60).
Old Pond	P204	UH	-	_	-	-	-	-	-	-
Palmer Lake	P127B	UH	05/24/94	DEC	32.5	6.51	21.1	1994	DEC	BT(8), GS(66), BNM(7), CC(17), WS(26), BB(23).
Round Pond	P521	UH	07/15/85	DEC	12.07	7.39	44.0	1985	DEC	GS(21), CC(7), WS(80), RB(44), YP(28), PKS(42).
Russell Pond	P281B	UH	-	-	-	-	-	-	-	-
Shiras Pond	P282	UH	08/03/98	DEC	68.28	6.98	20	1998	DEC	ST(14), NRBD(98), CC(37).
Unnamed Water	P194A	UH	-	-	-	-	-	-	-	-
Unnamed Water	P194	UH	-	-	-	-	-	-	-	-
Unnamed Water	P196A	UH	-	-	-	-	-	-	-	-
Unnamed Water	P196	UH	-	-	-	-	-	-	-	-
Unnamed Water	P204A	UH	-	-	-	-	-	-	-	-
Unnamed Water	P204B	UH	-	-	-	-	-	-	-	-
Unnamed Water	P208B	UH	-	-	-	-	-	-	-	-
Unnamed Water	P281A	UH	-	-	-	-	-	-	-	-
Unnamed Water	P288A	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5163	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5172	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5228	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5270	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5286	UH	-	-	-	-	-	-	-	-

Unnamed Water	P5287	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5288	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5289	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5290	UH	-	-	-	-	-	-	-	-
Unnamed Water	P5297	UH	-	-	-	-	-	-	-	-
Wilcox Lake	P188	UH	08/12/87	ALSC	87.3	&.0	25.2	1987	ALSC	ST(21), GS(26), CS(10), CC(46), WS(83), BB(11), RBS(47).
Willis Lake	P215	UH	08/13/87	ALSC	58.8	6.73	21.4	1987	ALSC	GS(60), BB(3), PKS(16), LMB(11), YP(18).

* Fish species caught by various gear. Entries without numbers indicate fish species thought to be present or reported during earlier surveys.

Species Abbreviations

A-Alewife
C-Cisco
GS-Golden shiner
LLS-Landlocked Salmon
RbS-Redbreast sunfish
ST-Brook trout
BND-Blacknose dace
CC-Creek chub
KOK-Kokanee Salmon
NOP-Northern pike
RT-Rainbow trout
WS-White Sucker
Bhc-Brown Bullhead
CCS-Creek chub sucker
LND-Longnose dace
PD-Pearl dace
S-Smelt
YP-Yellow perch
BK-Banded killifish
CS-Common shiner
LmB-Largemouth bass
PKL-Chain Pickerel
SFS-Spotfin shiner
WF-Whitefish
BnM-Bluntnose minnow
LT-Lake trout
PkS-Pumpkinseed
SmB-Smallmouth bass
Spl-Splake
BT-Brown trout
FF-Fallfish
NRD-Northern redbelly dace
RB-Rock bass

Unknown - No biological survey

APPENDIX D: AMPHIBIAN AND REPTILE HABITAT ASSOCIATIONS

Spotted Salamander (*Ambystoma maculatum*).-- The spotted salamander prefers vernal pools for breeding, but its jelly-like globular egg masses are found in a variety of wetland habitats. Because of its fossorial habits, the spotted salamander is rarely encountered except during the breeding season. At that time they can be found under rocks, logs, and debris near the edges of the breeding pools.

Red-spotted Newt (*Notophthalmus viridescens)*.-- One of the most fascinating life histories of any salamander is that of the Red-spotted Newt, with four stages in its life cycle (egg, aquatic larva, terrestrial immature red eft, and aquatic adult). Interestingly, the red eft remains on land from two (Bishop 1941) to seven years (Healy 1974) before they transform into their final life stage, the aquatic adult.

Northern Dusky Salamander (*Desmognathus fuscus*).-- The Northern Dusky Salamander inhabits rocky stream ecotones, hillside seeps and springs, and other seepage areas in forested or partially forested habitat. They are typically found under rocks and other cover objects such as logs adjacent to, or in the water (Harding 1997).

Allegheny Dusky Salamander (*Desmognathus ochrophaeus*).-- The Allegheny Dusky Salamander is more terrestrial than its congener, the Northern Dusky Salamander, being found under rocks and woodland debris in moist forests usually near a seep or stream.

Northern Redback Salamander (*Plethodon cinereus*).-- The Northern Redback Salamander is found in deciduous, coniferous or mixed forest where it nests in moist, rotten logs. It favors pine logs in advanced stages of decay rather than deciduous tree logs that appear to be more susceptible to molds, thus attributing to possible fungal infections in the eggs (Pfingsten and Downs 1989).

Northern Spring Salamander (*Gyrinophilus porphyriticus*).-- Although Northern Spring Salamanders inhabit cool, well-oxygenated streams in forested areas where they can be found under rocks and logs, they sometimes can be found foraging in the open on rainy nights. This species also uses underground springs that are a considerable distance away from their natal habitat (Harding 1997).

Northern Two-lined Salamander (*Eurycea bislineata*).-- Northern Two-lined Salamanders inhabit springs and seeps in forested wetlands, edges of brooks and streams, and terrestrial areas many meters from water. They are usually found under rocks, logs, and debris (Pfingsten and Downs 1989).

Eastern American Toad (*Bufo americanus*).-- Although Eastern American Toads can be found in almost every habitat from cultivated gardens to woodlands, they are typically found in moist upland forest. Special habitat requirements include shallow water for breeding (DeGraaf and Rudis 1983).

Northern Spring Peeper (*Pseudacris crucifer*).-- Northern Spring Peepers inhabit coniferous, deciduous and mixed forested habitat where they typically breed in ponds, emergent marshes or shrub swamps. However, their spring chorus is commonly heard from just about any body of water, especially in areas where trees or shrubs stand in and near water (Hunter et al. 1999).

Gray Treefrog (*Hyla versicolor*).-- Gray Treefrogs are found in forested areas where they hibernate near the soil surface, tolerating temperatures as cold as -6 degrees C for as long as five consecutive days. Due to the production of glycerol which serves as an antifreeze, gray treefrogs can freeze up to 41.5% of their total body fluids. The frogs breed in both permanent or temporary ponds or wetlands (Hunter et al. 1999).

Bullfrog (*Rana catesbeiana*).-- Bullfrogs require permanent bodies of water with adequate emergent and edge cover. Their aquatic habitats include shallow lake coves, slow-moving rivers and streams, and ponds (Hunter et al. 1999).

Green Frog (*Rana clamitans*).-- Green frogs are rarely found more than several meters from some form of water, including lakes and ponds, streams, quarry pools, springs, and vernal pools (DeGraaf and Rudis 1983).

Mink Frog (*Rana septentrionalis*).-- Mink frogs prefer cool, permanent water with adequate emergent and floating-leaved vegetation where they feed on aquatic insects and other invertebrates. Here they also hibernate on the bottom in the mud (Harding 1997).

Wood Frog (*Rana sylvatica*).-- Wood frogs prefer cool, moist, woodlands where they select temporary pools for breeding. However, where vernal pools are absent, wood frogs will breed in a variety of habitats including everything from cattail swamps to roadside ditches (Hunter et al. 1999).

Northern Leopard Frog (*Rana pipiens*).-- Although sometimes found in wet woodlands, Northern Leopard Frogs are the frog of wet meadows and open fields, breeding in ponds, marshes, and slow, shallow, vegetated streams (DeGraaf and Rudis 1983).

Pickerel Frog (*Rana palustris*).-- Whether the habitat selected is a bog, fen, pond, stream, spring, slough, or cove, Pickerel Frogs prefer cool, clear waters, avoiding polluted or stagnant habitats. Grassy streambanks and inlets to springs, bogs, marshes, or weedy ponds are preferred habitats (Harding 1997).

Common Snapping Turtle (*Chelydra serpentina*).-- Snapping Turtles are found in most permanent and semipermanent bodies of fresh and brackish water. Areas that have dense aquatic vegetation with deep, soft, organic substrates and plenty of cover are favored (Mitchell 1994).

Wood Turtle (*Glyptemys insculpta*).-- The Wood Turtle is a semiaquatic turtle that inhabits both the terrestrial and aquatic environment. It favors streams with sandy-pebbly substrates that are deep enough so that they do not freeze during hibernation, are well-oxygenated, and have good

water quality. Terrestrial habitat includes a variety of wetlands, upland successional fields, and deciduous woodlands with open areas for basking (Tuttle and Carroll 1997).

Eastern Box Turtle (*Terrapene carolina*).-- The Eastern Box Turtle is typically found in well-drained forest bottomlands and open deciduous forests. Preferred habitats include woodlands, field edges, marshes, bogs, and stream banks. The young are semiaquatic. The Eastern Box Turtle hibernates from late fall to April in loose soil, decaying vegetation, mud, or stream banks (DeGraaf and Rudis 1986).

Painted Turtle (*Chrysemys picta*).-- Painted Turtles most often inhabit ponds, lakes, and other slow-moving bodies of water with soft substrates and abundant aquatic vegetation. A critical habitat parameter is adequate basking sites such as logs, rocks, and mats of aquatic vegetation.

Northern Water Snake (*Nerodia s. sipedon*).-- This species is found in many aquatic habitats including lakes, ponds, rivers, and wetlands. Northern Water Snakes prefer fish and amphibians as their primary food source (Mitchell 1994).

Northern Brown Snake (*Storeria d. dekayi*).-- Northern Brown Snakes are found in the soil-humus layer of hardwood forests, mixed hardwood-pine forests, pine woods, grasslands, early successional agricultural land, and urban areas where they are frequently found in gardens (Mitchell 1994).

Northern Redbelly Snake (*Storeria occipitomaculata*).-- Although the Northern Redbelly Snake prefers wetland-upland ecotones, it is found in a variety of terrestrial habitats. This extremely secretive nocturnal species may be found under rocks, logs, bark, and leaves; but if conditions are dry, they are apt to go underground in unused rodent borrows (Mitchell 1994).

Common Garter Snake (*Thamnophis sirtalis*).-- Garter Snakes are found in a wide variety of habitats including, but not limited to, woodlands, meadows, wetlands, streams, drainage ditches, and even city parks and cemeteries (Conant and Collins 1998). But large populations of Common Garter Snakes are usually found in moist, grassy areas near the edges of water (Harding 1997).

Ribbon Snake (*Thamnophis sauritus*).–This semiaquatic snake requires shallow, permanent waterbodies in open, grassy habitats. Examples of these habitats include damp meadows, grassy marshes, northern sphagnum bogs, and the borders of ponds, lakes, and streams (DeGraaf and Rudis 1986).

Eastern Hognose Snake (*Heterodon platirhinos*).-- The Eastern Hognose Snake prefers sandy soils and open woodlands (typically pine or deciduous forest) where it preys on toads, frogs, salamanders, insects, and worms (DeGraaf and Rudis 1986).

Northern Ringneck Snake (*Diadophis punctatus edwardsi*).-- The Northern Ringneck Snake is a secretive woodland snake and is usually more common where abundant hiding structure exists,

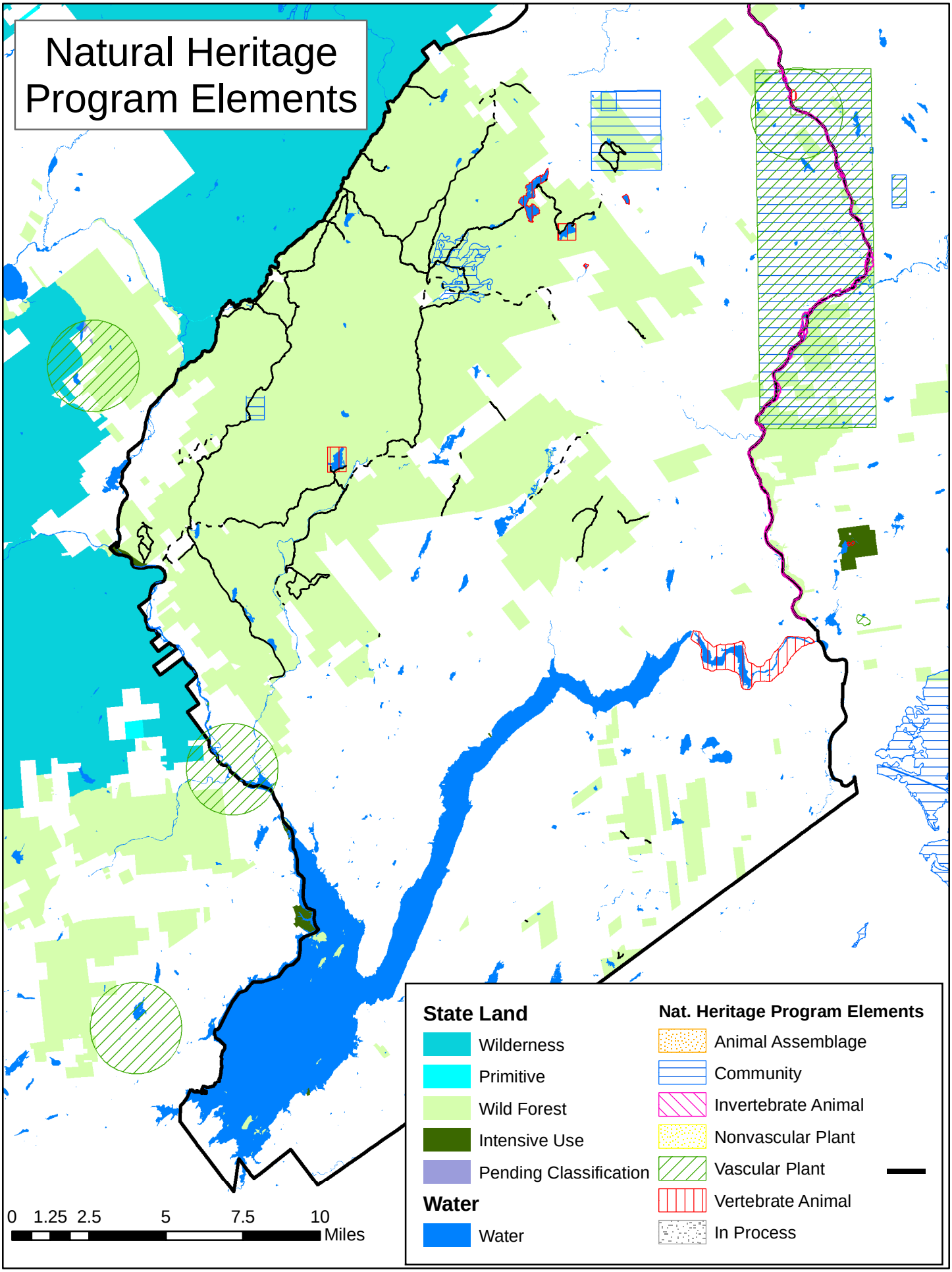
including stones, logs, and other rotting wood. Rocky, wooded hillsides are favored.

Smooth Green Snake (*Liochlorophis vernalis*).-- The Smooth Green Snake is a snake of moist, grassy areas of wetland edges, meadows and old fields, and of deciduous and coniferous woods and woodland ecotones where they feed on insects, their forage of choice (Harding 1997).

Black Rat Snake (*Elaphe o. obsoleta*).–The Black Rat Snake uses a variety of habitats, including woodlands, field edges, farmlands, rocky hillsides and mountaintops. This species can be found in dry oak, oak-hickory, and mesic bottomland forests. Small mammals (primarily rodents) account for the majority of its diet. Black Rat Snakes may use talus slopes for hibernation during the winter (DeGraaf and Rudis 1986).

Eastern Milk Snake (*Lampropeltis triangulum*).-- The Milk Snake is the snake of farm outbuildings and barns, taking cover under rocks, logs, firewood, or building materials. Natural habitat includes open woodlands, wetlands, old fields and pastures (Harding 1997).

APPENDIX E: NATURAL HERITAGE PROGRAM ELEMENTS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State Land
Wilderness
Primitive
Wild Forest
Intensive Use
Pending Classification
Water
Water
Nat. Heritage Program Elements
Animal Assemblage
Community
Invertebrate Animal
Nonvascular Plant
Vascular Plant
Vertebrate Animal
In Process
0 1.25 2.5 5 7.5 10
Miles

APPENDIX F: BREEDING BIRD ATLAS AND WILDLIFE DATA

Table 1: Bird species documented in atlas blocks within, or partially within, the Wilcox Lake Wild Forest during the New York State Breeding Bird Atlas Project, 2000-2005.

Common Name	**Scientific Name**	**Federal Status**	**NYS Status**
Common Loon	*Gavia immer*	MBTA	Protected-Special Concern
Double-crested Cormorant	*Phalacrocorax auritus*	MBTA	Protected
American Bittern	*Botaurus lentiginosus*	MBTA	Protected-Special Concern
Great Blue Heron	*Ardea herodias*	MBTA	Protected
Green Heron	*Butorides virescens*	MBTA	Protected
Canada Goose	*Branta canadensis*	MBTA	Game Species
Wood Duck	*Aix sponsa*	MBTA	Game Species
Mallard	*Anas platyrhynchos*	MBTA	Game Species
Mallard x Am. Black Duck Hybrid	*Anas platyrhynchos x A. rubripes*	MBTA	Game Species
Ring-necked Duck	*Aythya collaris*	MBTA	Game Species
Hooded Merganser	*Lophodytes cucullatus*	MBTA	Game Species
Common Merganser	*Mergus merganser*	MBTA	Game Species
Turkey Vulture	*Cathartes aura*	MBTA	Protected
Osprey	*Pandion haliaetus*	MBTA	Protected-Special Concern
Bald Eagle	*Haliaeetus leucocephalus*	MBTA-Endangered	Threatened
Sharp-shinned Hawk	*Accipiter striatus*	MBTA	Protected-Special Concern
Cooper's Hawk	*Accipiter cooperii*	MBTA	Protected-Special Concern

Red-shouldered Hawk	*Buteo lineatus*	MBTA	Protected-Special Concern
Broad-winged Hawk	*Buteo platypterus*	MBTA	Protected
Red-tailed Hawk	*Buteo jamaicensis*	MBTA	Protected
American Kestrel	*Falco sparverius*	MBTA	Protected
Ruffed Grouse	*Bonasa umbellus*	Unprotected	Game Species
Virginia Rail	*Rallus limicola*	MBTA	Game Species
Sora	*Porzana carolina*	MBTA	Game Species
Killdeer	*Charadrius vociferus*	MBTA	Protected
Spotted Sandpiper	*Actitis macularia*	MBTA	Protected
Common Snipe	*Gallinago gallinago*	MBTA	Game Species
American Woodcock	*Scolopax minor*	MBTA	Game Species
Ring-billed Gull	*Larus delawarensis*	MBTA	Protected
Rock Dove	*Columba livia*	Unprotected	Unprotected
Mourning Dove	*Zenaida macroura*	MBTA	Protected
Black-billed Cuckoo	*Coccyzus erythropthalmus*	MBTA	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	MBTA	Protected
Great Horned Owl	*Bubo virginianus*	MBTA	Protected
Barred Owl	*Strix varia*	MBTA	Protected
Whip-poor-will	*Caprimulgus vociferus*	MBTA	Protected-Special Concern
Chimney Swift	*Chaetura pelagica*	MBTA	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	MBTA	Protected

Belted Kingfisher	*Ceryle alcyon*	MBTA	Protected
Red-headed Woodpecker	*Melanerpes erythrocephalus*	MBTA	Protected-Special Concern
Yellow-bellied Sapsucker	*Sphyrapicus varius*	MBTA	Protected
Downy Woodpecker	*Picoides pubescens*	MBTA	Protected
Hairy Woodpecker	*Picoides villosus*	MBTA	Protected
Pileated Woodpecker	*Dryocopus pileatus*	MBTA	Protected
Olive-sided Flycatcher	*Contopus cooperi*	MBTA	Protected
Yellow-bellied Flycatcher	*Empidonax flaviventris*	MBTA	Protected
Alder Flycatcher	*Empidonax alnorum*	MBTA	Protected
Willow Flycatcher	*Empidonax traillii*	MBTA	Protected
Least Flycatcher	*Empidonax minimus*	MBTA	Protected
Eastern Phoebe	*Sayornis phoebe*	MBTA	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	MBTA	Protected
Eastern Kingbird	*Tyrannus tyrannus*	MBTA	Protected
Purple Martin	*Progne subis*	MBTA	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	MBTA	Protected
Blue Jay	*Cyanocitta cristata*	MBTA	Protected
Common Raven	*Corvus corax*	MBTA	Protected
Black-capped Chickadee	*Poecile atricapillus*	MBTA	Protected
Boreal Chickadee	*Poecile hudsonicus*	MBTA	Protected
Red-breasted Nuthatch	*Sitta canadensis*	MBTA	Protected

White-breasted Nuthatch	*Sitta carolinensis*	MBTA	Protected
Brown Creeper	*Certhia americana*	MBTA	Protected
House Wren	*Troglodytes aedon*	MBTA	Protected
Winter Wren	*Troglodytes troglodytes*	MBTA	Protected
Golden-crowned Kinglet	*Regulus satrapa*	MBTA	Protected
Ruby-crowned Kinglet	*Regulus calendula*	MBTA	Protected
Eastern Bluebird	*Sialia sialis*	MBTA	Protected
Veery	*Catharus fuscescens*	MBTA	Protected
Swainson's Thrush	*Catharus ustulatus*	MBTA	Protected
Hermit Thrush	*Catharus guttatus*	MBTA	Protected
Wood Thrush	*Hylocichla mustelina*	MBTA	Protected
American Robin	*Turdus migratorius*	MBTA	Protected
Gray Catbird	*Dumetella carolinensis*	MBTA	Protected
Brown Thrasher	*Toxostoma rufum*	MBTA	Protected
Yellow-throated Vireo	*Vireo flavifrons*	MBTA	Protected
Warbling Vireo	*Vireo gilvus*	MBTA	Protected
Philadelphia Vireo	*Vireo philadelphicus*	MBTA	Protected
Red-eyed Vireo	*Vireo olivaceus*	MBTA	Protected
Nashville Warbler	*Vermivora ruficapilla*	MBTA	Protected
Northern Parula	*Parula americana*	MBTA	Protected
Chestnut-sided Warbler	*Dendroica pensylvanica*	MBTA	Protected
Magnolia Warbler	*Dendroica magnolia*	MBTA	Protected

Black-throated Blue Warbler	*Dendroica caerulescens*	MBTA	Protected
Pine Warbler	*Dendroica pinus*	MBTA	Protected
American Redstart	*Setophaga ruticilla*	MBTA	Protected
Ovenbird	*Seiurus aurocapillus*	MBTA	Protected
Northern Waterthrush	*Seiurus noveboracensis*	MBTA	Protected
Louisiana Waterthrush	*Seiurus motacilla*	MBTA	Protected
Mourning Warbler	*Oporornis philadelphia*	MBTA	Protected
Common Yellowthroat	*Geothlypis trichas*	MBTA	Protected
Canada Warbler	*Wilsonia canadensis*	MBTA	Protected
Scarlet Tanager	*Piranga olivacea*	MBTA	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	MBTA	Protected
Indigo Bunting	*Passerina cyanea*	MBTA	Protected
Chipping Sparrow	*Spizella passerina*	MBTA	Protected
Field Sparrow	*Spizella pusilla*	MBTA	Protected
Song Sparrow	*Melospiza melodia*	MBTA	Protected
Lincoln's Sparrow	*Melospiza lincolnii*	MBTA	Protected
Swamp Sparrow	*Melospiza georgiana*	MBTA	Protected
White-throated Sparrow	*Zonotrichia albicollis*	MBTA	Protected
Bobolink	*Dolichonyx oryzivorus*	MBTA	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	MBTA	Protected
Eastern Meadowlark	*Sturnella magna*	MBTA	Protected

Rusty Blackbird	*Euphagus carolinus*	MBTA	Protected
Brown-headed Cowbird	*Molothrus ater*	MBTA	Protected
Purple Finch	*Carpodacus purpureus*	MBTA	Protected
House Finch	*Carpodacus mexicanus*	MBTA	Protected
White-winged Crossbill	*Loxia leucoptera*	MBTA	Protected
Pine Siskin	*Carduelis pinus*	MBTA	Protected
American Goldfinch	*Carduelis tristis*	MBTA	Protected
Evening Grosbeak	*Coccothraustes vespertinus*	MBTA	Protected
House Sparrow	*Passer domesticus*	Unprotected	Unprotected

Table 2: Bird species documented in atlas blocks within, or partially within, the Wilcox Lake Wild Forest during the New York Breeding Bird Atlas Project, 1980-1985.

Common Name	Scientific Name	Federal Status	NYS Status
Common Loon	*Gavia immer*	MBTA	Protected-Special Concern
American Bittern	*Botaurus lentiginosus*	MBTA	Protected-Special Concern
Great Blue Heron	*Ardea herodias*	MBTA	Protected
Green Heron	*Butorides virescens*	MBTA	Protected
Canada Goose	*Branta canadensis*	MBTA	Game Species
Wood Duck	*Aix sponsa*	MBTA	Game Species
Green-winged Teal	*Anas crecca*	MBTA	Game Species
American Black Duck	*Anas rubripes*	MBTA	Game Species
Mallard	*Anas platyrhynchos*	MBTA	Game Species
Ring-necked Duck	*Aythya collaris*	MBTA	Game Species
Hooded Merganser	*Lophodytes cucullatus*	MBTA	Game Species
Common Merganser	*Mergus merganser*	MBTA	Game Species
Turkey Vulture	*Cathartes aura*	MBTA	Protected
Osprey	*Pandion haliaetus*	MBTA	Protected-Special Concern
Northern Harrier	*Circus cyaneus*	MBTA	Threatened
Sharp-shinned Hawk	*Accipiter striatus*	MBTA	Protected-Special Concern
Cooper's Hawk	*Accipiter cooperii*	MBTA	Protected-Special Concern
Northern Goshawk	*Accipiter gentilis*	MBTA	Protected-Special Concern
Red-shouldered Hawk	*Buteo lineatus*	MBTA	Protected-Special Concern

Broad-winged Hawk	*Buteo platypterus*	MBTA	Protected
Red-tailed Hawk	*Buteo jamaicensis*	MBTA	Protected
American Kestrel	*Falco sparverius*	MBTA	Protected
Ruffed Grouse	*Bonasa umbellus*	Unprotected	Game Species
Wild Turkey	*Meleagris gallopavo*	Unprotected	Game Species
American Crow	*Corvus brachyrhynchos*	MBTA	Game Species
Sora	*Porzana carolina*	MBTA	Game Species
Killdeer	*Charadrius vociferus*	MBTA	Protected
Spotted Sandpiper	*Actitis macularia*	MBTA	Protected
Common Snipe	*Gallinago gallinago*	MBTA	Game Species
American Woodcock	*Scolopax minor*	MBTA	Game Species
Herring Gull	*Larus argentatus*	MBTA	Protected
Rock Dove	*Columba livia*	Unprotected	Unprotected
Mourning Dove	*Zenaida macroura*	MBTA	Protected
Black-billed Cuckoo	*Coccyzus erythropthalmus*	MBTA	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	MBTA	Protected
Eastern Screech-Owl	*Otus asio*	MBTA	Protected
Great Horned Owl	*Bubo virginianus*	MBTA	Protected
Barred Owl	*Strix varia*	MBTA	Protected
Northern Saw-whet Owl	*Aegolius acadicus*	MBTA	Protected
Common Nighthawk	*Chordeiles minor*	MBTA	Protected-Special Concern
Whip-poor-will	*Caprimulgus vociferus*	MBTA	Protected-Special Concern

Chimney Swift	*Chaetura pelagica*	MBTA	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	MBTA	Protected
Belted Kingfisher	*Ceryle alcyon*	MBTA	Protected
Red-headed Woodpecker	*Melanerpes erythrocephalus*	MBTA	Protected-Special Concern
Yellow-bellied Sapsucker	*Sphyrapicus varius*	MBTA	Protected
Downy Woodpecker	*Picoides pubescens*	MBTA	Protected
Hairy Woodpecker	*Picoides villosus*	MBTA	Protected
Three-toed Woodpecker	*Picoides tridactylus*	MBTA	Protected
Northern Flicker	*Colaptes auratus*	MBTA	Protected
Pileated Woodpecker	*Dryocopus pileatus*	MBTA	Protected
Olive-sided Flycatcher	*Contopus cooperi*	MBTA	Protected
Eastern Wood-Pewee	*Contopus virens*	MBTA	Protected
Yellow-bellied Flycatcher	*Empidonax flaviventris*	MBTA	Protected
Alder Flycatcher	*Empidonax alnorum*	MBTA	Protected
Willow Flycatcher	*Empidonax traillii*	MBTA	Protected
Least Flycatcher	*Empidonax minimus*	MBTA	Protected
Eastern Phoebe	*Sayornis phoebe*	MBTA	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	MBTA	Protected
Eastern Kingbird	*Tyrannus tyrannus*	MBTA	Protected
Horned Lark	*Eremophila alpestris*	MBTA	Protected-Special Concern

Purple Martin	*Progne subis*	MBTA	Protected
Tree Swallow	*Tachycineta bicolor*	MBTA	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	MBTA	Protected
Bank Swallow	*Riparia riparia*	MBTA	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	MBTA	Protected
Barn Swallow	*Hirundo rustica*	MBTA	Protected
Blue Jay	*Cyanocitta cristata*	MBTA	Protected
Common Raven	*Corvus corax*	MBTA	Protected
Black-capped Chickadee	*Poecile atricapillus*	MBTA	Protected
Tufted Titmouse	*Baeolophus bicolor*	MBTA	Protected
Red-breasted Nuthatch	*Sitta canadensis*	MBTA	Protected
White-breasted Nuthatch	*Sitta carolinensis*	MBTA	Protected
Brown Creeper	*Certhia americana*	MBTA	Protected
House Wren	*Troglodytes aedon*	MBTA	Protected
Winter Wren	*Troglodytes troglodytes*	MBTA	Protected
Golden-crowned Kinglet	*Regulus satrapa*	MBTA	Protected
Blue-gray Gnatcatcher	*Polioptila caerulea*	MBTA	Protected
Eastern Bluebird	*Sialia sialis*	MBTA	Protected
Veery	*Catharus fuscescens*	MBTA	Protected
Swainson's Thrush	*Catharus ustulatus*	MBTA	Protected
Hermit Thrush	*Catharus guttatus*	MBTA	Protected

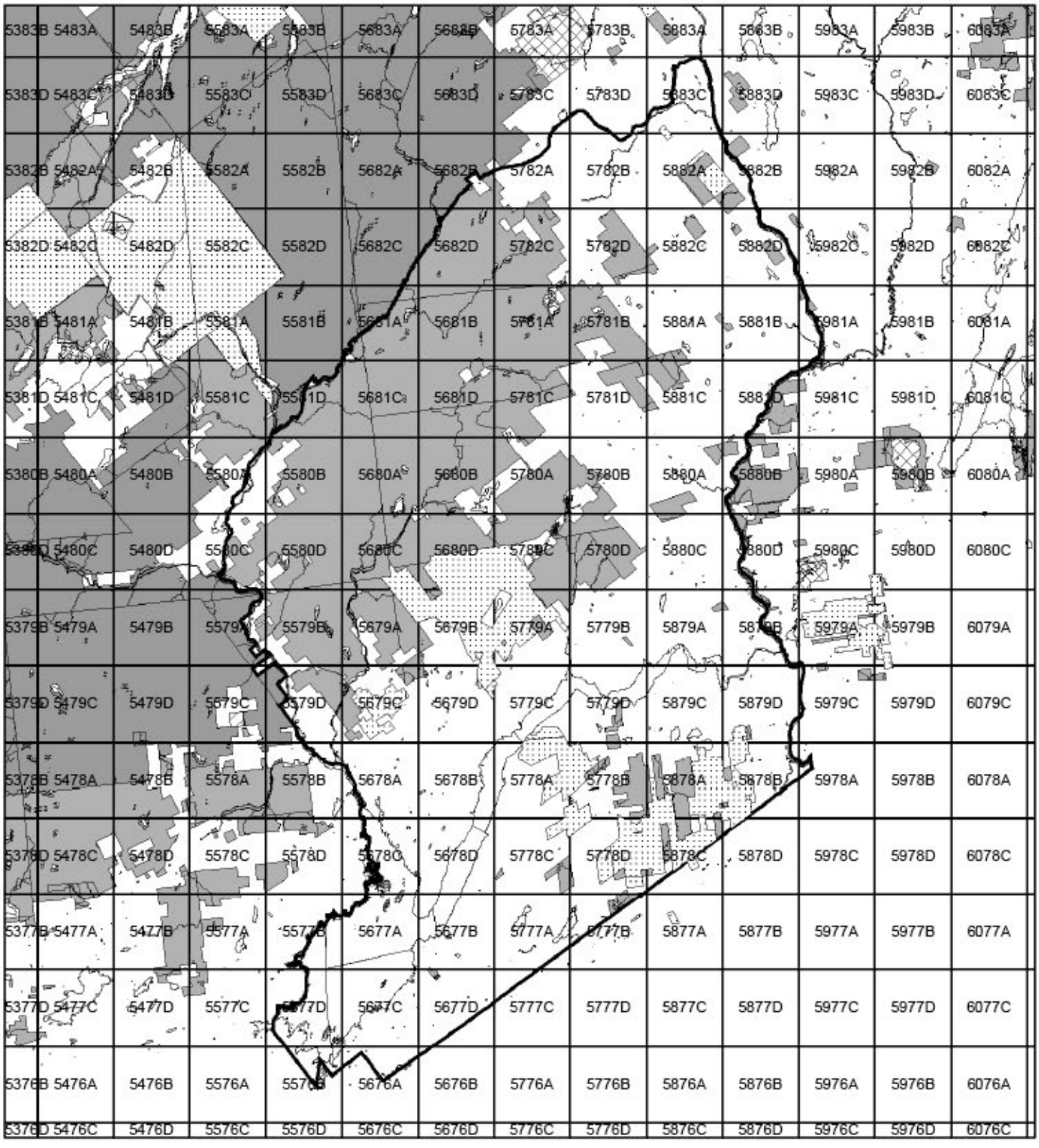
Wood Thrush	*Hylocichla mustelina*	MBTA	Protected
American Robin	*Turdus migratorius*	MBTA	Protected
Gray Catbird	*Dumetella carolinensis*	MBTA	Protected
Northern Mockingbird	*Mimus polyglottos*	MBTA	Protected
Brown Thrasher	*Toxostoma rufum*	MBTA	Protected
Cedar Waxwing	*Bombycilla cedrorum*	MBTA	Protected
European Starling	*Sturnus vulgaris*	Unprotected	Unprotected
White-eyed Vireo	*Vireo griseus*	MBTA	Protected
Blue-headed Vireo	*Vireo solitarius*	MBTA	Protected
Yellow-throated Vireo	*Vireo flavifrons*	MBTA	Protected
Warbling Vireo	*Vireo gilvus*	MBTA	Protected
Red-eyed Vireo	*Vireo olivaceus*	MBTA	Protected
Golden-winged Warbler	*Vermivora chrysoptera*	MBTA	Protected-Special Concern
Tennessee Warbler	*Vermivora peregrina*	MBTA	Protected
Nashville Warbler	*Vermivora ruficapilla*	MBTA	Protected
Northern Parula	*Parula americana*	MBTA	Protected
Yellow Warbler	*Dendroica petechia*	MBTA	Protected
Chestnut-sided Warbler	*Dendroica pensylvanica*	MBTA	Protected
Magnolia Warbler	*Dendroica magnolia*	MBTA	Protected
Cape May Warbler	*Dendroica tigrina*	MBTA	Protected
Black-throated Blue Warbler	*Dendroica caerulescens*	MBTA	Protected

Yellow-rumped Warbler	*Dendroica coronata*	MBTA	Protected
Black-throated Green Warbler	*Dendroica virens*	MBTA	Protected
Blackburnian Warbler	*Dendroica fusca*	MBTA	Protected
Pine Warbler	*Dendroica pinus*	MBTA	Protected
Prairie Warbler	*Dendroica discolor*	MBTA	Protected
Bay-breasted Warbler	*Dendroica castanea*	MBTA	Protected
Blackpoll Warbler	*Dendroica striata*	MBTA	Protected
Black-and-white Warbler	*Mniotilta varia*	MBTA	Protected
American Redstart	*Setophaga ruticilla*	MBTA	Protected
Ovenbird	*Seiurus aurocapillus*	MBTA	Protected
Northern Waterthrush	*Seiurus noveboracensis*	MBTA	Protected
Louisiana Waterthrush	*Seiurus motacilla*	MBTA	Protected
Mourning Warbler	*Oporornis philadelphia*	MBTA	Protected
Common Yellowthroat	*Geothlypis trichas*	MBTA	Protected
Canada Warbler	*Wilsonia canadensis*	MBTA	Protected
Scarlet Tanager	*Piranga olivacea*	MBTA	Protected
Northern Cardinal	*Cardinalis cardinalis*	MBTA	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	MBTA	Protected
Indigo Bunting	*Passerina cyanea*	MBTA	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	MBTA	Protected
Chipping Sparrow	*Spizella passerina*	MBTA	Protected

Field Sparrow	*Spizella pusilla*	MBTA	Protected
Savannah Sparrow	*Passerculus sandwichensis*	MBTA	Protected
Grasshopper Sparrow	*Ammodramus savannarum*	MBTA	Protected-Special Concern
Henslow's Sparrow	*Ammodramus henslowii*	MBTA	Threatened
Song Sparrow	*Melospiza melodia*	MBTA	Protected
Lincoln's Sparrow	*Melospiza lincolnii*	MBTA	Protected
Swamp Sparrow	*Melospiza georgiana*	MBTA	Protected
White-throated Sparrow	*Zonotrichia albicollis*	MBTA	Protected
Dark-eyed Junco	*Junco hyemalis*	MBTA	Protected
Bobolink	*Dolichonyx oryzivorus*	MBTA	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	MBTA	Protected
Eastern Meadowlark	*Sturnella magna*	MBTA	Protected
Rusty Blackbird	*Euphagus carolinus*	MBTA	Protected
Common Grackle	*Quiscalus quiscula*	MBTA	Protected
Brown-headed Cowbird	*Molothrus ater*	MBTA	Protected
Orchard Oriole	*Icterus spurius*	MBTA	Protected
Baltimore Oriole	*Icterus galbula*	MBTA	Protected
Purple Finch	*Carpodacus purpureus*	MBTA	Protected
House Finch	*Carpodacus mexicanus*	MBTA	Protected
White-winged Crossbill	*Loxia leucoptera*	MBTA	Protected
American Goldfinch	*Carduelis tristis*	MBTA	Protected
Evening Grosbeak	*Coccothraustes vespertinus*	MBTA	Protected

House Sparrow	*Passer domesticus*	Unprotected	Unprotected

WILCOX LAKE
BREEDING BIRD ATLAS



Lyme Lands

Management Complex Unit Boundary

Breeding Bird Atlas Block

4 2 0 4 8 12 Miles

N W E S

LAND CLASSIFICATION

Wilderness

Intensive Use

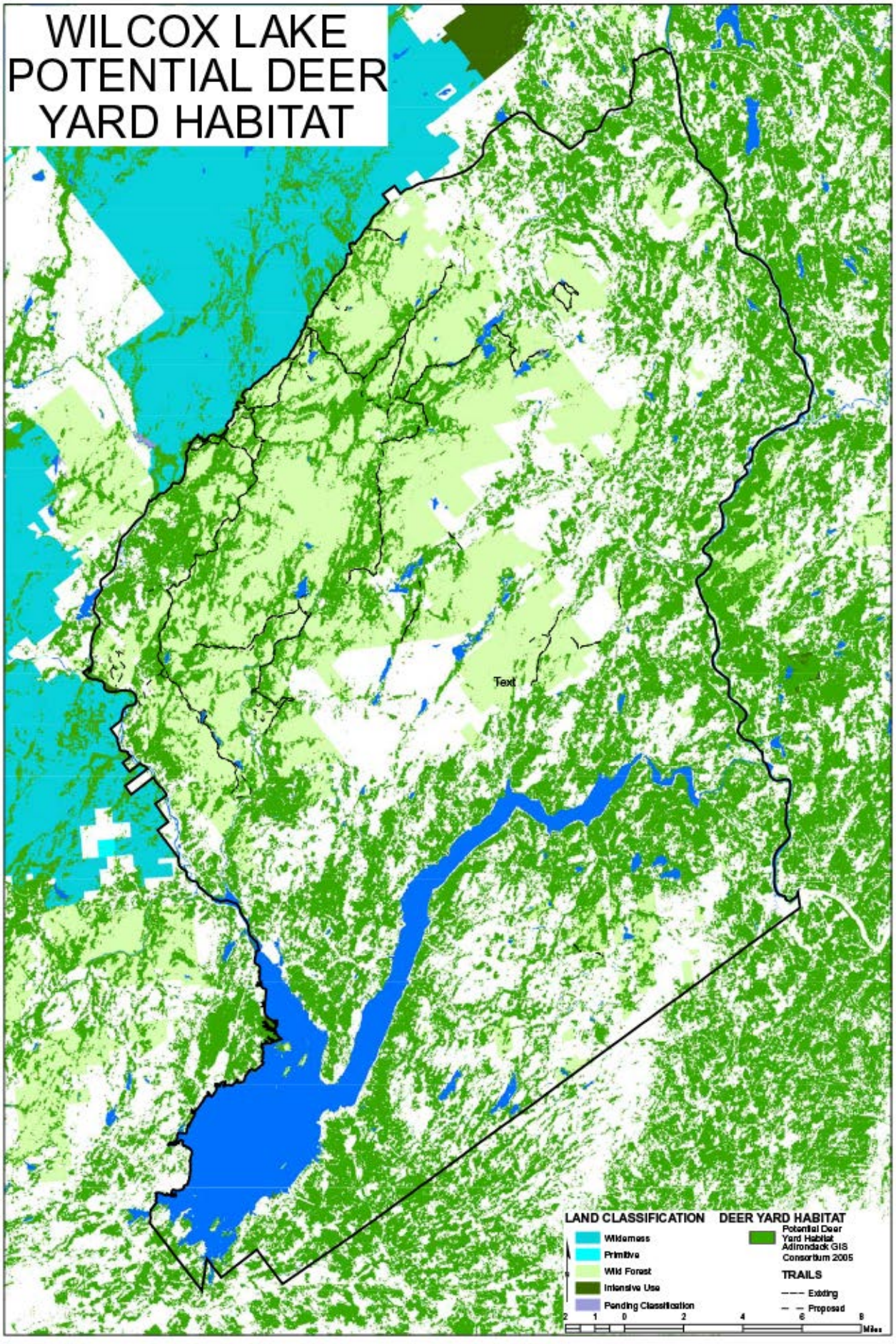
Primitive

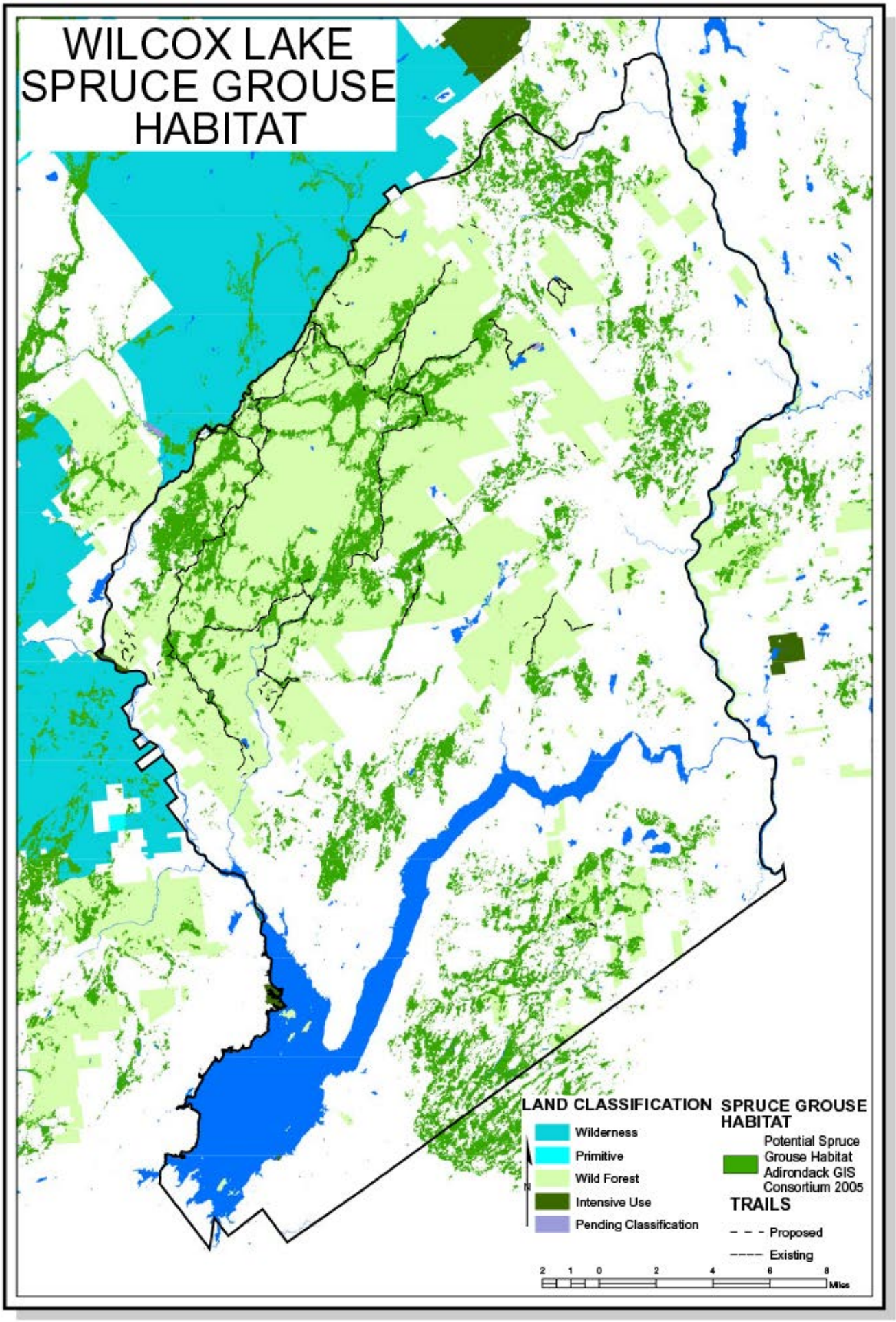
Pending Classification

Wild Forest

Easement

WILCOX LAKE POTENTIAL DEER YARD HABITAT




WILCOX LAKE
SPRUCE GROUSE
HABITAT
LAND CLASSIFICATION
Wilderness
Primitive
Wild Forest
Intensive Use
Pending Classification
SPRUCE GROUSE HABITAT
Potential Spruce Grouse Habitat
Adirondack GIS Consortium 2005
TRAILS
Proposed
Existing
2 1 0 2 4 8 8
Miles

APPENDIX G: TRAIL CLASSIFICATION SYSTEMS

Table 1. Non-snowmobile trail classifications system and standards.

TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
I. Unmarked Route	Nate Davis Pond Trail	None	Intermittently apparent, relatively undisturbed organic soil horizon	Natural obstructions present, logs and water courses	Occasional	None
II. Path	Little Joe Pond Trail	Intermittent	Intermittently apparent, compaction of duff, mineral soils occasionally exposed.	Same as unmarked route	Low, varies by location	Intermittent marking with consideration given to appropriate layout based on drainage, occasional barrier removal only to define appropriate route.
III. Primitive	St. John Lake Connector Trail	Trail markers, sign at junction with secondary or other upper level trail	Apparent, soil compaction evident	Limited natural obstructions (logs and river fords)	Low	Drainage (native materials) where necessary to minimize erosion, blowdown removed 2-3 years, brushing as necessary to define trail (every 5-10 years). Bridges only to protect resource (max - 2 log width). Ladders only to protect exceptionally steep sections, Tread 14"-18", clear: 3' wide, 3' high.

TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
IV. Secondary	Tenant Creek Falls Trail	Markers, signs with basic information	Likely worn and possibly quite eroded. Rocks exposed, little or no duff remaining	Up to one year's accumulated blowdown, small streams.	Moderate	Drainage where needed to halt erosion and limit potential erosion (using native materials), tread hardening with native materials where drainage proves to be insufficient to control erosion. Remove blowdown annually. Brush to maintain trail corridor. Higher use may warrant greater use of bridges (2–3 logs wide) for resource protection. Ladders on exceptionally steep rock faces. Tread 18"-24". Clear 4' wide, 3' High.
V. Trunk or Primary	Hadley Mountain Trail	Markers, signed with more information and warnings.	Wider tread, worn and very evident. Rock exposed, possibly very eroded.	Obstructions only rarely, small streams	High	Same as above; Plus: regular blowdown removal on designated ski trails, non-native materials as last resort. Extensive tread hardening when needed, bridge streams (2–4 logs wide) difficult to cross during high water, priority given to stream crossings below concentrations of designated camping. Tread 18"-26", clear 6' wide, 8' high, actual turn piking limited to 2% of trail length.

TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
VI. Front Country	None in the WLWF	Heavily marked, detailed interpretive signing	Groomed	None	Very High	Extensive grooming, some paving, bark chips, accessible to persons with disabilities. This is to be implemented within 500' of wilderness boundary.
VII. Horse Trail	None specifically designated in the WLWF	Marked as Trunk or Secondary	Wide tread, must be rather smooth.	Same as Trunk Trail.	Moderate to High	Same as trunk trail, except use techniques appropriate for horses. Bridges: 6' minimum width with kick rails, nonnative dimensional materials preferred. Tread: 2'-4' wide, clear 8' wide, 10' high.
VIII. Ski Trail	None specifically designated in the WLWF	Marked High. Special markers, sign at all junctions with hiking trails.	Duff remains. Discourage summer use	Practically none due to hazards.	High	Focus on removal of obstructions, maintenance should be low profile, tread determined by clearing 6' (Should be slightly wider at turns and steep sections). Provide drainage using native materials to protect resource.

Table 2. Classifications of post-UMP foot trails in the WLWF.

CLASS III. PRIMITIVE	
Name	**Length (miles)**
Bartman Junction Trail	2.22
Cotter Brook Trail	2.19
Eagle Pond Trail	1.48
Indian Pond Trail	1.66

Little Joe Pond Trail	1.28
Mud Pond Trail	0.11
Oxbow Trail	1.64
Rand Mountain Trail	2.98
St. John Lake Connector Trail	0.35
Thompson Mountain Trail	0.5
Wilcox Lake Lean-tos Trail	0.73
CLASS IV. SECONDARY	
Name	**Length (miles)**
Kibby Pond Trail	1.3
Tenant Creek Falls Trail	1.73
CLASS V. PRIMARY OR TRUNK	
Name	**Length (miles)**
Crane Mountain Trail	3.55
Hadley Mountain Trail	1.32
Moose Mountain Trail	3.85
CLASS VIII. SKI	
Name	**Length (miles)**
East Stony Creek Trail (Brownell Camp to Dayton Creek)	3.4
Old Fodder Brook Road Ski Trail (access from private land or Saratoga County land off Hadley Hill Road)	3.58

Table 3. Snowmobile trail classification system and standards.

CLASS	DESCRIPTION	GROOMING	WIDTH & HEIGHT
A	Major travel routes, with physical features that permit grooming and; 1. Follow old roadways, or; 2. Connect with groomed trail systems on adjacent public or private lands, or; 3. Join with other trails on State land to form a long loop or other major travel corridor.	Yes, if desired	Width – Eight (8) feet on straight or gently curved stretches of trail, twelve (12) feet on curves or steep grades Height – Twelve (12) feet
B	Routes other than major travel routes, not designed for grooming and which; 1. Are connecting or "spur" trails companion to Class A trails, or; 2. Lead to a particular point of interest such as a popular ice fishing pond, a scenic overlook, etc.	No	Width – Maximum of eight (8) feet Height – Twelve (12) feet

Table 4: Classifications of post-UMP snowmobile trails in the WLWF.

CLASS A	
Name	**Length (miles)**
Arrow Trail	4.88
Baldwin Spring Spur Trail	0.36
Bartman Trail	5.92
Davignon Road Extension	0.64
East Stony Creek Trail (Bakertown Road to Wilcox Lake Trail)	0.17
Georgia Creek-Moose Mountain Trail	4.19
Girards Sugarbush Trail	1.66
Kidder Brook Trail	0.93
Lizard Pond Trail	4.87
Murphy-Middle-Bennett Lakes Trail	6.78
Old Armstrong Road Trail	1.18
Oregon Trail	4.81
Oxbow Trail	1.64

Pine Orchard Trail	9.34
Pumpkin Hollow Trail	1.3
Round Pond Trail	3.82
Route 8 Trail	0.99
Wilcox Lake Trail (East Stony Creek Trail to Wilcox Lake-Willis Lake Trail)	0.62
Wilcox Lake-Willis Lake Trail	5.04
CLASS B	
Name	**Length (miles)**
Cod Pond Trail	0.84
Dog ‘n Pup Bypass Trail	1.7
Dorr Road Connector Trail	0.34
East Stony Creek Trail (Wilcox Lake Trail to Dayton Creek lean-to)	0.61
Harrisburg Lake-Tenant Lake Trail	1.83
Wilcox Lake Trail (Wilcox Lake-Willis Lake Trail to Wilcox Lake)	0.28

APPENDIX H: ARCHAEOLOGICAL AND CULTURAL RESOURCES

Number	Quad	Reporter	Name	Period, Phase	Description
1439	B		Summerhouse Point		1899 site files, no other information
1440	B	KS	Butterstreet		1899 site files, no other information
1441	B		Workhouse Point		1899 site files, no other information
1442	B	ACG, Jr.	Frenchman's Creek		1899 site files, no other information
1443	B		Marvin Point		1899 site files, no other information
9110	B				1899 site files, no other information
A035-02-0001	B	HAA, Inc.	Workhouse Point NYSM 1441	Submerged under Great Sacandaga Lake	
A035-02-0002	B	HAA, Inc.	Frenchman's Creek NYSM 1442	Submerged under Great Sacandaga Lake	
A035-06-0003	B	HAA, Inc.	Butterstreet Site NYSM 1440	Submerged under Great Sacandaga Lake	
A305-02-0003	B	HAA, Inc.	Marvin Point NYSM 1443	Submerged under Great Sacandaga Lake	
7479	B, N	Gillette	Sites	PC	Notes many sites near Great Sacandaga Lake but no precise locations are given
7771	C	Elanger		EA, EW	Points
A091-09-0008	C	HAA, Inc.	Stewarts Bridge Hydroelectric Plant	1951-present	
A091-09-0009	C	HAA, Inc.	E. J. West Hydroelectric Plant	1930-present	NRE

A091-44-0016	C	HAA, Inc.	Curtis Hydroelectric Plant	1912-present	
A091-06-000086	E	Kirk	Edinburg Town Park Historic Foundation	1800s	Surface traces and several artifacts
A091-06-000087	E	Kirk	Kuhn Historic Foundation	1800s	Mortared fieldstone and 97 artifacts
A091-06-000088	E	Kirk	Kuhn Historic Wall	1800s	Dry-laid fieldstone and other artifacts
A091-06-000090	E	Pickands	H. P. Perry Site	1850-1930	Buried foundation often inundated by Great Sacandaga Lake
A091-06-000091	E	Pickands	J. P. Conkling Site	1860-1930	Buried foundation often inundated by Great Sacandaga Lake
A041-09-000001	G	HAA, Inc.	Griffin Tannery and Logging Complex	1860s-1893	Complex included several buildings and a bridge
A113-06-000067	G	Dean	Bass House Site	M18-1900s	Existing structure with buried deposits
A113-06-000069	G	Dean	Hamlet Store II	ML1800s	Buried foundation, many artifacts
A113-06-000070	G	Dean	W. Potter Residence Site	M18-1900s	Foundation, many artifacts
A113-06-000071	G	Dean	The R. Gilchrist/Grove Hotel Site	M18-1900s	Buried foundation, many artifacts
A113-06-000072	G	Dean	Glen Tannery Site	EM1800s	Foundation, many artifacts
A113-06-0015	G	McCann	The Glen Site	ML1800s	Hotel foundation
A113-10-000064	G	Dean	Blacksmith Shop/Barn Site	L18-E1900s	Partial superstructure, foundation, many artifacts

A113-10-000065, A113-10-000066	G	Dean	Potter Hotel Site	M18-1900s	Partial superstructure, foundation, many artifacts
A113-10-0010	G	SUNYA	Needham 1876	1800s	
1433	N		Osborn Bridge		1899 site files, no other information
1435	N				1899 site files, no other information
1436	N				1899 site files, no other information
1437	N				1899 site files, no other information
1438	N		Fink's Island	PI, MA?	May be the same as NYSM 9111
3318	N				No information
8590	N	Wellman		H	Brick, cut stone, transfer-printed ceramics, handblown glass
9111	N	Hamilton		PI, MA: Clovis, Bifurcate	Points
A035-02-0006	N	HAA, Inc.	NYSM 3315	PC	Many points
A035-02-0007	N	HAA, Inc.	Fink's Island NYSM 1438	Under Great Sacandaga Lake	
A035-07-0001	N	HAA, Inc.	NYSM 3318		Traces of occupation
A035-07-0002	N	HAA, Inc.	Osborne Bridge NYSM 1433	Under Great Sacandaga Lake	
A035-07-0003	N	HAA, Inc.	NYSM 1435	PI	Clovis and bifurcate points
A035-07-0004	N	HAA, Inc.	NYSM 1436		Under Great Sacandaga Lake
A035-07-0005	N	HAA, Inc.	NYSM 1437		Under Great Sacandaga Lake
A035-07-0006	N	HAA, Inc.	Fishhouse NYSM 1434		

3315	N, E				No information
10296	NC	Pickands	Riverside Station Worker's Housing	H	Buried barn
A113-06-000031	NC	Pickands	Riverside Station Worker's Housing NYSM 10296	1880-1968	Foundation, many artifacts
A113-06-000082	NC	Cardinal	W. Roblee Site	1800s-present	Existing structure with buried deposits
4695	OM	Parker			Burial, possibly submerged
A091-05-0001	OM	Allen	Old Day Centre	1800-1930	Cellar holes, graveyard boundary stones, outlines of burned buildings, and church foundation visible when reservoir is low
A091-05-0002	OM	Allen	Day Centre Bridge	1880s-1930	Trusses intact though rusty and deteriorating
6902	W	James	Thurman Station	PC	Bifaces, stone ax, red ochre
A113-10-000015	W	Bouchard	Shikes, Cameron House Site	M18-1900s	Fieldstone foundation with few artifacts
A113-10-0006	W	HAA, Inc.	Sugarloaf Mt. Rockshelter	PC	Precontact artifacts found
A113-10-0007	W	McCann	Cameron Site	LA	Red ochre burials destroyed by road construction

APPENDIX I: ALTERNATIVES DISCUSSION – SNOWMOBILE TRAILS

1. Snowmobile Trails – General Direction

Several sources of policy must be considered when planning long-distance snowmobile routes in the Adirondack Park. Guidance comes from the APSLMP, the Snowmobile Plan for the Adirondack Park, and established Department policy regarding snowmobile trail management.

The Adirondack State Land Master Plan (APSLMP)
The APSLMP identifies snowmobile trails as a conforming use of Wild Forest units. The APSLMP defines a "snowmobile trail" on page 31 as:

> *"a marked trail of essentially the same character as a foot trail designated by the Department of Environmental Conservation on which, when covered by snow and ice, snowmobiles are allowed to travel and which may double as a foot trail at other times of the year."*

Further, the APSLMP on page 33, in Basic Guideline 4 for Wild Forest units, states that:

> *"There will be no material increase in the mileage of roads and snowmobile trails open to motorized use by the public that conformed to the master plan at the time of its original adoption in 1972."*

Additionally, the APSLMP, on page 36, goes on to further define the appropriate nature of snowmobile trails in Wild Forest units with the following qualifiers:

> *"Snowmobile trails should be designed and located in a manner that will not adversely affect adjoining private landowners or the wild forest environment and in particular:*
>
> *-the mileage of snowmobile trails lost in the designation of wilderness, primitive, and canoe areas may be replaced in wild forest areas with existing roads or abandoned wood roads as a basis of such new trail construction, except in rare circumstances requiring the cutting of new trails;*
>
> *-wherever feasible such replacement mileage should be located in the general area as where mileage is lost to wilderness, primitive, and canoe classification;*
>
> *-appropriate opportunities to improve the snowmobile trail system may be pursued subject to basic guideline set forth above, where the impact on the wild forest environment will be minimized, such as (I) provision for snowmobile trails adjacent to but screened from certain public highways within the Park to facilitate snowmobile access between communities where alternative routes on either state or private land are not available or topography permits and, (ii)*

designation of new snowmobile trails on established roads in newly acquired state lands classified as wild forest, and,

-deer wintering yards and other important wildlife and resource areas should be avoided by such trails."

The Snowmobile Plan for the Adirondack Park

Appendix N consists of a briefing document published by the Department that outlines the vision and goals of the Snowmobile Plan for the Adirondack Park. The spirit and intent of this document was considered when evaluating the alternatives discussed below.

Department Policy

Department policy and guidelines related to the siting of snowmobile trails include the following:

- For safety reasons, trails should be kept off highways (especially major highways) and water bodies whenever possible.
- Trails should be free of obstructions such as trees and boulders.
- The proper consideration of potential environmental impacts must be given when siting trails. This includes:
  - avoiding rare, threatened, and endangered plant and animal species and their habitats,
  - avoiding deer wintering areas,
  - minimizing vegetation disturbance,
  - avoiding wetlands, areas with poor drainage, and steep slopes, and
  - minimizing tree cutting and preserving the tree canopy over the trail.
- Efforts should be undertaken to minimize, and if possible, avoid user group conflicts through appropriate signage.
- Trails will not be placed on private land without the permission of the private landowner. If the landowner agrees to allow the trail on their property, the Department and its partners should secure, whenever possible, a permanent snowmobile trail easement which binds the owner's successors in title.

2. Warrensburg to Speculator – Alternatives Discussion *(see Appendix L for maps)*

Existing Conditions

Warrensburg and Speculator are both reasonably large villages located in the southern Adirondacks, a region that relies heavily on the tourism industry to contribute to the local economy. As a result, the area would likely benefit economically from a well-defined, safe snowmobile route that provides a non-circuitous linkage between the two communities. Because the WLWF covers approximately half of the 29-mile distance between the two communities, using the unit's existing snowmobile trail mileage as part of the trail to facilitate snowmobile access between the two communities makes sense from a logistical and financial perspective.

Warrensburg, by most accounts, is not currently a snowmobiling "hub," probably because of the lack of suitable Hudson and Schroon River crossings and the limited amount of state land in the

immediate vicinity of the village. Speculator has somewhat better snowmobile connections to other Adirondack communities, but the large Wilderness areas in the vicinity, including the West Canada Lake Wilderness to the north and west, the Siamese Ponds Wilderness to the north and east, and the Silver Lake Wilderness to the south, somewhat limit the number of snowmobile routes that lead to Speculator. As such, providing a snowmobile connection between Warrensburg and Speculator is an achievable goal that would serve to help realize the vision of the Snowmobile Plan and benefit the local communities involved without compromising the Wild Forest ideals laid out by the APSLMP.

Eastern Part of the Warrensburg to Speculator Connection - Warrensburg to Baldwin Spring
Basically, three alternatives, a northern, middle, and southern route, were considered for linking Warrensburg to Baldwin Spring (the trail hub at the center of the WLWF), but all lack an ideal snowmobile crossing of the Hudson River. Currently, there are two automobile bridges crossing the Hudson River in the vicinity of Warrensburg, one on NYS Route 418 south of Warrensburg at Thurman Station and one on NYS Route 28 north of Warrensburg at The Glen. Of these two bridges, the Rte. 418 bridge is the choice of local snowmobilers due to its lower traffic volume and proximity to connections to the local snowmobile trail network; subsequently the local snowmobile club has arranged an agreement to cross this bridge.

Alternative 1 (Southern) – From the Rte. 418 bridge, an already existing network of snowmobile trails on private lands in the Towns of Thurman and Stony Creek connects the Delaware & Hudson railroad tracks (currently open to snowmobile traffic) on the west bank of the Hudson River to Tucker Road in the Town of Stony Creek. The route formerly followed Tucker Road west and then turned northward across private lands, south of Baldhead Mountain. Because the owners of a private parcel along this route no longer wish to allow snowmobile traffic across their property and the local snowmobile club could not secure a connection across other private lands in the vicinity, a new trail across Forest Preserve land paralleling Kidder Brook (approximately 0.9 miles) has been proposed to avoid the private land along Tucker Road and provide a lasting solution to the problem. This new trail then reconnects to the existing trail network on private land near the northern end of Van Auken Road, continues westward across private lands to Wolf Pond Road, and eventually joins West Stony Creek Road, re-entering Forest Preserve land. The unplowed West Stony Creek Road provides an excellent snowmobile trail from this point westward to Baldwin Spring.

Advantages:
- This is the most direct route to Baldwin Spring from Warrensburg.
- The local snowmobile club endorses this route
- This route uses the Rte. 418 bridge which is the most desirable crossing of the Hudson River at this time.
- The trail connection from D & H railroad tracks to Forest Preserve land across private land has already been established by the local snowmobile club.
- The West Stony Creek Road is already designated for snowmobile use. Because the road is not maintained in the winter, vehicle traffic other than snowmobiles is extremely limited.
- The Town of Thurman maintains the West Stony Creek Road, meaning less maintenance

responsibilities for the Department.
- Because much of the route is on West Stony Creek Road, actual impacts on Forest Preserve lands are minimal.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.

Disadvantages:
- The route requires approximately 0.9 miles of new snowmobile trail construction on Forest Preserve land.
- The West Stony Creek Road is open to ATV traffic in the winter months creating potential user conflicts.
- The West Stony Creek Road passes through potential deer wintering habitat, as identified by Adirondack Ecological Center staff, east of Baldwin Spring.

Alternative 2 (Middle) – From the Rte. 418 bridge, this route uses trails on private lands in the Towns of Thurman to connect to the WLWF trail network at Mud Pond Road in the Town of Thurman. From this point, the route continues to the end of the road, then follows the Round Pond Trail, around and/or across Round Pond to Garnet Lake. From Garnet Lake, the route uses the Lizard Pond Trail to reach Baldwin Spring.

Advantages:
- No occurrences of protected plants or animals have been identified in the vicinity of the route.
- The route will pass the lean-to at Lizard Pond, providing an opportunity for overnight use.
- The route is generally more scenic than the southern alternative with potential views of Crane Mountain, Ross Mountain, and Mount Blue.
- The route uses the Rte. 418 bridge.

Disadvantages:
- The route requires the crossing of one frozen water body, Garnet Lake.
- The route requires the construction of a 0.6 mile trail connecting the two sections of the Round Pond Trail to avoid an ice crossing of Round Pond.
- The route is somewhat longer than Alternative 1.
- The Round Pond Trail and Lizard Pond Trail are generally narrow, rough, winding, and often have a limited sight distance, making the snowmobiling slow and occasionally unsafe.
- The Lizard Pond Trail passes through potential deer wintering habitat.

Alternative 3 (Northern) – The northern alternative's route through the private lands west of the Hudson River is not well-established. Currently, the Department is in negotiations to buy a small piece of Lyme Timber Company land (as part of a larger land deal) north of the Glen Creek Road. From the D & H railroad tracks, this piece and its access road from Route 28 could form the easternmost segment of the northern alternative. From the point where the trail exits this parcel, the route across private lands is unclear but would presumably enter Forest Preserve again in the vicinity of Armstrong Road. From here, the route uses the proposed Old Armstrong

Road Trail to reach Bartman Road, which is followed southward, eventually becoming the Bartman Trail and leading to Baldwin Spring.

Advantages:
- No occurrences of protected plants or animals have been identified in the vicinity of the route.
- The Bartman Trail and Old Armstrong Road are generally in good condition.

Disadvantages:
- There is no good snowmobile crossing of the Hudson River in the vicinity of the route although the railroad tracks on the west side of the Hudson provide a good connection to the Rte. 418 bridge at this time.
- This route requires the designation of 1.1 miles of Old Armstrong Road as a snowmobile trail.
- There is no established route across private lands between the Lyme Timber parcel and Old Armstrong Road.
- The route is significantly longer than Alternative 1.
- The Bartman Trail passes through potential deer wintering area.

Table 1. Comparison between the three alternatives for the Warrensburg to Baldwin Spring section (eastern section) of the trail to facilitate snowmobile access between Warrensburg and Speculator.

Alternative	**Total Mileage (Estimated)**	**Total Trail Mileage in the WLWF**	**New Trail Mileage in the WLWF**
Alternative 1 (Southern)	23.1	1.2	0.8
Alternative 2 (Middle)	26.3	7.3	0.6
Alternative 3 (Northern)	33.4	6.9	1.1

Conclusion – It is clear that the southern route is the preferred alternative for the eastern portion of the trail to facilitate snowmobile access between Warrensburg and Speculator. The local snowmobile club, the Thurman Connection, supports this route and has worked hard to secure the connections through private lands in the Town of Thurman to connect with the West Stony Creek Road. The West Stony Creek Road provides a wide, high quality snowmobile route that does not have the associated maintenance costs for the Department that designated snowmobile trails have. Additionally, the Route 418 bridge (nearer to the southern alternative) currently makes the best crossing of the Hudson River in the vicinity of Warrensburg. Although this alternative requires 0.9 miles of new trail construction on Forest Preserve land in the vicinity of Baldhead Mountain, closure of snowmobile trails elsewhere in the unit ensures that there will be "no material increase" in snowmobile trail mileage in the unit. Although the middle alternative

has the least amount of new trail construction in the unit, it has several disadvantages that make it impractical as part of the trail to facilitate snowmobile access between Warrensburg and Speculator. The primary drawback of the route is that it relies on an ice crossing of Garnet Lake. It is against Department policy to support trails that cross water bodies when feasible alternatives exist elsewhere. Secondary drawbacks of this alternative include the lack of an established route through private lands between Warrensburg and Mud Pond Road and the narrow, winding nature of the Round Pond and Lizard Pond Trails. The main drawbacks of the northern alternative are the lack of an established route through private land between the Lyme Timber Company parcel and Old Armstrong Road and its overall length – at over 33 miles, the northern alternative is substantially longer than the other two alternatives.

Western Part of the Warrensburg to Speculator Connection - Baldwin Spring to Speculator
West of Baldwin Spring, four major alternative routes were considered for the trail to facilitate snowmobile access between Warrensburg to Speculator. The most direct of these routes (Alternative 1) heads westward through the WLWF to Route 8 at Griffin, where it exits the unit. From Griffin, the route crosses the East Branch of the Sacandaga River on the Teachout Road bridge and continues through the Forks Mountain Primitive Area corridor, following existing trails to Speculator. Alternative 2 would utilize a newly constructed trail parallel to Route 8 across the unit's lands south of Griffin to the Route 8 bridge over the East Branch of the Sacandaga River. The route would cross the bridge and use either the Route 30 right-of-way or the Dunning Pond Trail (currently slated for closure in the Jessup River Wild Forest (JRWF) UMP) to reach Speculator. The last two alternatives (Alternatives 3 and 4) would link to Speculator via Wells; the primary difference between the alternatives is the path used to get from Baldwin Spring to Wells. Both of these routes could exit the unit near Dorr Road in the Village of Wells or near Pumpkin Hollow Road, south of the Village of Wells. Included in all these alternatives except Alternative 4 is a segment of new trail parallel to Route 8 north of Griffin. This new trail section would replace the existing Cotter Brook Trail which is too rough for continued use. When this new trail is opened, the Cotter Brook Trail will be closed to snowmobile traffic.

Evaluation of these alternatives requires not only considering the appropriateness of the routes themselves, but also examining other factors such as the connectivity to the trails outside the unit, minimizing the amount of new trail construction, and existing regulatory constraints, among other things. For example, while Alternative 1, which uses the Forks Mountain Primitive Area corridor snowmobile trail, is already established and probably represents the most direct connection between Warrensburg and Speculator, the APSLMP strongly encourages the relocation of this trail, stating that

> "*This area in the town of Wells includes the fifty-foot wide corridor of the snowmobile trail which cuts across the southern tip of the Siamese Ponds Wilderness between the Teachout Road on the East Branch of the Sacandaga and the state land boundary on the Sacandaga River. Efforts should be made to relocate the important trail in the Hamilton County snowmobile trail system so that this area can become part of the wilderness area.*"

As a result, the preferred route to connect Warrensburg to Speculator may ultimately go through Wells to comply with the APSLMP. Unfortunately, from Wells, no good trail connection exists to Speculator at the present; the current trail uses a combination of NYS Department of Transportation shoulders along NYS Route 30, unplowed town roads, and private lands and is considered unsuitable for a trail of this type due to safety concerns, maintenance problems, and conflicts with public motor vehicle use of the highway. A better trail connection between Wells and Speculator, described in the JRWF UMP, would have to be established before the Forks Mountain Primitive Area could be eliminated. Alternatively, the Forks Mountain Primitive Area and the Wilderness land to the south of it could be permanently designated as Wild Forest, eliminating the need to relocate this section of trail. However, this UMP cannot be the vehicle for such a reclassification.

Alternative 1 – This alternative perpetuates the use of the Forks Mountain Primitive Area corridor and the existing trails beyond the primitive corridor to connect with Speculator. From Baldwin Spring, the route follows the Oregon Trail west to the junction with the Cod Pond Trail. From here, the route turns south on the Cod Pond Trail and continues south along the Georgia Creek-Moose Mountain Trail. From the Georgia Creek-Moose Mountain Trail, the route continues south on a new trail parallel to Route 8 (0.3 miles of which is over private lands, contingent upon permission from landowners) to connect to the Girards Sugarbush Trail. From the Girards Sugarbush Trail, the route follows the Griffin Connector Trail to abandoned hamlet of Griffin. In Griffin, the route uses the Teachout Road bridge to cross the East Branch of the Sacandaga River and continues through the Forks Mountain Primitive Area corridor and across the Lyme Timber Company Speculator Tree Farm property via easement.

Advantages:
- This route uses already established snowmobile trails west of the unit's boundary.
- The Teachout Road bridge provides an excellent crossing of the East Branch of the Sacandaga River and is currently the only snowmobile crossing of the river north of Wells.
- The Oregon Trail is in relatively good condition.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.

Disadvantages:
- The APSLMP strongly discourages the continued use of the Forks Mountain Primitive Area corridor for a snowmobile route.
- The route requires approximately 1.3 miles of new snowmobile trail construction parallel to Route 8 including 1.0 miles on Forest Preserve.
- This route has no intermediate stopping point for refueling.
- The Oregon Trail passes through potential deer wintering habitat.

Alternative 2 – This connection would use the same route as Alternative 1 until the hamlet of Griffin. Rather than use the Teachout Road bridge and Forks Mountain Primitive Area corridor, this alternative would head south from Griffin on a newly constructed, 2.4-mile trail parallel to Route 8 and cross the Sacandaga River on the Route 8 bridge. From this point, the route would

either follow the Route 30 right-of-way to Speculator or continue south to intersect with the Dunning Pond Trail in the Jessup River Wild Forest.

Advantages:
- This route eliminates the need for the Forks Mountain Primitive Area, allowing this area to be reclassified as Wilderness.
- The Oregon Trail is in relatively good condition.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.
- The route parallels Route 8 for much of its length in the WLWF, meaning that in the case of a snowmobile breakdown, the stranded snowmobiler would not have to travel far for assistance.

Disadvantages:
- The JRWF UMP proposed the closure of the Dunning Pond Trail to snowmobiles, while the other alternative, the Route 30 shoulder, is not suitable for a trail of this type.
- The route requires approximately 3.7 miles of new snowmobile trail construction in the WLWF parallel to Route 8.
- The Rte. 8 bridge is not an appropriate crossing of the Sacandaga River for a trail of this type. This bridge has fairly heavy traffic volume and reasonably limited sighting distance.
- This route has no intermediate stopping point for refueling.
- The Oregon Trail passes through potential deer wintering habitat.

Alternative 3 – This alternative involves the same route recommended for Alternative 1 and 2 until the junction of the proposed new trail parallel to Rte. 8 and the Girards Sugarbush Trail near Griffin. At this point, instead of following the Griffin Connector Trail, Alternative 3 would continue along the Girards Sugarbush Trail to the Pine Orchard Trail, continuing southward to Dorr Road, skirting the private in-holding(s) at the northwest end of the road using existing trails or short segments of new trail construction. From this point, permanent routes through private land from Dorr Road to Wells need to be established by the snowmobile clubs before this route could be considered as an acceptable connection. Currently, several landowners south of Dorr and Windfall Roads do not allow snowmobile access across their property. As a result, snowmobile traffic has been forced to use Windfall Road between the intersection of Dorr and Windfall Roads and Buttermilk Hill Road. Because this section of Windfall Road, in addition to being paved and plowed, is narrow, winding, and steep, it creates unsafe conditions for both snowmobiles and motor vehicles.

As previously mentioned, from Wells, the current route to Speculator is not desirable and is unsuitable for a trail to facilitate snowmobile access between Warrensburg and Speculator. To remedy this situation, the Town of Wells supervisor and DEC staff have developed a plan for the relocation of the existing Dunning Pond snowmobile trail (within the JRWF) in order to provide a safe and enjoyable snowmobile connection between the communities of Wells and Speculator. This trail, proposed in the JRWF UMP, begins in the Village of Wells, and proceeds northwesterly over private lands and/or Niagara Mohawk property along an existing utility

ROW, eventually intersecting Gilmantown Road in the vicinity of Gilman Lake. From the powerline, the trail continues northwesterly a short distance along the road ROW to reach the entrance of an old woods road. No land in the JRWF is crossed to this point. Because the Town of Lake Pleasant opposes the designation of the Gilmantown Road for snowmobile use, a new snowmobile trail in the JRWF will be designated on the existing old road for a distance of approximately 2.5 miles to the Lyme Timber Company property line. Pending a trail easement over Lyme Timber Company lands, the trail will continue on existing Lyme roads to the Burnhams Mill bridge (the closed Old Route 30 bridge approximately 3.5 miles north of the intersection of Routes 8 and 30). From this point, the trail utilizes the existing snowmobile trail into Speculator.

The proposed Dunning Pond-Lyme Timber Company trail relocation in the JRWF combined with utility line ROW and private land connections will provide an adequate route between Wells and Speculator by bypassing the existing sections of trail with the most problems, namely along Rte. 30. The ability to entirely use routes parallel and near to travel/transportation corridors, while a goal of the Snowmobile Plan for the Adirondack Park, is not feasible at this location. The existing NYS Route 30 roadside trail section between Wells and the Burnhams Mill bridge stays almost entirely within the DOT road ROW requiring a snowmobile rider to traverse numerous obstacles including guard rails, metal signs, and sidehill banks. To safely accommodate its use as a trail designed to facilitate snowmobile access between communities, the trail would have to be relocated farther back from the road edge. However, large areas of rocky, steep sidehill terrain limit the ability to construct an adequate trail without a large degree of terrain modification to both State and adjoining private lands.

Advantages:

- This route eliminates the need for the Forks Mountain Primitive Area, facilitating the reclassification of this area as Wilderness.
- This route would pass through the Village of Wells, creating a possible economic benefit for the community and giving snowmobilers a chance to stop for refueling and refreshment.
- The existing trails in the WLWF used in this route are in relatively good condition.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.

Disadvantages:

- The route requires approximately 1.3 miles of new snowmobile trail construction parallel to Rte. 8, including 1.0 miles on Forest Preserve.
- Because of terrain constraints, there are a limited number of potential routes between Dorr Road and Wells. However, the majority of these potential routes have been eliminated because several private landowners in this area do not allow snowmobile access across their property.
- Because a snowmobile connection has not been secured across private lands in this area, the current route between Dorr Road and Wells requires use of a section of plowed road which is steep, winding, and narrow, making it unsafe.
- The only available crossing of the Sacandaga River in the vicinity of this route is the Rte. 30

bridge in Wells. This crossing receives substantial vehicle traffic and is not well-suited for snowmobile traffic.
- The current route between Wells and Speculator is unsuitable for a trail connection of this type.
- The proposed future route between Wells and Speculator relies on the approval of the JRWF UMP and requires approximately 2.5 miles of new snowmobile trail construction in the JRWF.
- This route passes through potential deer wintering habitat, especially the Oregon Trail, Girards Sugarbush Trail, and the Pine Orchard Trail.

Alternative 4 – This connection would be similar to Alternative 3, but would utilize a different route to reach the Pine Orchard Trail in the vicinity of Dorr Road. From Baldwin Spring, the route heads south on West Stony Creek Road, which becomes the Arrow Trail south of the Dog'n Pup Club. At the intersection of the Arrow Trail and Bakertown Road, the route follows the road westward to the junction with the Wilcox Lake Trail and then continues westward along the Wilcox Lake-Willis Lake Trail to Pumpkin Hollow Road. From this point, a short stretch of road is used to reach the Pine Orchard Trail, which is followed northward to Dorr Road. From here, the route described in Alternative 3 is used to reach Wells.

Advantages:
- This route requires no new trail construction in the WLWF.
- This route passes Wilcox Lake and its two lean-tos, allowing for potential overnight use.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.
- This route passes through the Village of Wells, creating a possible economic benefit for the community and giving snowmobilers a chance to stop for refueling and refreshment.

Disadvantages:
- The Arrow Trail is in poor condition.
- Because of terrain constraints, there are a limited number of potential routes between Dorr Road and Wells. However, the majority of these potential routes have been eliminated because several private landowners in this area do not allow snowmobile access across their property.
- Because a snowmobile connection has not been secured across private lands in this area, the current route between Dorr Road and Wells requires use of a section of plowed road which is steep, winding, and narrow, making it unsafe.
- The only available crossing of the Sacandaga River in the vicinity of this route is the Rte. 30 bridge in Wells. This crossing receives substantial vehicle traffic and is not well-suited for snowmobile traffic.
- The current route between Wells and Speculator is unsuitable for a trail connection of this type.
- The proposed future route between Wells and Speculator relies on the approval of the JRWF UMP and requires approximately 2.5 miles of new snowmobile trail construction in the JRWF.

- This route passes through potential deer wintering habitat, including along the Arrow and Wilcox Lake-Willis Lake Trails.

Alternate Route from the Pine Orchard Trail to Wells for Alternatives 3 and 4 – An alternative to the route described in Alternatives 3 and 4 exists for reaching the Village of Wells from the Pine Orchard Trail. Rather than leaving the Pine Orchard Trail near Dorr Road, this alternate route crosses Pumpkin Hollow Road and uses a short stretch of the Murphy-Middle-Bennett Lakes Trail to skirt private lands. From this point, a proposed new trail parallel to Pumpkin Hollow Road through private and Forest Preserve lands would link to the road network in the Sacandaga Public Campground. (Trails will not be placed on private land without the permission of the private landowner). The route then follows the unplowed campground road northwest, using the existing bridge across the East Branch of the Sacandaga Road. From the boundary of the campground, the route continues north (contingent upon permission from any private landowners involved) on or parallel to Karuth Road into the Village of Wells. From Wells, the Wells to Speculator connection described in Alternative 3 would be used.

Advantages:
- This route takes advantage of the bridge over the Sacandaga River in the Sacandaga Campground, eliminating the need to use the Rte. 30 bridge near Wells.
- This route avoids the problems associated with the Dorr to Wells connection.
- No occurrences of protected plants or animals have been identified in the vicinity of the route.

Disadvantages:
- The route across private lands required for this alternative is not currently established.
- This route requires 1.1 miles of new snowmobile trail on Forest Preserve lands, including 0.6 miles of new trail construction and 0.5 miles of trail designation of an old wagon road and utility right-of-way.
- This route might require the crossing of many privately-owned parcels in the Hamlet of Wells.
- The route passes through potential deer wintering habitat.

Table 2. Mileage comparison of the six alternatives for the western section (Baldwin Spring to western boundary of the WLWF) of the trail to facilitate snowmobile access between Warrensburg to Speculator.

Alternative	**Total Trail Mileage in the WLWF**	**New Trail Mileage in the WLWF**
Alternative 1	11.3	1
Alternative 2	13.7	3.4
Alternative 3a (Dorr Road connection to Wells)	16.7	1

Alternative 3b (Pumpkin Hollow Road connection to Wells)	22.3	2.1
Alternative 4a (Dorr Road connection to Wells)	14.2	0
Alternative 4b (Pumpkin Hollow Road connection to Wells)	12.3	1.1

Conclusion: Based on the discussions and conclusion outlined in the JRWF UMP regarding the Wells to Speculator connection, the Department is moving forward with a plan to follow the APSLMP recommendations to close the Forks Mountain Primitive Area snowmobile corridor and facilitate the reclassification of this area as part of the Siamese Ponds Wilderness Area. For this reason, Alternative 1, which includes the continued use of the Forks Mountain Primitive Area, was not considered a feasible long-term solution for the Baldwin Spring to Speculator portion of the trail to facilitate snowmobile access between Warrensburg and Speculator, despite the benefits associated with the route.

Alternative 2 is also problematic. The biggest drawback of the route is the amount of new trail construction that it requires; constructing 3.7 miles of new trail results in the need for substantial trail closures elsewhere in the unit to comply with the "no material increase" guideline of the APSLMP. Additionally, the Rte. 8 bridge might need significant alteration to make it suitable for both automobile and snowmobile traffic. Additionally, this route requires the use of the Rte. 30 shoulder from the intersection of Rte. 8 to the Burnhams Mill bridge.

If Alternatives 1 and 2 are considered to be unacceptable, the preferred choice between Alternatives 3 and 4 is Alternative 3. Alternative 4 requires the use of the Arrow Trail which at present is in extremely poor condition, especially at the southern end. Additionally, portions of the Wilcox Lake-Willis Lake Trail are in need of rerouting and a new bridge is required over the Wilcox Lake Outlet. It is uncertain as to when such improvements will be made considering the competing demands for DEC funding. Although Alternative 3 requires new trail construction along Rte. 8 between the Georgia Creek-Moose Mountain Trail and the Girards Sugarbush Trail, this mileage is offset by snowmobile trail closures recommended by this UMP in other parts of the unit.

After considering the two alternative routes of reaching the hamlet of Wells from the Pine Orchard Trail at Dorr Road, the second alternative of using the trail connections parallel to Pumpkin Hollow Road and crossing the Sacandaga River on the Sacandaga Campground bridge to reach Wells was deemed to be preferable. The alternative of crossing the Sacandaga River on the Rte. 30 bridge was considered unacceptable in light of the high volume of vehicle traffic on this bridge. Without significant alterations to make it suitable for safely accommodating both automobile and snowmobile traffic, the Rte. 30 bridge is inappropriate for a high volume, snowmobile connector trail. Although the Pumpkin Hollow connection requires more new snowmobile trail designation in the unit, much of this new trail mileage is on existing, non-

designated trail and utility right-of-way. Additionally, private land near Dorr Road make off-road trail connections in this area difficult.

Preferred Ultimate Alternative - Warrensburg to Speculator Connection
Based on the conclusions discussed above, the preferred alternative for the trail to facilitate snowmobile access between Warrensburg and Speculator will ultimately use the southern route between Warrensburg and Baldwin Spring and then continue to Speculator via the Village of Wells. Within the WLWF, the route uses a short stretch of new trail along Kidder Brook south of Baldhead Mountain, the West Stony Creek Road, the Oregon Trail, the Moose Mountain-Georgia Creek Trail, a new stretch of trail paralleling Rte. 8, the Girards Sugarbush Trail, the Pine Orchard Trail, a short stretch of the Middle-Murphy-Bennett Lakes Trail, and a new trail on Forest Preserve paralleling Pumpkin Hollow Road. The route leaves the unit in the vicinity of Pumpkin Hollow Road and uses the roads and bridge in the Sacandaga Campground to cross the Sacandaga River and reach the Village of Wells. From this point, the route will use the mix of private and public lands described in the JRWF UMP to reach Speculator.

Preferred Interim Alternative - Warrensburg to Speculator Connection
Recognizing that efforts to secure agreements and/or easements to use private lands and utility rights-of-way for the preferred ultimate alternative will take some time, the Forks Mountain Primitive Area corridor should remain open in the interim to provide an adequate snowmobile trail connection between Warrensburg and Speculator.

Within the WLWF, the interim route would use essentially the same route recommended for the ultimate preferred route described above. The divergence from the ultimate preferred route would occur at the Girards Sugarbush Trail - Griffin Connector Trail junction. Rather than continuing southeast on the Girards Sugarbush Trail, the interim route would follow the Griffin Connector Trail to the Village of Griffin. Using the Teachout Road bridge to cross the East Branch of the Sacandaga River, the route would continue west to the Forks Mountain Primitive Area corridor and then follow existing snowmobile trails across public and private lands to Speculator.

The trails along this route are in reasonably good condition, with some minor reroutes and bridge work that have been identified as proposed management actions. New trail construction along Route 8 will be necessary for approximately one and one-third mile. Since the trail will follow parallel to the road, tree cutting will be limited. New trail will also be designed to limit potential vehicle-snowmobile impacts and other obstacles that can be experienced along other existing trails adjacent to roads and highways, such as the Route 30 trail. With these improvements and good trail maintenance practices, the preferred interim route will not significantly impact the environment or character of WLWF, will provide a safe and enjoyable snowmobiling experience, and will achieve a linkage between two communities that may promote economic development and tourism.

3. Wells to Northville – Alternatives Discussion *(see Appendix L for maps)*

Existing Conditions

Wells and Northville are both small hamlets on the western periphery of the WLWF separated by approximately 15 miles along NYS Route 30. Both villages receive a fair amount of snowmobile traffic; Northville's location on the west end of Great Sacandaga Lake makes it highly accessible by snowmobile when the lake is frozen while Wells receives snowmobile traffic from Speculator and will, with the implementation of this UMP, be an intermediate stop on the trail to facilitate snowmobile access between Warrensburg and Speculator. However, despite the close proximity of Wells and Northville, a satisfactory overland snowmobile connection between the two communities does not exist.

Currently, snowmobilers from Northville have no direct designated trails connecting Great Sacandaga Lake to points north. A snowmobiler would have to travel almost ***70 miles*** via the Towmantown Trail through Bleecker and into Caroga, then head north to Arietta, Lake Pleasant, and Speculator to get to Wells. While alternatives exist to trailer one's snowmobile to either the Murphy-Middle-Bennett Lakes Trailhead on Creek Road or the East Stony Creek Trailhead (Brownell Camp) on Hope Falls Road, a direct, dedicated snowmobile connection between Northville and Wells makes sense from a practical, economic, and safety perspective.

Because of this lack of an adequate snowmobile connection between Wells and Northville, the development of a connection between these two communities was identified and agreed upon as a priority by the stakeholders involved in the preparation of the Snowmobile Plan for the Adirondack Park. The development of a trail to facilitate snowmobile access between Wells and Northville was deemed to be an important component of this UMP.

Alternative 1

From Wells, the route for Alternative 1 heads south via private lands, utility rights-of-way and/or Karuth Road to connect with the road system in the Sacandaga Campground, taking advantage of the campground's bridge over the Sacandaga River. After exiting at the southern end of the campground, the route crosses Route 30 and traverses private lands and utility rights-of-way , taking advantage of the Pumpkin Hollow Road bridge over Coulombe Creek, before entering the WLWF on the western side of Pumpkin Hollow Road. Once in the unit, the route follows a utility right-of-way for a short distance before crossing Pumpkin Hollow Road and proceeding along an old wagon road paralleling the Forest Preserve boundary to the southeast. After about 0.3 miles, the route turns northeast via newly-constructed trail across private land and Forest Preserve parallel to Pumpkin Hollow Road, eventually connecting to the Murphy-Middle-Bennett Lakes Trail. The route then follows this trail south to Creek Road near Hope Falls. The connection to Northville from this point becomes difficult due to private land and steep terrain. Alternative 1 runs northwest along Creek Road for approximately 0.4 miles, then heads southwest across Forest Preserve land on newly-designated trail that follows an old road for 1.2 miles, paralleling a small tributary of East Stony Creek, before reaching the unit's boundary. The route then uses old logging roads across private lands to reach Route 30. After reaching Rte. 30, the trail continues roadside along the east side of Route 30, using a combination of private lands, unimproved roads, utility rights-of-way, and/or ice travel to reach the Village of Northville. Depending on the success of local snowmobile clubs in procuring trail access along the eastern

side of Rte. 30, a future modification of the Rte. 30 bridge over the Sacandaga River may be desirable to allow snowmobilers to take advantage of a more desirable route on the western side of the river.

Total trail mileage in the WLWF for Alternative 1 is 8.6 miles with approximately 2.3 miles of new trail construction/designation in the unit. Trails will not be placed on private land without the permission of the private landowner.

Alternative 2

Alternative 2 only differs from Alternative 1 in that a different route is utilized to reach the Murphy-Middle-Bennett Lakes Trail. From Wells, the route heads east, crossing private lands to eventually join the WLWF trail system in the vicinity of Dorr Road. From this point, the route follows the Pine Orchard Trail south, meeting the Murphy-Middle-Bennett Lakes Trail at Pumpkin Hollow Road. Once on the Murphy-Middle-Bennett Lakes Trail, the route to reach Northville is the same as Alternative 1.

Total trail mileage in the WLWF for Alternative 2 is 11.8 miles with approximately 1.2 miles of new trail construction in the unit. Trails will be not placed on private land without the permission of the private landowner.

Alternative 3

After reaching the Murphy-Middle-Bennett Lakes Trail using the route described in Alternative 1, another possible alternative from the end of the Murphy-Middle-Bennett Lakes Trail at Creek Road is to follow Creek Road to the southeast, across East Stony Creek, to Hope Falls. This segment requires approximately 0.4 miles of new trail construction parallel to Creek Road across either private land, Forest Preserve lands or some combination of the two and will also require crossing East Stony Creek on the Creek Road bridge.

From the Creek Road–Hope Falls Road intersection, Hope Falls Road is followed east for a short distance to a private roadway that heads south into Lyme Timber Company land. The route traverses existing logging roads across Lyme Timber land, where a snowmobile trail easement is being acquired (expected closing 12/2006), southward over Mason Hill toward Northville. After exiting Lyme Timber lands, the route continues across private lands into the village of Northville. This alternative requires less trail construction on Forest Preserve, although the conditions of the roads used to cross the Lyme Timber Company property are unknown and the snowmobile trail easement has not yet been acquired..

Total trail mileage in the WLWF for Alternative 3 is 7.4 miles with approximately 1.1 miles of new trail construction in the unit. Trails will not be placed on private land without the permission of the private landowner.

Alternative 4

Alternative 4 is basically a combination of Alternatives 2 and 3. The Dorr Road – Pine Orchard Trail connection is used to reach the Murphy-Middle-Bennett Lakes Trail. From the southern

end of this trail, the route over Mason Hill is used to reach to reach Northville.

Total trail mileage in the WLWF for Alternative 4 is 10.6 miles with no miles of new trail construction in the unit. Trails will not be placed on private land without the permission of the private landowner.

Alternative 5, 6, 7, 8

Four additional alternatives, comparable to Alternatives 1-4, exist if, instead of using the Murphy-Middle-Bennett Lakes Trail option from Pumpkin Hollow Road, the Wilcox Lake-Willis Lake Trail and East Stony Creek Trail are used. This trail combination connects to Hope Falls Road at the Brownell Camp inholding; from this point, the route continues southward to Hope Falls. However, this route requires the use of either Hope Falls Road or a new trail parallel to the road. At present, the Town of Hope has not designated Hope Falls Road for snowmobile use. Additionally, residents along this road would likely oppose any such designation by the Town and would not be likely to give permission for a snowmobile trail across their lands.

In addition to these concerns, the East Stony Creek Trail is in poor condition and would require significant improvements to function properly as a high-use snowmobile trail. Additionally, the section of this trail between Dayton Creek and Brownell Camp has been proposed for closure due to the poor conditions. Although the trail will remain open for hiking in its current state, alternatives requiring the use of this trail section would not provide a safe and enjoyable snowmobiling experience.

Total trail mileage in the WLWF for Alternative 5 is 12.8 miles with 2.3 miles of new trail construction in the unit.

Total trail mileage in the WLWF for Alternative 6 is 14.8 miles with 1.2 miles of new trail construction in the unit.

Total trail mileage in the WLWF for Alternative 7 is 11.6 miles with 1.1 miles of new trail construction in the unit.

Total trail mileage in the WLWF for Alternative 8 is 13.6 miles with no miles of new trail construction in the unit.

Alternative 9

The alternative of following Route 30 the entire way from Wells to Northville is not considered desirable or viable. The section of Route 30 between Pumpkin Hollow and the bridge traverses mostly private lands. Several segments of this route are steep, making snowmobile travel adjacent to the road corridor dangerous, and in some cases, impossible. There are also concerns about the route crossing front yards of homes that are relatively close to the road along this corridor and utility easements, which can present physical obstacles.

Ultimate Preferred Route - Wells to Northville

Strong consideration was given to Alternatives 1, 2, 3, and 4 as the Wells to Northville Community Connector route. Alternatives 5-8 were not considered desirable because of the poor condition of the East Stony Creek Trail in comparison to the existing Murphy-Middle-Bennett Lakes Trail. In addition, Alternatives 5-8 require use of approximately 3-miles of either the Hope Falls Road or a new trail across private lands parallel to Hope Falls Road, neither of which are considered likely to be permitted. Alternative 9 was not considered appropriate for the reasons described above.

For the reasons described in the Warrensburg to Speculator discussion, it was deemed that the best method of reaching the WLWF trail system from Wells was via the trails in the vicinity of Pumpkin Hollow Road rather than the trails in the vicinity of Dorr Road. Therefore, Alternatives 2 and 4 were eliminated from consideration for this reason.

Choosing between Alternatives 1 and 3 ultimately came down to the amount of new trail construction on Forest Preserve and the connections across private lands required for each alternative. Alternative 1 requires 2.5 miles of new trail construction/designation on Forest Preserve lands and also requires traversing several miles of private land for which no formal easements or agreements are currently in place. Trails will not be placed on private land without the permission of the private landowner. Additionally, Alternative 1 may ultimately require the modification of the Rte. 30 bridge north of Northville, although the necessity of this modification is not known at this time. Alternative 3 requires only 1.3 miles of new trail construction/designation on Forest Preserve land, 1.2 miles less than Alternative 1, and, because of the pending acquisition of the Lyme Timber Hope Falls Tract easement, much of the route across private lands required for this alternative will be secured in perpetuity. For these reasons, Alternative 3 was selected as the preferred route for the trail to facilitate snowmobile access between Wells and Northville.

4. Discussion of "No Material Increase"

The APSLMP requires that there be no *"material increase in the mileage of roads and snowmobile trails open to motorized use by the public in wild forest areas that conformed to the master plan at the time of its original adoption in 1972"*. Further, the APSLMP states that *"the mileage lost in the designation of wilderness, primitive and canoe areas may be replaced in wild forest areas with existing roads or abandoned woods roads as a basis of such new snowmobile trail construction, except in rare circumstances requiring the cutting of new trails*;" and that *"wherever feasible such replacement mileage should be located in the general area as where mileage is lost to wilderness, primitive or canoe classification."*

Prior to the adoption of the APSLMP in 1972, there were at least 64 miles of formally recognized snowmobile trails on the Forest Preserve lands that now constitute the WLWF. This trail mileage gradually increased over the next 30 years to become the 72 miles of snowmobile trails present in the unit today. Following the adoption and implementation of this UMP, the snowmobile trail mileage in the unit will be approximately 60 miles, substantially less (17%) than the pre-UMP mileage and somewhat less (7%) than the existing mileage before the adoption

of the APSLMP. This overall decrease in snowmobile trail mileage results from trail closures intended to 1) reduce redundancy in the unit's snowmobile trail network by eliminating the poorer of two parallel routes, or 2) eliminate isolated trails that have poor access and are not part of the larger trail network. The resulting snowmobile network will provide improved connectivity between nearby communities, benefitting local economies and increasing safety and efficiency. Additionally, reducing overall snowmobile mileage in the unit will allow limited trail maintenance resources to be focused on the most important and desirable trails.

Table 4. Mileage comparisons for snowmobile trails in the Wilcox Lake Wild Forest prior to the adoption of the APSLMP in 1972, prior to the adoption of this UMP, and following the implementation of this UMP.

Snowmobile Trail	**Pre-'72 Mileage***	**Pre-UMP Mileage**	**Post-UMP Mileage**
Arrow Trail	3.9	3.9	3.9
Baldwin Spring Spur	0	0.4	0.4
Bartman Trail	5	5	5
Bartman Junction Trail	2.2	2.2	0
Cod Pond Trail	0.8	0.8	0.8
Cotter Brook Trail	2.6	2.6	0
Davignon Road Extension	0	0.6	0.6
Dorr Road Connector Trail	0	0.3	0.3
Dog 'n Pup Bypass	0	1.7	1.7
East Stony Creek Trail	4	4	0.8
Forks Mountain Primitive Area†**	1	1	0
Georgia Creek-Moose Mountain Trail	4.2	4.2	4.2
Girards Sugarbush Trail***	0	1.7	1.7
Griffin Connector Trail††***	0	1.3	0
Harrisburg Lake-Tenant Lake Trail***	0	1.8	1.8
Indian Pond Trail	1.7	1.7	0
Kidder Brook Trail	0	0	0.9
Kibby Pond Trail	1.3	0	0
Lizard Pond Trail	2.3	3.7	3.7

Louis Waite Road Extension***	0	0.7	0
Madison Creek Trail	2.7	0	0
Murphy-Middle-Bennett Lakes Trail	6.5	7.3	6.8
Old Armstrong Road	0	0	1.2
Old Fodder Brook Road Trail	2.6	2.6	0
Oregon Trail	6	3.1	3.1
Oxbow Trail****	0	1.6	1.6
Pine Orchard Trail	9.3	9.3	9.3
Pumpkin Hollow Trail	0	0	1.3
Round Pond Trail	0.6	3	3.8
Route 8 Trail (Cotter Brook Trail reroute)	0	0	1
Tenant Creek Falls Trail	1.9	1.9	0
Wilcox Lake Trail	0.9	0.9	0.9
Wilcox Lake-Willis Lake Trail	4.6	4.6	5
TOTAL	**64.1**	**71.9**	**59.8**

*Pre-1972 snowmobile trail information found in NYS DEC, 1971, *Snowmobile Trails in New York State* publication.

†Trail cuts across southern extension of Siamese Ponds Wilderness; closure is contingent on implementation of this UMP and the implementation of proposed trails in the JRWF UMP.

**This trail was omitted from the 1971 DEC snowmobile brochure; however, discussion in the APSLMP suggests that this trail was in use prior to the 1972 adoption of the Master Plan, therefore it was included as pre-1972 mileage.

***Although these trails were omitted from the 1971 DEC snowmobile brochure, it is likely that they were in use prior to the adoption of the APSLMP in 1972. However, to be conservative, they were not included as pre-1972 mileage.

††Trail connects the WLWF snowmobile trail network to the Forks Mountain Primitive Corridor; closure is contingent on implementation of this UMP and the implementation of the JRWF UMP.

****although closure of this trail following the acquisition of a permanent snowmobile trail easement across private land at the southern end of the Arrow Trail is a long-term management objective in the unit, to be conservative, its mileage is being counted as post-UMP mileage.

APPENDIX J: ALTERNATIVES DISCUSSION – ROADS

Alternatives for motor vehicle roads within the WLWF are numerous, but plagued with financial, political and practical difficulties. As stated previously, roads and vehicular access are allowable in a Wild Forest setting under APSLMP guidelines. However, the APSLMP dictates that public use of motor vehicles will not be encouraged, there will be no material increase in road mileage, and such use must be compatible with the Wild Forest character of the area. Therefore, although new road construction is not permitted, many alternatives exist for managing the existing motor vehicle roads in the unit including the total number and mileage of roads, their location, type of use, and level of improvement and maintenance.

1. Roads Under DEC's Jurisdiction

The Department is afforded with much greater flexibility in managing roads that are clearly under its jurisdiction. Currently, there are 8 segments of road totaling 5.3 miles in the unit that are clearly under DEC jurisdiction.

Baldwin Spring Spur, Oregon Trail, Bartman Trail (Fish Ponds Road), Lizard Pond Trail
The Baldwin Spring Spur road is the short segment of road that connects West Stony Creek Road to the Baldwin Spring Trailhead and parking area and includes the East Stony Creek ford east of Baldwin Spring. The southern Bartman Trail (Fish Ponds Road), Lizard Pond Trail, and Oregon Trail are all road segments accessed from the Baldwin Spring Trailhead that are currently open to motor vehicle use.

The East Stony Creek ford is currently in poor condition and, due to beaver activity, is safely passable only at times when the water level in East Stony Creek is extremely low. Additionally, the ford represents a location where significant water quality degradation, including vehicle fluid discharges and sedimentation, might conceivably be occurring, although the occurrence and/or extent of these effects at this location has not been studied. Alternatives for public motor vehicle use of the Baldwin Spring Spur road can basically be distilled down to three options: leaving the road open to public motor vehicle use at all times, implementing seasonal or periodic closures of the ford when it is unsafe and environmentally unsound to cross, or permanently closing the road. If the road is left open all the time or seasonally, several alternatives for maintenance exist. These include no maintenance, minor annual maintenance, or a serious reworking of the ford to make it safer. If the road is closed, alternatives exist as to where the road should be closed.

The preferred alternative for the Baldwin Spring Spur road is a permanent closure to motor vehicle use prior to the East Stony Creek ford. This ford represents too great a safety and environmental risk to remain open. Allowing seasonal use of the ford by either the public or qualified persons with disabilities as part of the Oregon Trail CP-3 route was strongly considered. However, the condition of the ford precludes even this limited use. Additionally, from a safety and resource protection perspective, allowing continued use of the ford by one user group (persons with disabilities) while denying use to others makes little sense. While this closure may be unpopular with some users, reasonable alternative access to the Baldwin Spring

area is provided by the snowmobile bridge south of the ford.

The closure of the East Stony Creek ford will eliminate motor vehicle access to the Bartman Trail, Lizard Pond Trail, and Oregon Trail, effectively closing them to this use. Because of the poor conditions and general character of these trails, this result is preferable. The Lizard Pond Trail in particular is unsuited for continued motor vehicle use. It lacks the character of a road which the other two still retain; it is in worse condition; and it no longer appears to be receiving regular use by motor vehicles other than snowmobiles. Motor vehicle use of the last half of this road is probably no longer possible. A substantial investment of Department resources and alteration to the natural landscape would be necessary to bring all of these roads up to acceptable standards. These improvements would benefit relatively few users while allocation of resources to more heavily-used areas in the unit, such as Hadley Mountain or Crane Mountain, would benefit a much greater number of people. Additionally, with the exception of the campsite at North Bend, these road segments do not provide access to any especially interesting or scenic destinations. For persons with disabilities, CP-3 permits will be available to access the Oregon Trail and the southern Bartman Trail (a.k.a. the Fish Ponds Road). (See further discussion in Appendix K). The 0.6-mile Lizard Pond trail will be closed to all public motor vehicle use except snowmobiles.

Bakertown Road, Wilcox Lake Road

The portion of Bakertown Road under the Department's jurisdiction begins after the road exits the Moosewood Club inholding and ends 0.1 miles north of the Wilcox Lake Trail snowmobile bridge. Wilcox Lake Road heads east from Bakertown Road 0.2 miles south of the Moosewood Club inholding, crossing a ford of East Stony Creek and eventually meeting up with the Wilcox Lake Trail atop the hill south of Wilcox Lake.

Based on the extremely poor condition of Wilcox Lake Road, a result of steep grades, highly eroded soils that have led to braiding and gullying, and its frequent use in early spring for fishing access, and safety and environmental concerns surrounding the continued use of the East Stony Creek ford, the road was closed in 2004 and there are no feasible alternatives except to close this road permanently. Steep slopes and heavy use just after frost out preclude any reasonable alternatives for reconstruction and maintenance. Furthermore, foot and snowmobile access is provided to Wilcox Lake via the snowmobile bridge and Wilcox Lake Trail less than 0.5 miles further south. Wilcox Lake Road will be permanently closed with the installation of a permanent rock barrier, placed on the western side of East Stony Creek to prevent removal, and the former roadbed will be revegetated to prevent further soil erosion. Given the popularity of Wilcox Lake for early spring trout fishing and the use of small boats, canoes and other floatation devices, the distance added by the permanent closure of Wilcox Lake Road may preclude some people from using the lake.

As opposed to Wilcox Lake Road, reasonable management alternatives do exist for the Bakertown Road. These alternatives consist of leaving the road open in its current configuration or closing the road at some point south of the Moosewood Club inholding. Closure could occur just beyond the inholding, at the intersection with the Wilcox Lake Road, or at some point

between Wilcox Lake Road and the Wilcox Lake Trail snowmobile bridge. The preferred management alternative is to close the road at the old clearing about halfway between Wilcox Lake Road and the Wilcox Lake Trail snowmobile bridge. Although this alternative eliminates motor vehicle access to a short stretch of road, the clearing provides the best location for the development of a parking area with space to turn around vehicles pulling trailers. It is necessary to provide space for these vehicles with trailers because this parking area will serve as one of the access points for persons with disabilities to the East Stony Creek CP-3 route. The closure of the road beyond this point will be enforced through the installation of a gate at this location.

2. Town Roads

The Department has less flexibility when managing the use of roads in the WLWF over which local towns claim jurisdiction. However, because these roads affect the Forest Preserve and provide the basis for access to the unit in many locations, this plan contains several management actions that propose working with local towns to manage several specific sections of town road that affect the unit.

West Stony Creek Road (The Arrow Trail)
The portion of the Arrow Trail within the Town of Thurman, south of the Dog 'n Pup Club inholding, is currently classified as a town road and thus open to motor vehicle access. However, this section of road provides no useful motor vehicle connection because the portion of the Arrow Trail in the Town of Stony Creek is closed to motor vehicle use. Additionally, this trail is not suited to motor vehicle use and harbors numerous mud holes, other wet spots, and very rough, rocky stretches. Two alternatives exist for this section of road – no change in the current status or working with the Town of Thurman to close the road at some point south of the Dog 'n Pup inholding. The preferred alternative between these two options is to work with the town to close this road segment. The most logical location for this closure is at a small parking area less than 0.1 miles south of the inholding. By maintaining motor vehicle use to this point, reasonable public boating access to East Stony Creek, which becomes a canoeable route south of its confluence with Madison Creek, is preserved and access to the large tract of Forest Preserve is facilitated. Road closure beyond this point is a logical step from the perspective of resource protection and may help to eliminate the potential for illegal ATV use on the Stony Creek section of the Arrow Trail (the Town of Thurman has posted at least some portion of the West Stony Creek Road as open to ATVs from October through April). This closure will be enforced through the installation of a gate south of the parking area. If this closure cannot be agreed upon, the gate will be installed at the town line to prevent unauthorized use beyond this point. In either case, the Town of Thurman will be encouraged to provide timely maintenance to the segment of road open to motor vehicles.

Mud Pond Road
Mud Pond Road is a short road off Garnet Lake Road that formerly provided access to an inholding that is now owned by the state. The road passes through a short stretch of private land after diverging from Garnet Lake Road before entering the Forest Preserve; from that point on, the road is entirely on State land. The Town of Thurman considers the Mud Pond Road to be a

town road to the point where it ends at the former inholding and provides routine maintenance on this section. However, although the road is well-maintained and presents no threat of resource degradation, it provides no useful motor vehicle connection, very little additional access, and the clearing at the current end of the road provides local youth with a potential "party spot." Two management alternatives exist for the Mud Pond Road – no change in the current status or closure of the road at some point between where it enters Forest Preserve and its current terminus.

From the Department's perspective, closure of Mud Pond Road at some point prior to its current terminus is the preferred alternative for several reasons. This road has been posted by the town as open to ATV use between October and April; therefore, closing the road at some earlier point might discourage illegal ATV use in the unit, especially on the Round Pond Trail, a designated snowmobile trail. For example, since the opening of the Mud Pond Road to seasonal ATV traffic, multiple instances of illegal ATV use on the Round Pond Trail have been documented and a illegal ATV trail constructed across Forest Preserve was discovered in the spring of 2005 originating from the eastern end of Round Pond, crossing Cherry Ridge, eventually connecting to Wolf Pond Road. Additionally, if the road was closed to motor vehicles at some point, a primitive tent site could be designated in the clearing at the former inholding. However, under the current configuration, designating a campsite at this location would probably further facilitate the illegal use of this location as a party spot.

The logical location to end motor vehicle access on Mud Pond Road is at the Mud Pond Trailhead. The Department will work with the Town of Thurman to accomplish this closure. If this is agreed to, a barrier will be installed at this location and the parking area may be expanded.

Because Mud Pond Road was probably opened by the town to ATVs without complying with the Vehicle and Traffic Law and this presumably illegal opening is resulting in ATV trespass in the unit, the Department will seek to end ATV use on the section of road within the Forest Preserve if aforementioned road closure cannot be agreed upon. If the town is unwilling to eliminate ATV use on this section of road, the Department may be forced to use a 212 closure order to close the road.

Bakertown Road

Bakertown Road between the hamlet of Harrisburg and the Moosewood Club inholding is considered a town road by the Town of Stony Creek. This road largely passes through Forest Preserve lands and includes a ford of the Harrisburg Lake Outlet, a fairly large stream. While a permanent closure of this ford is not desirable or proposed, a seasonal or periodic closure of this ford is a management alternative that deserves consideration from a safety and resource protection viewpoint. The other alternative at this location is the no action alternative, basically doing nothing. If this ford is seasonally closed, qualified persons with disabilities and members of the Moosewood Club could access the East Stony Creek CP-3 route and Moosewood Club inholding, respectively, on ATVs via the snowmobile bridge at this location. From the Department's perspective, the alternative of a seasonal and/or periodic closure of this ford with possible limited CP-3 ATV access during times when the ford is closed is preferred. This

alternative could be enforced with a gate across the road at the ford and a gate that selectively restricts ATV access to authorized individuals while simultaneously allowing foot traffic on the bridge.

APPENDIX K: ALTERNATIVES DISCUSSION – ACCESS FOR PERSONS WITH DISABILITIES

Given the July 5, 2001 Consent Decree, there is no legal alternative to the provision of motorized access to the recreational programs offered by the WLWF for persons with disabilities. However, although the Consent Decree required that the Arrow Trail be designated and upgraded to accommodate users with disabilities (in automobiles or on ATVs), this proposal presents significant practical difficulties. The trail surface is very rough with numerous wet areas and protruding rocks and occasional steep slopes are encountered throughout the 3.9-mile length of the trail. Therefore, it would be extremely difficult to bring the Arrow Trail up to acceptable standards for use by persons with disabilities, even on ATVs, without a large investment of financial resources and a potentially significant impact to the unit's Wild Forest character. Similar problems exist with the Upper Fish Ponds trail (the northern portion of the Bartman Trail). Steep grades (as much as 24%), rugged trail conditions, and numerous stream and wet area crossings would necessitate changes to the trail that would likely result in a significant change in the character of the trail.

Consequently, recognizing the difficulties associated with the Arrow Trail, the substitution of an alternative accessible route within the WLWF was agreed to by the plaintiffs, defendants, and intervener-defendants in the case. This route, the East Stony Creek Trail from the end of Bakertown Road to Dayton Creek, along with the Roosevelt Truck Trail CP-3 route in the Vanderwhacker Mountain Wild Forest, replace 3 miles of CP-3 road lost with the exclusion of the Arrow Trail from the agreement. The East Stony Creek Trail CP-3 route will be much easier to maintain to appropriate ATV standards and presents fewer potential maintenance and user conflict problems than the Arrow Trail. In addition, this route provides a better opportunity to develop access to DEC recreational programs than the Arrow Trail, including a proposal to provide a camping opportunity through the construction of an accessible lean-to at a level site near Dayton Creek.

In addition to the East Stony Creek trail, several other opportunities to provide recreational program access for persons with disabilities exist in the WLWF, including the roads originating from the Baldwin Spring trailhead – the Oregon Trail from Baldwin Spring to North Bend and the Fish Ponds Road (southern Bartman Trail) for one mile north of Baldwin Spring. Following the closure of these roads to public motor vehicle access (discussed in Appendix J), it is proposed that they be designated as CP-3 routes to provide access for persons with disabilities to recreational programs. The Lizard Pond Road, also in this area and proposed for closure, was also considered for designation as a CP-3 road for use by people with disabilities via ATV, but was considered less than ideal for this use. It no longer appears to be receiving regular use by motor vehicles other than snowmobiles, and hence, it lacks the character of a road. A substantial investment of Department resources and alteration to the natural landscape would be necessary to bring the road up to acceptable standards and would likely result in a significant change in the character of the area. It also does not add much in terms of access to Department programs (e.g, hunting, camping, fishing, etc.). It is only 0.6 miles in length and accesses areas that are similar to the areas accessed by the other two roads.

For all of these proposed CP-3 access routes— the lower Fish Ponds Road (southern Bartman Trail), the East Stony Creek Trail, and the Oregon Trail—alternatives exist as to what type of CP-3 use will be allowable and where CP-3 access will begin and end.

East Stony Creek Trail

The East Stony Creek Trail is a former road that is now designated as a snowmobile trail. It connects the southern end of Bakertown Road and the northern end of Hope Falls Road and parallels East Stony Creek for much of this length. Existing and future opportunities for recreational program access along this route include fishing at Dayton Creek, camping at a proposed accessible lean-to near Dayton Creek, and hunting along the entire length of the route. As previously stated, this route provides the best opportunity in the unit to replace a portion of the CP-3 mileage lost when it was realized that the Arrow Trail was not an appropriate venue for a motorized access route. Recognizing that the East Stony Creek Trail has been formally agreed upon as part of a suitable replacement for the Arrow Trail, there are several alternatives that exist addressing the type of use and location of that use that will be permitted on this route. As discussed, public motor vehicle use on Bakertown Road will end at the old clearing midway between Wilcox Lake Road and the Wilcox Lake Trail snowmobile bridge with the implementation of this UMP (Appendix J). From this point south, motor vehicle access will be limited to qualified persons with disabilities.

On this CP-3 route, access could take the form of full-sized automobiles or ATVs or a combination of the two (although not on the same stretch of road under the Department's interpretation of NYS law). The first alternative is to make the entire route, from the end of Bakertown Road to Dayton Creek, open to automobiles only. The second alternative is to make the entire route open to only ATVs, with parking spots for vehicles with ATV trailers furnished at the end of Bakertown Road. The third alternative is to make the first part of the route open only to automobiles, with the second part of the route open only to ATVs. This alternative will require the provision of another parking area at the intermediate point where the mode of access changes from automobiles to ATVs.

The preferred alternative for the East Stony Creek Trail CP-3 route is to make the entire route open only to ATVs. Although this option will require furnishing a parking area with two accessible spaces that will accommodate vehicles with ATV trailers at the end of Bakertown Road, it avoids the necessity of providing a parking area at the Dayton Creek lean-to site (necessary with Alternative 1) or an intermediate parking area (Alternative 3). Alternative 2 was preferred over Alternatives 1 and 3 because automobiles generally cause more environmental impact due to their greater size and weight and require a higher level of road maintenance than ATVs, all else being equal, potentially resulting in a greater impact to the Wild Forest character along this route.

Oregon Trail, Southern Fish Ponds Road (Bartman Trail)

Segments of the Oregon Trail and the Fish Ponds Road (southern Bartman Trail) are DEC roads currently open to public motor vehicle use. Because of the longstanding public motorized vehicle access to these roads, they all have long histories of traditional use, dating back to the early era

of automobiles. Even today, although access is often complicated by high water levels at the East Stony Creek ford, several hunting parties every year continue to drive in and use roadside primitive tent sites accessed by these roads as base camps during big game season, much as they have for decades. However, due to resource protection and public safety concerns, public automobile access to these roads via the East Stony Creek ford is proposed to be eliminated as part of this UMP.

CP-3 use of the Oregon Trail and Fish Ponds Road by qualified persons with disabilities presents a good opportunity to maintain recreational program access to this area of the WLWF for a historically under-served user group. While the threat of significant resource impacts precludes continued public automobile use of these roads (see Appendix J), some regulated motorized access by persons with disabilities will serve to substantially minimize those impacts as compared to unregulated general public use. Because the number of CP-3 users on these routes will be limited, seasonal restrictions on use during periods of wet weather will be easier to enforce. Numerous existing and proposed opportunities for access to recreational programs for persons with disabilities along these routes; the opportunities include camping at the terminus of each route, hunting along the entire length of the routes, and fishing at Stewart Creek.

Reasonable alternatives exist for the type and location of motorized access for persons with disabilities on these trails. Alternative 1 is to have CP-3 users park their automobiles at an area east of the ford, and then cross the ford and traverse the routes on ATVs. This alternative requires the provision of a parking area east of the ford with two accessible parking spots for vehicles with trailers and enough space to turn these vehicles around. Alternative 2 is to make both CP-3 routes open in their entirety to automobiles (high-clearance, four-wheel-drive trucks and SUVs) only. While this alternative eliminates the need for any special parking arrangements east of the ford, it also requires maintaining the routes to a much higher standard than would be necessary with access via ATVs. Alternative 3 is to have CP-3 users cross the ford with automobiles and park at the clearing at Baldwin Spring. From Baldwin Spring, the remainder of the routes would be open to ATVs only. This option eliminates the need for special parking arrangements east of the ford but also has the advantages of ATV use, including lower surface maintenance requirements, on the majority of the routes. Alternative 4 is to allow ATV access to the CP-3 routes via the snowmobile bridge south of the ford, eliminating altogether the safety risks and environmental impacts associated with fording East Stony Creek. This alternative requires the provision of two accessible parking spaces large enough to accommodate vehicles with trailers in the vicinity of the snowmobile bridge. Alternative 5 is to construct a new ATV/snowmobile bridge at or adjacent to the ford. This alternative would eliminate the need to use the ford, while simultaneously avoiding concerns about directing ATV use onto a snowmobile trail associated with Alternative 4. However, the drawback of Alternative 5 is obvious; the cost of bridge construction would be very high, considering the substantial width of East Stony Creek and the lack of high streambanks at this location. Alternative 6 is simply to not provide the opportunity for motorized access to persons with disabilities along these routes, recognizing that access to recreational programs for persons with disabilities is available at other locations in the unit.

From the Department's perspective, Alternative 4, because of its avoidance of the continued use of the East Stony Creek ford (Alternatives 1-3) and elimination of the need for new bridge construction (Alternative 5), is the preferred alternative for providing access to the Oregon Trail, and the Fish Ponds Road as CP-3 routes. By allowing ATV use of the snowmobile bridge and short, 0.3-mile snowmobile trail between the bridge and the clearing at Baldwin Spring, the impacts associated with the ford are eliminated. As previously discussed in the Appendix J, the East Stony Creek ford is in poor condition and poses a serious safety risk, especially when crossed during periods of high water. From a resource protection point of view, it makes little sense to prohibit use of the ford by the general public while allowing continued use by persons with disabilities. Alternative 5, while also avoiding the continued use of the ford, is financially prohibitive and not practical, especially when considering the availability of an existing bridge less than 0.4 miles to the south. The ford presents a poor location for bridge construction because of the stream width and the lack of steep banks necessary to provide adequate water clearance; therefore, bridge construction at this site might potentially result in unacceptable impacts on the character of this location. Of Alternatives 1-3, Alternative 3 is preferred if Alternative 4 is not approved. With Alternative 3, there is no need to develop two accessible parking spaces that will accommodate vehicles with trailers east of the ford because CP-3 users will be trailering their ATVs across the ford and to the parking area at Baldwin Spring using automobiles. Additionally, the parking area at Baldwin Spring is already large enough for several vehicles with trailers to park and turn around, so no additional reworking of this area will be necessary. Driving high-clearance, four-wheel-drive trucks and sport utility vehicles across the ford might also present some advantage over ATVs from the perspective of the depth of water they can safely negotiate. Once across the ford, ATVs are preferable to automobiles because they can tolerate lower maintenance levels (worse surface conditions) and generally cause less impact. However, serious consideration will have to be given to eliminating the possibility of CP-3 use of the Oregon Trail and Fish Ponds Road (Alternative 6) if Alternative 4, which requires the use of the snowmobile bridge south of the ford, is deemed unacceptable.

Other Opportunities for Persons with Disabilities

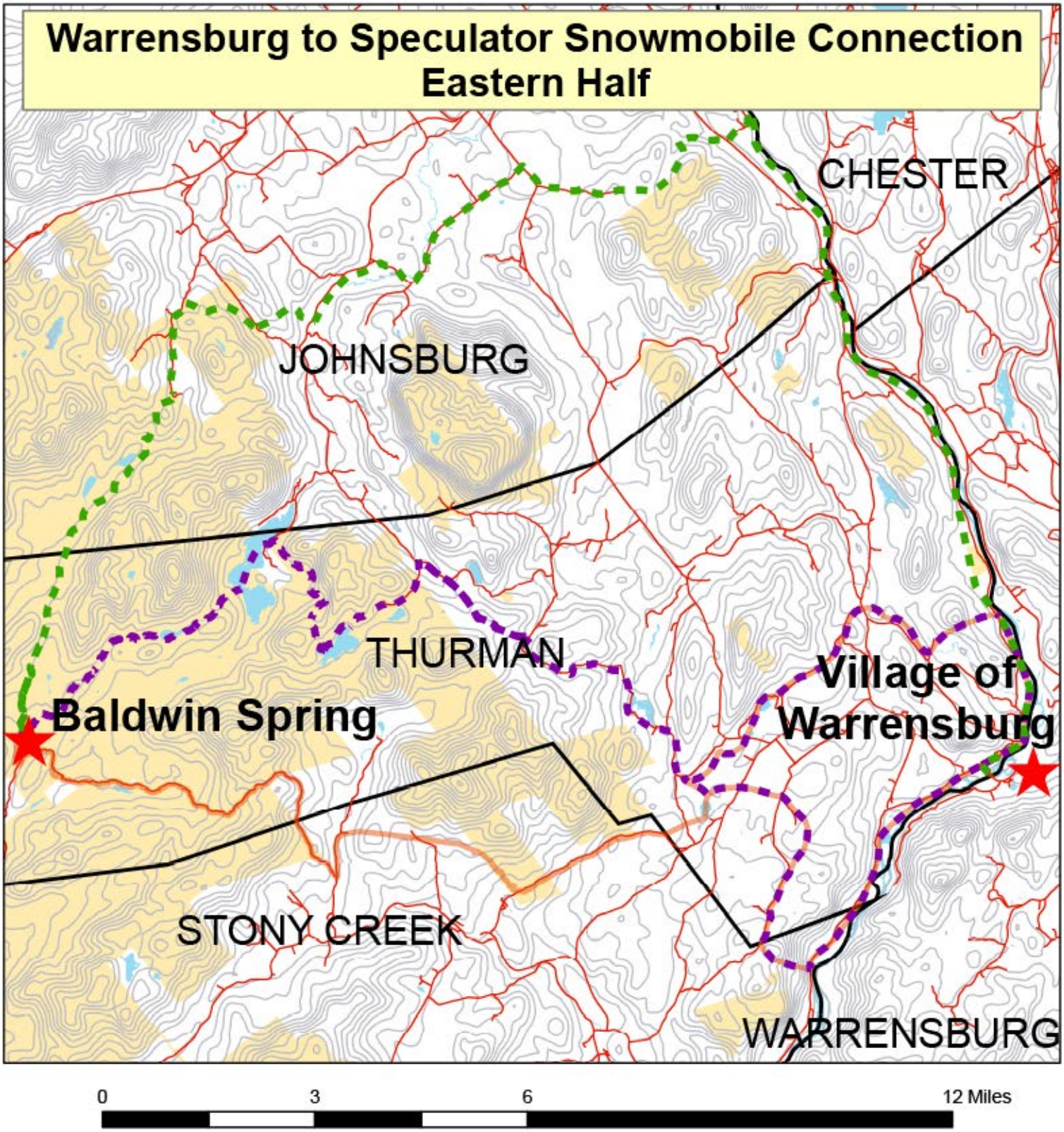
Aside from the motorized access routes discussed above, many other opportunities for providing recreational program access to persons with disabilities are available in the WLWF without fundamentally altering the natural character of the unit. A list of the facilities proposed for upgrading to provide universal access in the unit includes:

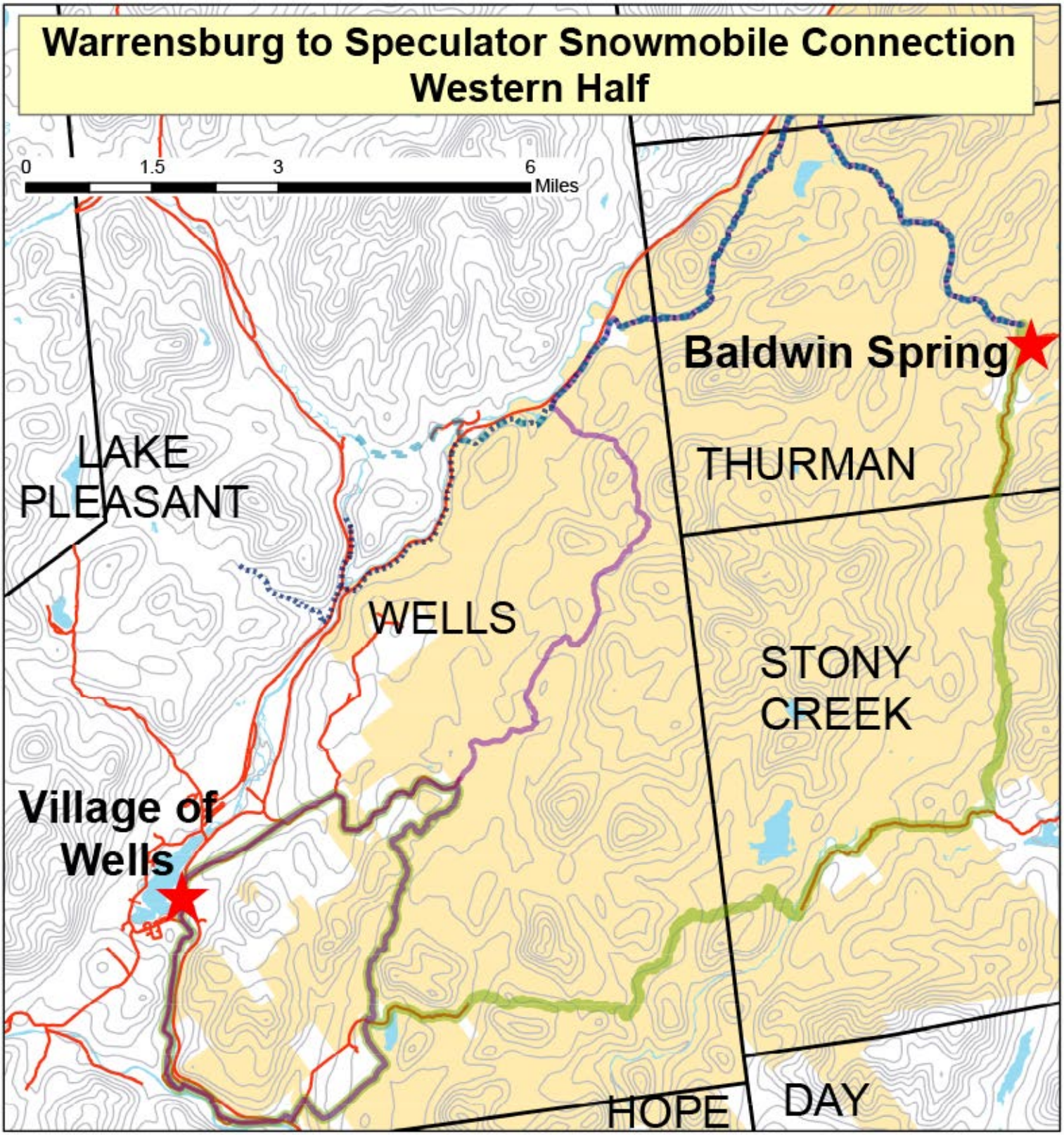
- Three accessible designated campsites along Bakertown Road. All three of these sites are roadside and provide camping opportunities that can be accessed directly from an automobile. These sites require the installation of an accessible privy and possibly some surface leveling and hardening to make them universally accessible.
- An accessible designated campsite east of Baldwin Spring. This site provides a camping opportunity that can be directly accessed via automobile. The site requires an accessible privy to make it fully accessible.
- Two accessible designated campsites at Fox Lair. These two sites provide camping opportunities that can be accessed directly via automobile. Both sites require an accessible privy to make them universally accessible. These camping sites provide an accessible

camping opportunity adjacent to the proposed horse trailhead and Cook Brook Horse Trail in SPW. By grouping these facilities, the number of recreational programs offered at this location for persons with disabilities is increased while the impacts of this use are concentrated in an area that can withstand such use.

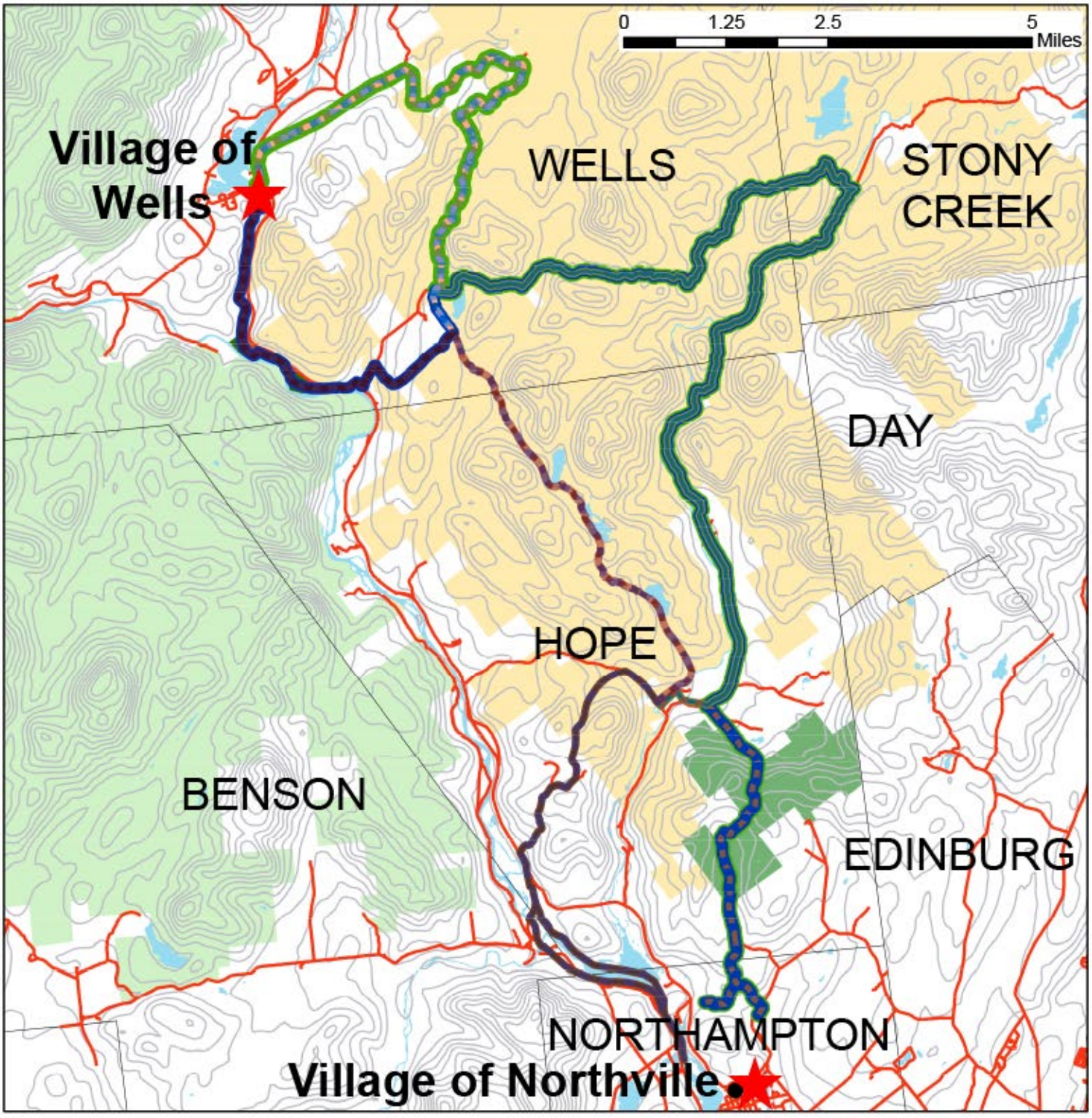
- An accessible horse trailhead with a parking area, kiosk, and mounting platform at Fox Lair. This location will provide access to horseback riding opportunities on the Cook Brook Horse Trail proposed in the Siamese Ponds Wilderness UMP. Because of the close proximity of this trailhead to the two accessible campsites discussed previously, it may not require the installation of an accessible pit privy. Appropriate signage will be necessary at the parking area/trailhead to make sure users are aware of the available nearby facilities (privies, camping opportunities, horse pasturing areas, etc.).

APPENDIX L: MAPS OF ROUTES TO FACILITATE SNOWMOBILE ACCESS BETWEEN COMMUNITIES

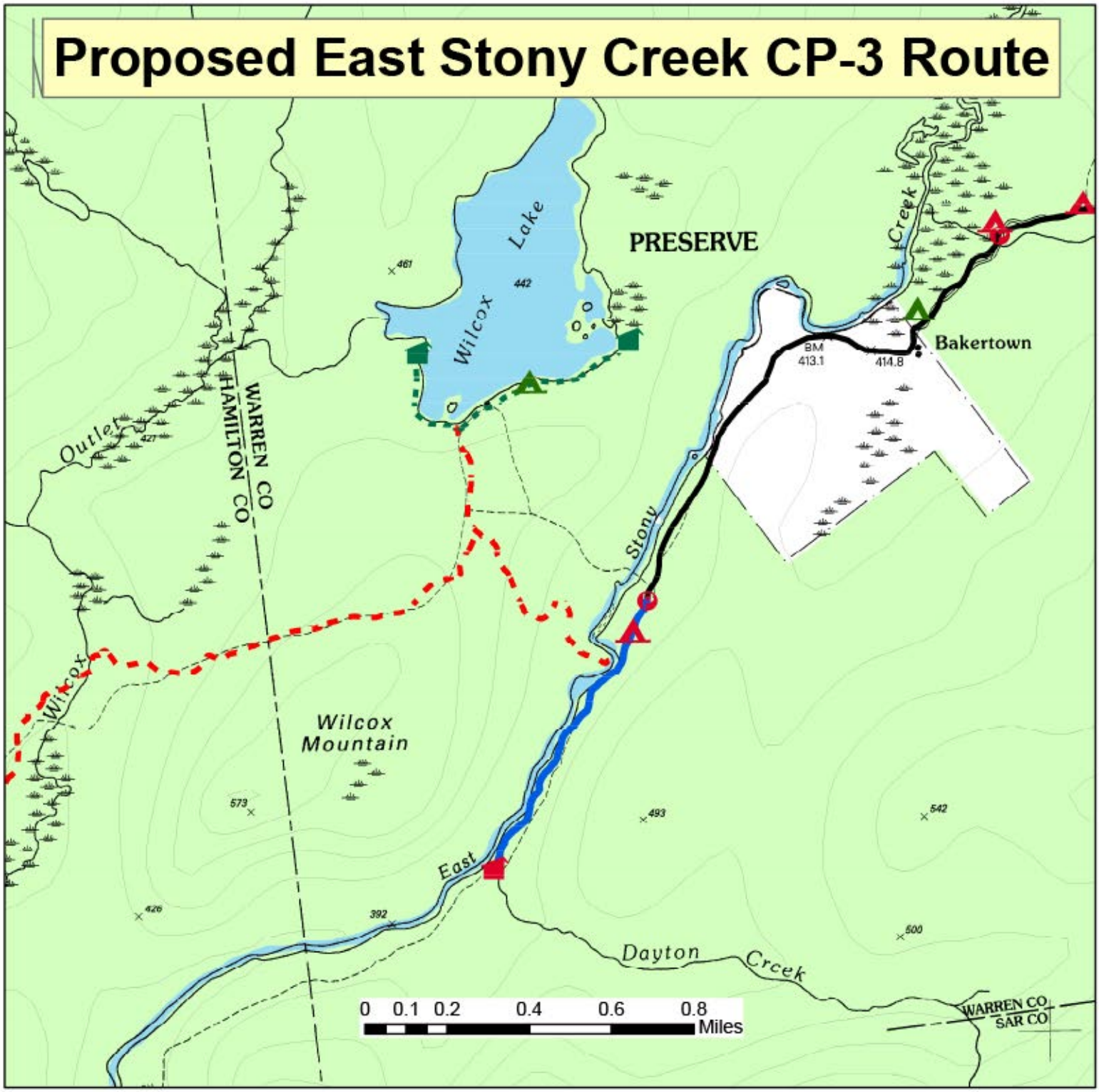

Warrensburg to Speculator Snowmobile Connection
Eastern Half
CHESTER
JOHNSBURG
THURMAN
Baldwin Spring
Village of
Warrensburg
STONY CREEK
WARRENSBURG
0
3
6
12 Miles
Legend
Northern_Alternative
Middle_Alternative
Southern_Alternative
Roads
Wilcox Lake Wild Forest
Water
N


Warrensburg to Speculator Snowmobile Connection
Western Half
0
1.5
3
6
Miles
Baldwin Spring
LAKE
PLEASANT
THURMAN
WELLS
STONY
CREEK
Village of
Wells
HOPE
DAY
Legend
Alternative_1
Alternative_2
Alternative_3
Alternative_4
Roads
Wilcox Lake Wild Forest
Wilderness Areas
Water
N

Wells to Northville Snowmobile Connection



APPENDIX M: MAPS OF INDIVIDUAL MANAGEMENT ACTIONS



Designated Campsites

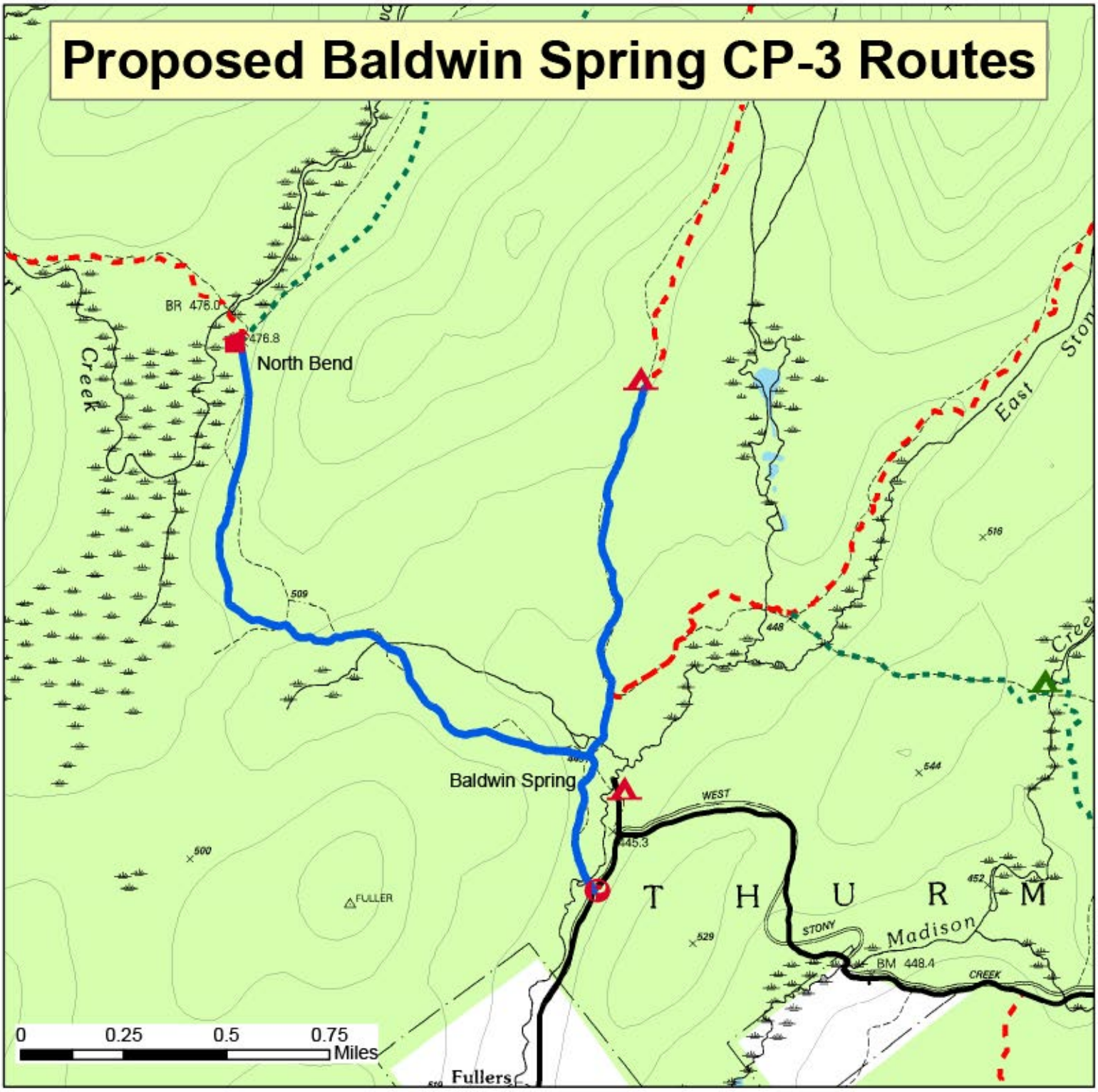
- Accessible
- Non-accessible

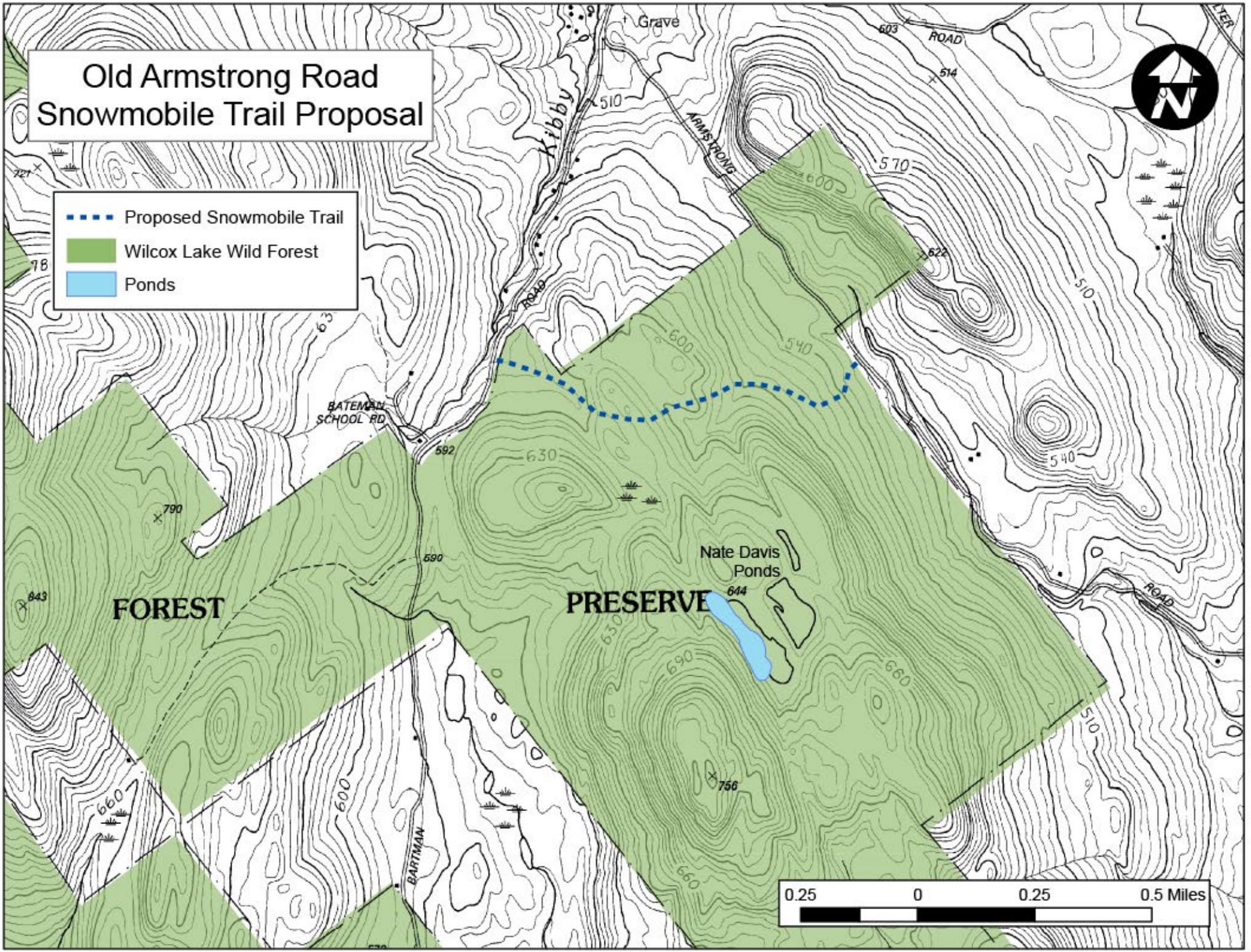
Lean-tos

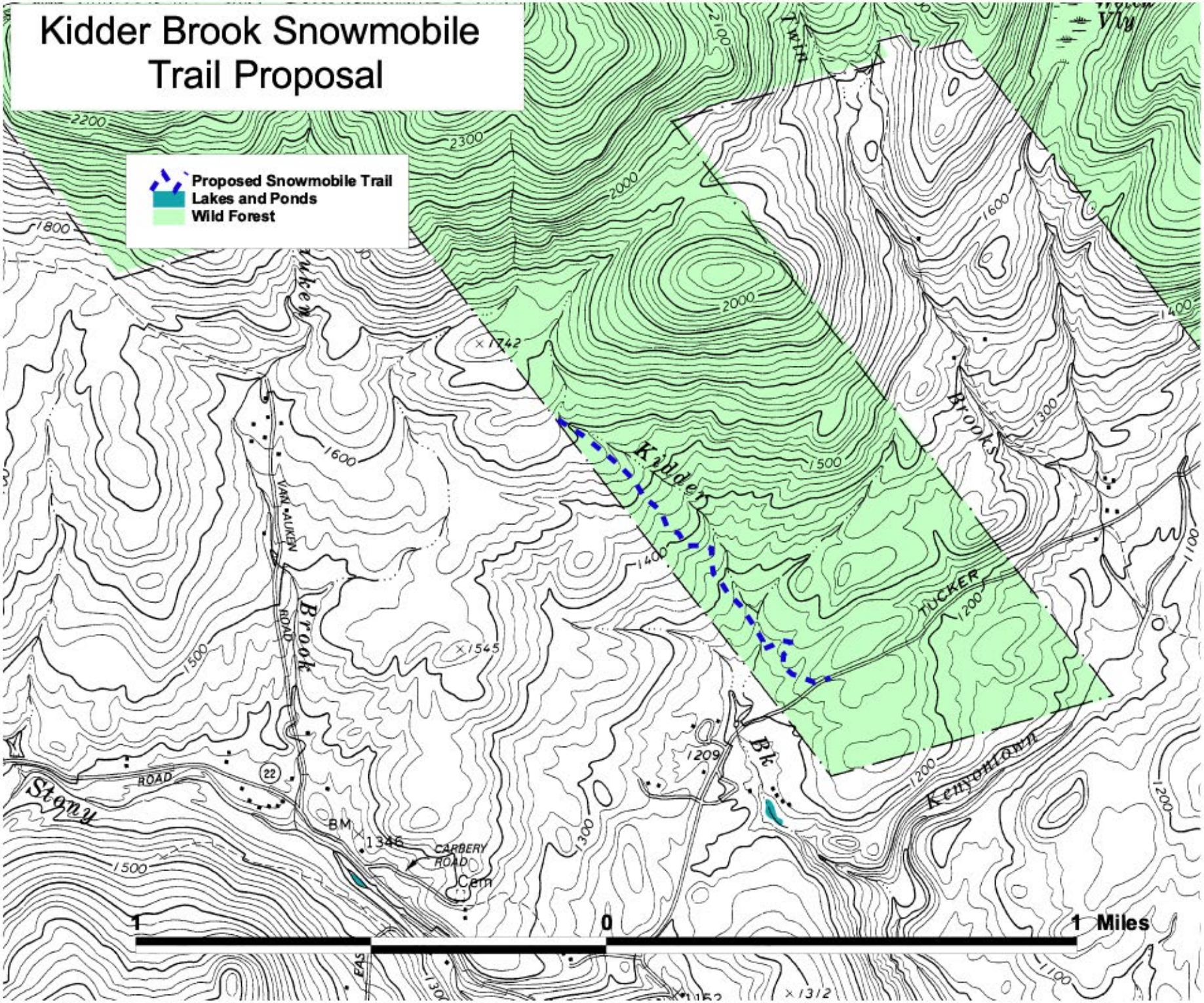
- Accessible
- Non-accessible

- Parking Areas
- CP-3 Routes
- Umimproved Roads
- Snowmobile Trails
- Foot and Ski Trails
- Water
- Forest Preserve

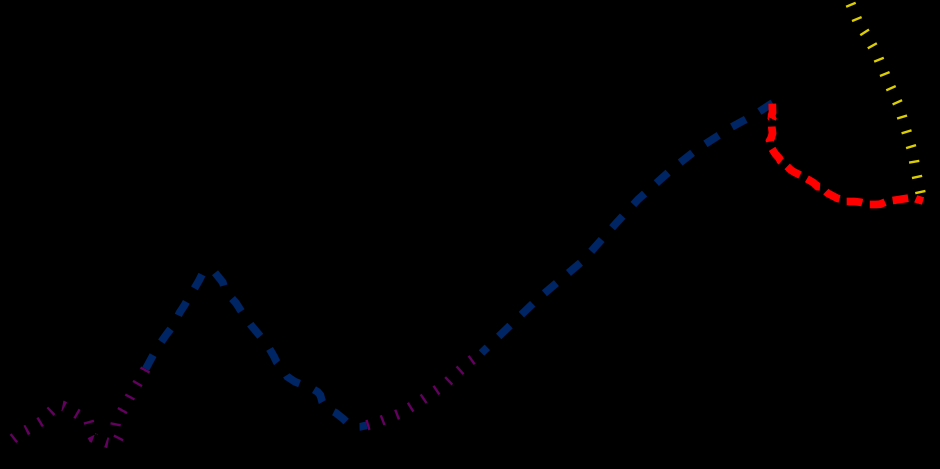
N


Proposed Baldwin Spring CP-3 Routes
North Bend
Baldwin Spring
Fullers
T H U R M
Madison
East
WEST
STONY
CREEK
BM 448.4
FULLER
BR 476.0
476.8
509
500
448
516
544
529
452
645.3
0
0.25
0.5
0.75
Miles
Designated Campsites
Accessible
Non-accessible
Lean-tos
Accessible
Non-accessible
Parking Areas
CP-3 Routes
Umimproved Roads
Snowmobile Trails
Foot and Ski Trails
Water
Forest Preserve
N


Old Armstrong Road
Snowmobile Trail Proposal
Proposed Snowmobile Trail
Wilcox Lake Wild Forest
Ponds
FOREST
PRESERVE
Nate Davis
Ponds
BATEMAN
SCHOOL RD
ARMSTRONG
ROAD
Kibby
Grave
BARTMAN
0.25
0
0.25
0.5 Miles

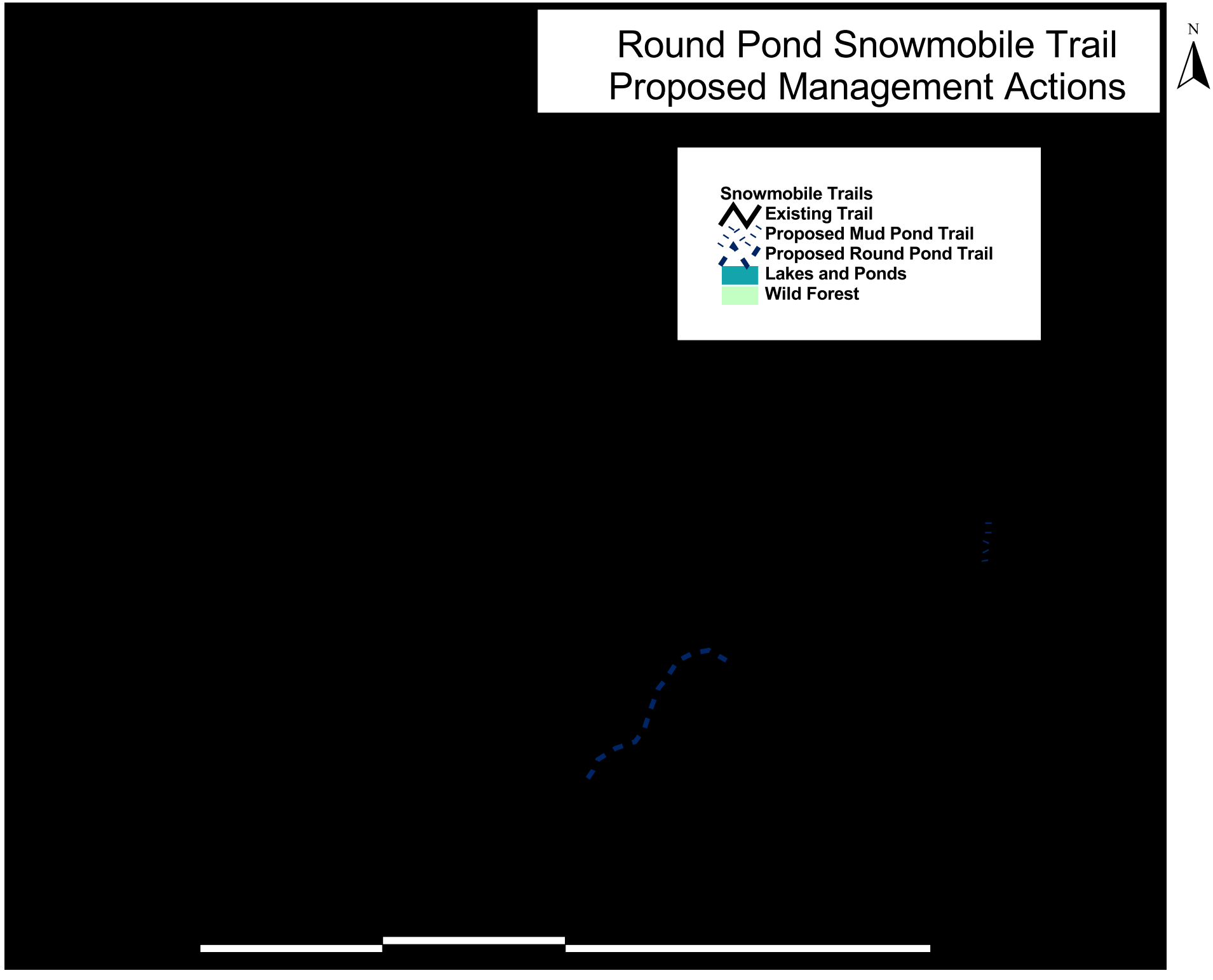

Kidder Brook Snowmobile Trail Proposal
Proposed Snowmobile Trail
Lakes and Ponds
Wild Forest
N
Kidder
Brook
Tucker
Brooks
Canyon
Stony
Brook
Van Auken
Road
Carbery
Road
Twin
Vly
Bk
Cem
BM
1346
1209
1742
1545
1312
2200
2300
2000
1800
1600
1500
1400
1300
1200
1100
2100
1 0 1 Miles

Pumpkin Hollow Snowmobile Trail
Proposed Management Actions

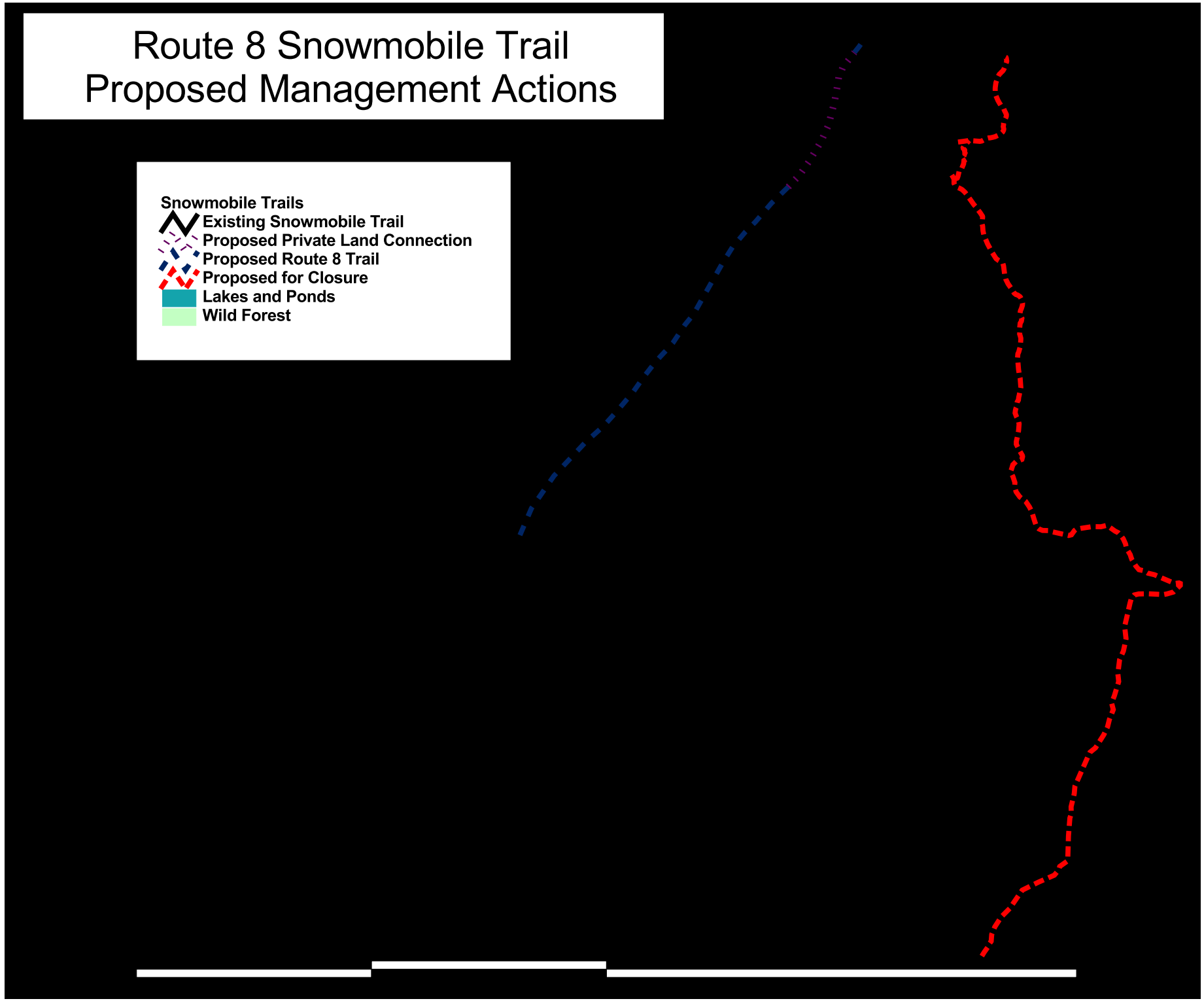


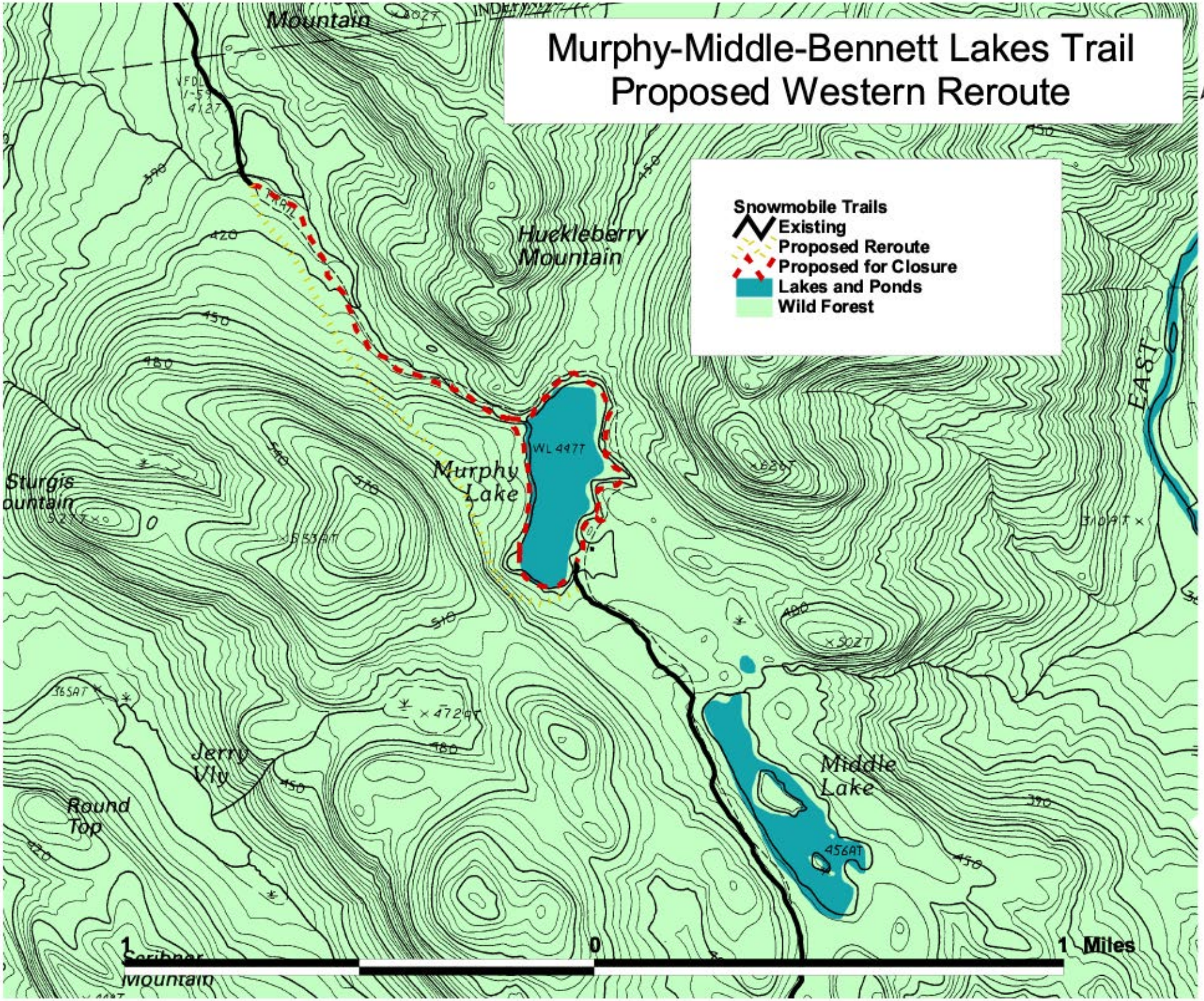
N

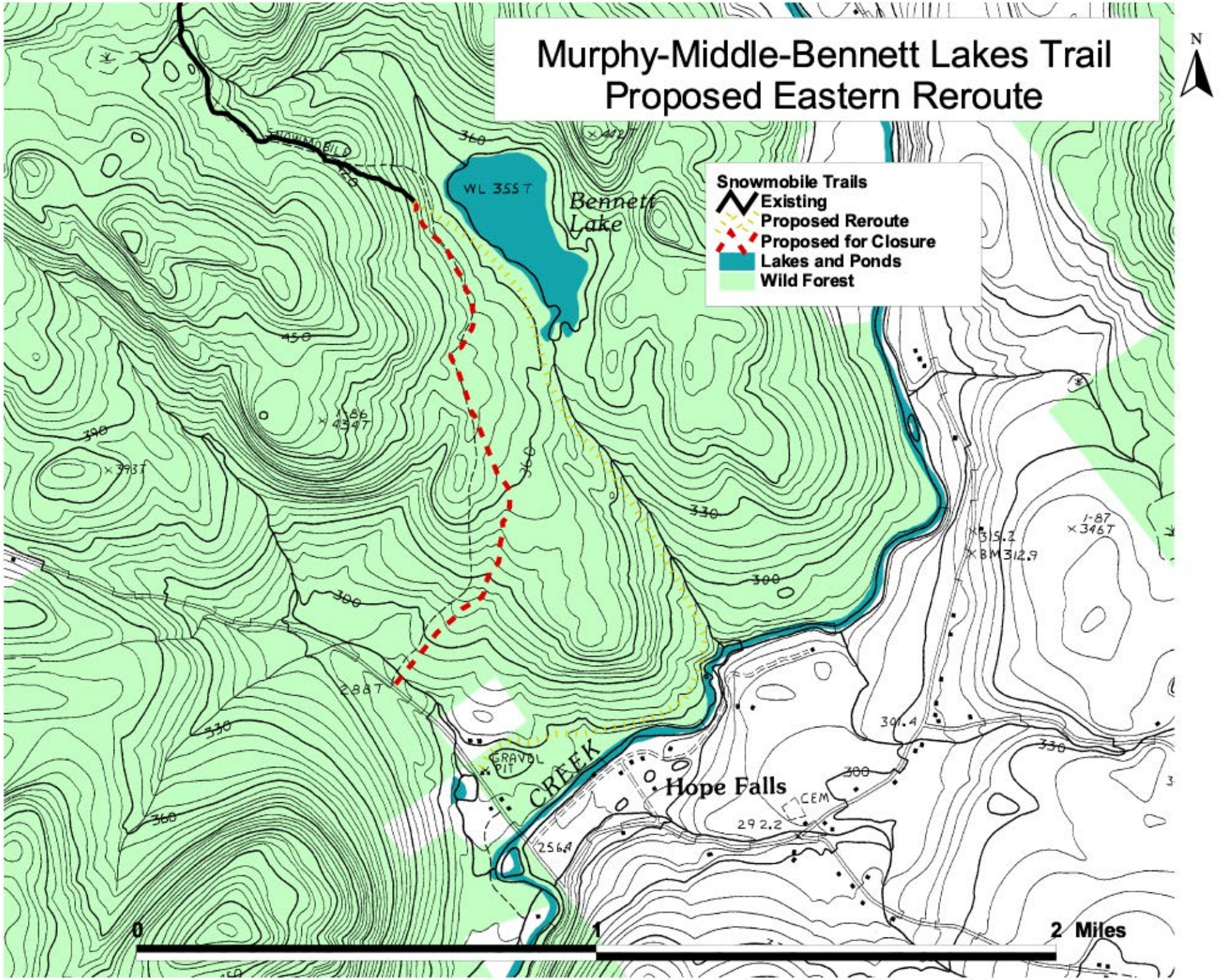
Round Pond Snowmobile Trail
Proposed Management Actions

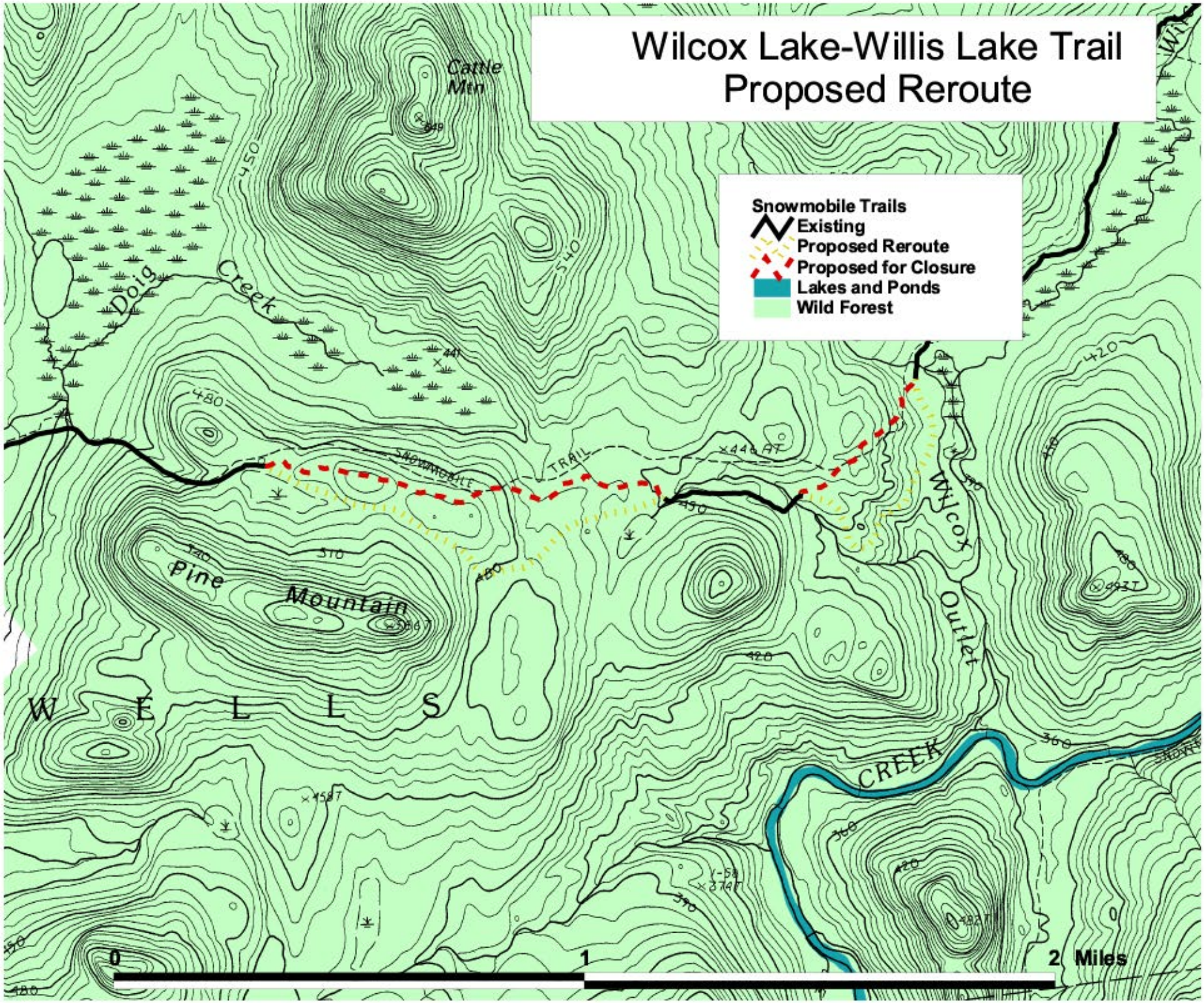


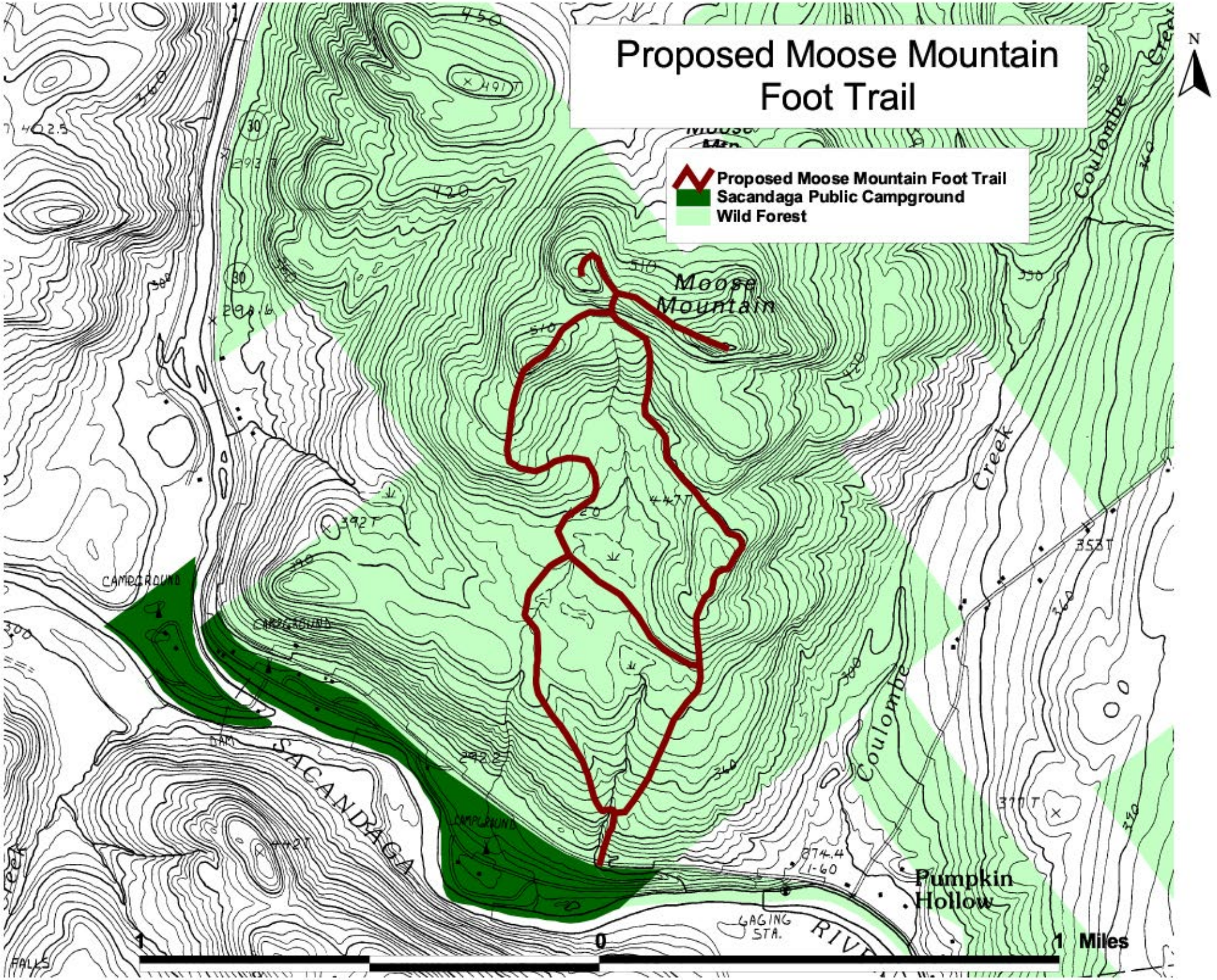
Route 8 Snowmobile Trail
Proposed Management Actions



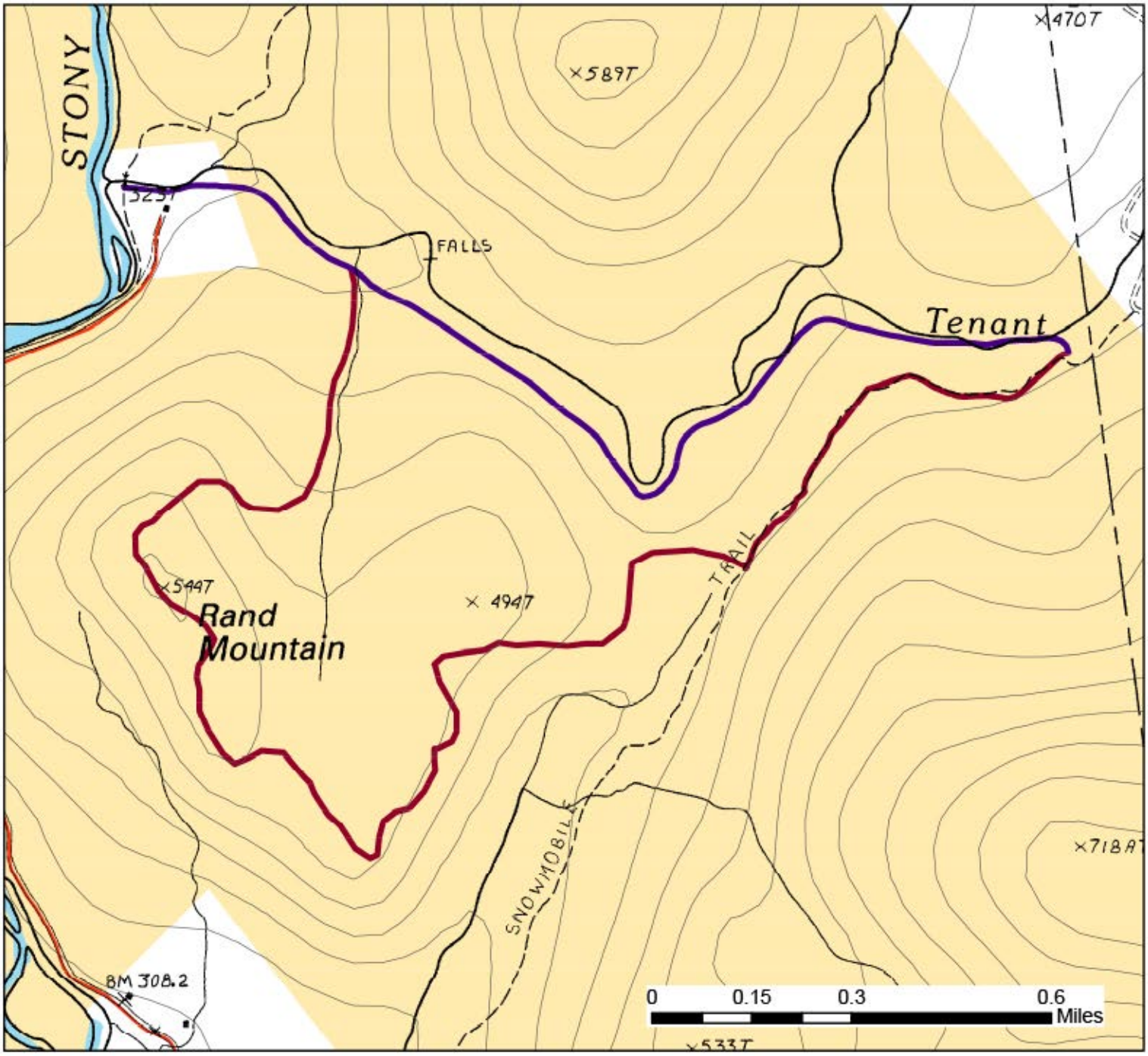

Murphy-Middle-Bennett Lakes Trail
Proposed Western Reroute
N
Snowmobile Trails
Existing
Proposed Reroute
Proposed for Closure
Lakes and Ponds
Wild Forest
Huckleberry Mountain
Murphy Lake
WL 497T
Sturgis Mountain
Jerry Vly
Round Top
Middle Lake
EAST
Scribner Mountain
1 0 1 Miles


Murphy-Middle-Bennett Lakes Trail
Proposed Eastern Reroute
N
Snowmobile Trails
Existing
Proposed Reroute
Proposed for Closure
Lakes and Ponds
Wild Forest
Bennett Lake
WL 355 T
Hope Falls
CREEK
GRAVEL PIT
CEM
0
1
2 Miles


Wilcox Lake-Willis Lake Trail
Proposed Reroute
N
Snowmobile Trails
Existing
Proposed Reroute
Proposed for Closure
Lakes and Ponds
Wild Forest
Cattle Mtn
Doig Creek
Pine Mountain
W E L L S
Wilcox Outlet
CREEK
TRAIL
SNOWMOBILE
0
1
2 Miles


Proposed Moose Mountain Foot Trail
Proposed Moose Mountain Foot Trail
Sacandaga Public Campground
Wild Forest
N
Moose Mountain
Coulombe Creek
Pumpkin Hollow
SACANDAGA
CAMPGROUND
CAMPGROUND
CAMPGROUND
DAM
GAGING STA.
1
0
1 Miles

Proposed Rand Mountain Foot Trail



Legend

- Existing Foot Trail
- Proposed Foot Trail
- Local Roads
- Water
- Wilcox Lake Wild Forest

N

APPENDIX N: SNOWMOBILE PLAN BRIEFING DOCUMENT

I. VISION

To develop and maintain an integrated snowmobile trail system on public and increasingly on private land in the Adirondack Park that will provide snowmobilers with an experience that is consistent with the spirit and letter of Article XIV, Section 1 of the New York State Constitution, is respectful of the rights and interests of private landowners, and strives to enhance the vitality of the Park's citizens by providing trail linkages between local communities within the Park.

II. GOALS

1. **Protect natural and cultural resources and the wild forest character of public lands in the Park (as envisioned by the Constitution, APSLMP and appropriate laws, rules, regulations) by:**
   - considering underutilized trails for abandonment;
   - utilizing to the maximum extent possible routes on the periphery of Wild Forest Units or parallel and near to travel/transportation corridors for new trail development and, where appropriate, re-designating trails in the interior of Wild Forest Units or in the vicinity of private in-holdings for non-motorized use only;
   - focusing on opportunities to route trails on non-state lands wherever possible and encouraging long-term commitment of corridor trail systems on private lands through cooperative agreements with private landowners consistent with the provisions of the OSP;
   - establishing a clear set of standards for snowmobile trails and snowmobile related activities on public lands;
   - increasing law enforcement resources at all levels to address trespass and deter illegal activity on the trail system and in surrounding public and private areas; and
   - providing intelligent and resource protective trail system planning in an overall way rather than dealing with each trail segment individually.

2. **Providing a safe, enjoyable snowmobile experience by:**
   - avoiding unsafe trail conditions;
   - minimizing dependency on lake and road crossings;
   - encouraging partnerships with the private sector, state and local governments that will provide, maintain and operate snowmobile trails; and
   - establishing a clear set of standards for snowmobile trails and snowmobile related activities on public lands.

3. **Promoting tourism and economic opportunities for local communities by:**
   - connecting communities and major points of interest;
   - connecting trail systems from outside of the Park;
   - connecting to necessary support services (gas, food, lodging, etc.); and
   - identifying important snowmobile trail connections.

APPENDIX O: APSLMP WILD FOREST GUIDELINES

Definition

A wild forest area is an area where the resources permit a somewhat higher degree of human use than in wilderness, primitive or canoe areas, while retaining an essentially wild character. A wild forest area is further defined as an area that frequently lacks the sense of remoteness of wilderness, primitive or canoe areas and that permits a wide variety of outdoor recreation.

To the extent that state lands classified as wild forest were given or devised to the state for silvicultural or wildlife management purposes pursuant to statutory provisions specifying that these lands will not form part of the forest preserve (if such provisions are constitutional), the following guidelines are not to be interpreted to prevent silvicultural or wildlife management practices on these lands, provided that other guidelines for wild forest land are respected.

Guidelines for Management and Use

Those areas classified as wild forest are generally less fragile, ecologically, than the wilderness and primitive areas. Because the resources of these areas can withstand more human impact, these areas should accommodate much of the future use of the Adirondack forest preserve. The scenic attributes and the variety of uses to which these areas lend themselves provide a challenge to the recreation planner. Within constitutional constraints, those types of outdoor recreation that afford enjoyment without destroying the wild forest character or natural resource quality should be encouraged. Many of these areas are under-utilized. For example the crescent of wild forest areas from Lewis County south and east through Old Forge, southern Hamilton and northern Fulton Counties and north and east to the Lake George vicinity can and should afford extensive outdoor recreation readily accessible from the primary east-west transportation and population axis of New York State.

Basic guidelines

1. The primary wild forest management guideline will be to protect the natural wild forest setting and to provide those types of outdoor recreation that will afford public enjoyment without impairing the wild forest atmosphere.
2. In wild forest areas:
(a) No additions or expansions of non-conforming uses will be permitted.
(b) Any remaining non-conforming uses that were to have been removed by the December 31, 1975 deadline but have not yet been removed will be removed by March 3l, l987.
(c) Non-conforming uses resulting from newly classified wild forest areas will be removed as rapidly as possible and in any case by the end of the third year following classification.
(d) Primitive tent sites that do not conform to the separation distance guidelines will be brought into compliance on a phased basis and in any case by the third year following adoption of the unit management plan for the area.
3. Effective immediately, no new non-conforming uses will be permitted in any designated wild forest area.
4. Public use of motor vehicles will not be encouraged and there will not be any material increase in the mileage of roads and snowmobile trails open to motorized use by the public in

wild forest areas that conformed to the master plan at the time of its original adoption in 1972.
5. Care should be taken to designate separate areas for incompatible uses such as snowmobiling and ski touring or horseback riding and hiking.
6. When public access to and enjoyment of the wild forest areas are inadequate, appropriate measures may be undertaken to provide improved access to encourage public use consistent with the wild forest character.
7. No new structures or improvements in wild forest areas will be constructed except in conformity with a finally adopted unit management plan. This guideline will not prevent ordinary maintenance, rehabilitation or minor maintenance of conforming structures or improvements, or the removal of non-conforming uses.
8. All conforming structures and improvements will be designed and located so as to blend with the surrounding environment and to require only minimal maintenance.
9. All management and administrative actions and interior facilities in wild forest areas will be designed to emphasize the self-sufficiency of the user to assume a high degree of responsibility for environmentally sound use of such areas and for his or her own health, safety and welfare.
10. Any new, reconstructed or relocated lean-tos, primitive tent sites and other conforming buildings and structures located on shorelines of lakes, ponds, rivers or major streams, other than docks, fishing and waterway access sites and similar water-related facilities, will be located so as to be reasonably screened from the water body to avoid intruding on the natural character of the shoreline and the public enjoyment and use thereof. Any such lean-tos, ranger stations, storage sheds, horse barns and similar structures will be set back a minimum of 100 feet from the mean high water mark of lakes, ponds, rivers or major streams.
11. All pit privies, seepage pits or leach fields will be located a minimum of 150 feet from any lake, pond, river or stream.

Structures and improvements

1. All structures and improvements permitted under the guidelines covering wilderness areas will be allowed in wild forest areas. In addition, the structures and improvements listed below will be allowed and their maintenance, rehabilitation and construction permitted:
-- small groupings of primitive tent sites below 3,500 feet in elevation, subject to the guidelines set forth below;
-- nature and interpretive trails;
-- trailheads adjacent to public highways;
-- stream improvement structures for fishery management purposes;
-- fishing and waterway access sites adjacent to public highways and complying with the criteria set forth below;
-- horse trails; and,
-- picnic tables.
The maintenance and rehabilitation of the following structures and improvements will be allowed to the extent essential to the administration and/or protection of state lands or to reasonable public use thereof but new construction will not be encouraged:
-- horse barns;
-- small scale dams, constructed of natural materials wherever possible;
-- boat docks, constructed of natural materials wherever possible;

-- small fireplaces in fire-sensitive areas;
-- storage sheds and similar rustic buildings for use of administrative personnel;
-- small-scale electronic communication and relay facilities for official communications;
-- telephone and electrical lines to service permitted administrative structures;
-- buoys;
-- small-scale water supply facilities under permit from the Department of Environmental Conservation;
-- ranger stations as set forth below;
-- roads, and state truck trails as set forth below;
-- snowmobile trails as set forth below;
-- fire towers and observer cabins as set forth below; and,
-- wildlife management structures.

Ranger stations
Existing ranger stations may be retained and new ranger stations constructed, but only where absolutely essential for administration of the area, no feasible alternative exists, and no deterioration of the wild forest character or natural resource quality of the area will result.

Motor vehicles, motorized equipment and aircraft
1. All uses of motor vehicles, motorized equipment and aircraft permitted under wilderness guidelines will also be permitted in wild forest areas.
2. In addition, the use of motor vehicles, snowmobiles, motorized equipment and aircraft will be allowed as follows:
(a) by administrative personnel where necessary to reach, maintain or construct permitted structures and improvements, for appropriate law enforcement and general supervision of public use, or for appropriate purposes, including research, to preserve and enhance the fish and wildlife or other natural resources of the area;
(b) by the general public, subject to basic guideline 4 set forth above, but only on:
-- existing public roads;
-- Department of Environmental Conservation roads now or hereafter designated as open for public use by motor vehicles by the Department of Environmental Conservation; and,
-- on rivers, lakes and ponds now or hereafter designated by the Department of Environmental Conservation as suitable for such motorized uses; and,
(c) by snowmobiles on snowmobile trails now or hereafter designated by the Department of Environmental Conservation in accordance with basic guideline 4 set forth above, and with the special guidelines for such trails specified below.
(d) by all terrain vehicles but only on existing public roads or Department of Environmental Conservation roads open to such vehicles, as specified in (b) above.
3. The Department of Environmental Conservation may restrict, under existing law and pursuant to authority provided in this master plan, the use of motor vehicles, motorized equipment and aircraft by the public or administrative personnel where in its judgment the character of the natural resources in a particular area or other factors make such restrictions desirable.

Roads, jeep trails and state truck trails

1. Continued use of existing roads, snowmobile trails and state truck trails by administrative personnel in wild forest areas will be permitted, to the extent necessary, to reach, maintain and construct permitted structures and improvements.
2. Existing roads or snowmobile trails, now open to and used by the public for motor vehicle use in wild forest areas, may continue to be so used at the discretion of the Department of Environmental Conservation, provided such use is compatible with the wild forest character of an area.
3. Established roads or snowmobile trails in newly-acquired state lands classified as wild forest may be kept open to the public, subject to basic guideline 4 set forth above and in the case of snowmobile trails to the special guidelines for such trails set forth below, at the discretion of the Department of Environmental Conservation, provided such use is compatible with the wild forest character of the area.
4. No new roads will be constructed in wild forest areas nor will new state truck trails be constructed unless such construction is absolutely essential to the protection or administration of an area, no feasible alternative exists and no deterioration of the wild forest character or natural resource quality of the area will result.

Snowmobile trails
Snowmobile trails should be designed and located in a manner that will not adversely affect adjoining private landowners or the wild forest environment and in particular:
-- the mileage of snowmobile trails lost in the designation of wilderness, primitive and canoe areas may be replaced in wild forest areas with existing roads or abandoned wood roads as the basis of such new snowmobile trail construction, except in rare circumstances requiring the cutting of new trails;
-- wherever feasible such replacement mileage should be located in the general area as where mileage is lost due to wilderness, primitive or canoe classification;
-- appropriate opportunities to improve the snowmobile trail system may be pursued subject to basic guideline 4 set forth above, where the impact on the wild forest environment will be minimized, such as (I) provision for snowmobile trails adjacent to but screened from certain public highways within the Park to facilitate snowmobile access between communities where alternate routes on either state or private land are not available and topography permits and, (ii) designation of new snowmobile trails on established roads in newly acquired state lands classified as wild forest; and,
-- deer wintering yards and other important wildlife and resource areas should be avoided by such trails.

All terrain bicycles
All terrain bicycles may be permitted, in the discretion of the Department of Environmental Conservation, on roads legally open to the public and on state truck trails, foot trails, snowmobile trails and horse trails deemed suitable for such use as specified in individual unit management plans.

Fire towers
The educational and informational aspects of certain fire towers should be encouraged and

wherever feasible these fire towers should be retained where consistent with their need from a fire control and communications standpoint.

Tent platforms

The Department of Environmental Conservation having removed all tent platforms previously existing under Department permit, erection of new tent platforms will be prohibited.

Small groupings of primitive tent sites designed to accommodate a maximum of 20 people per grouping under group camping conditions may be provided at carefully selected locations in wild forest areas, even though each individual site may be within sight or sound and less than approximately one-quarter mile from any other site within such grouping, subject to the following criteria:

-- such groupings will only be established or maintained on a site specific basis in conformity with a duly adopted unit management plan for the wild forest area in question;

-- such groupings will be widely dispersed (generally a mile apart) and located in a manner that will blend with the surrounding environment and have a minimum impact on the wild forest character and natural resource quality of the area;

-- all new, reconstructed or relocated tent sites in such groupings will be set back a minimum of 100 feet from the mean high water mark of lakes, ponds, rivers and major streams and will be located so as to be reasonably screened from the water body to avoid intruding on the natural character of the shoreline and the public enjoyment and use thereof.

Fishing and waterway access sites

Fishing and waterway access sites may be provided on any body of water irrespective of its size where the current or projected need for access clearly warrants such a site. Such sites will comply with the following management guidelines:

-- Adequate public hand launching facilities or private facilities open to the public are not available to meet a demonstrated need.

-- The physical, biological and social carrying capacity of the water body or other water bodies accessible from the site will not be exceeded.

-- The site and attendant water uses will be compatible with the state and private land use classifications and attendant management guidelines and land use controls surrounding the water body.

-- The site will be located in a manner to avoid adverse impact on adjacent or nearby state and private lands.

-- Motor size limitations or the prohibition of motorized use as appropriate to the carrying capacity of the water body are provided for.

-- There will be no adverse impacts on the physical, biological or scenic resources of the water body and surrounding land.

Any proposal to create a new fishing or waterway access site will be accompanied by an adequate demonstration that the above guidelines can be complied with.

Flora and fauna

The same guidelines will apply as in wilderness areas, although exceptions may be made by the Department of Environmental Conservation in accordance with sound biological management

practices, particularly where such practices will improve the wildlife resources.

Recreational use and overuse

1. All types of recreational uses considered appropriate for wilderness areas are compatible with wild forest and, in addition, snowmobiling, motorboating and travel by jeep or other motor vehicles on a limited and regulated basis that will not materially increase motorized uses that conformed to the Master Plan at the time of its adoption in 1972 and will not adversely affect the essentially wild character of the land are permitted.
2. Certain wild forest areas offer better opportunities for a more extensive horse trail system than in wilderness, primitive or canoe areas and horse trails and associated facilities in these areas.

APPENDIX P: UNIT MANAGEMENT PLANNING PROCESS

The development of unit management plans for classified public lands in the Forest Preserve should follow a stepwise process that will culminate in the preparation of a draft and final unit management plan UMP. The eight tasks in this process are:
1. Conduct a comprehensive ***Resource and Use Inventory and Analysis***.
2. Develop and implement a comprehensive ***Public Participation Plan***.
3. Prepare a ***Management and Policy Overview***.
4. Propose ***Goals, Objectives, and Management Actions*** for the Area.
5. Prepare a ***Draft Unit Management Plan For Public Review***.
6. Meet appropriate ***State Environmental Quality Review Act (SEQR)*** requirements.
7. Prepare a ***Draft Unit Management Plan for Determination of Master Plan Compliance by the Adirondack Park Agency***.
8. Prepare the ***Final Unit Management Plan***.

The activities associated with these eight tasks are described below.

Task 1 - Conduct a Comprehensive Resource and Use Inventory and Analysis
Conduct an inventory of the natural, scenic, cultural, wildlife (including game and non-game species) and other appropriate resources along with an analysis of the area's ecosystems. (See page 9 of the June 2001 version of the APSLMP for minimum necessary information to be contained in each section of the UMP as they relate to the inventories below).

1. Conduct an inventory of natural resources including an assessment of physical resources (geology, soils, topography, water, wetlands, air and climate), biological resources and ecological communities (plant life, wildlife and fish) and scenic resources (travel corridors, observation points, open space and other natural areas) and information, such as the occurrence of general vegetative community types.
2. Conduct an inventory of all existing man-made facilities for public or administrative use in the unit. Conduct an assessment of existing facilities to determine compliance with ADAAG and proposed ADAAG. Utilize the Maintenance Management System (MMS) format for the inventory of all man-made facilities in the unit. All point and line data will be gathered using global positioning system (GPS) technology and organized to be suitable for incorporation into NYSDEC's geographic information system (GIS).
3. Conduct an inventory of past influences and existing cultural and historic resources that are found in the unit.
4. Conduct an inventory of the types and extent of actual and projected public use within the unit. This inventory should involve a review of information gathered at trailhead and waterway access site registers and interviews with NYSDEC staff and the public.
5. Conduct an inventory and evaluation of existing recreational opportunities available to persons with disabilities within the unit.
6. Conduct an assessment of the relationship between public and private land in the vicinity of the unit. This assessment will include an examination of the impacts of public land ownership and use on adjacent private lands and nearby communities, and vice versa.
7. Conduct an assessment of the physical, biological, and social carrying capacity of the

resources of the unit, with particular attention to portions of the area threatened by overuse in light of its resource limitations and classification. Identify existing and potential resource concerns related to the impacts of present and projected use on the resources of the area.
8. Identify current activities related to the use of the area for education, interpretation and research.

Task 2 - Public Participation

Develop and implement a comprehensive public participation plan designed to assure participation in the planning process by all stakeholders including , but not limited to, local governments, tourist-oriented businesses, recreation advocates, people with disabilities, environmental groups, and neighboring landowners. At a minimum, the plan must involve:

1. The compilation of a mailing list of all identified stakeholders.
2. The development of a press release and the mailing of an announcement of the beginning of the planning process with a request for comments.
3. The holding of two public meetings at which the public comment will be effectively and efficiently received and recorded. One meeting shall be held early in the planning process to present information about the planning area to the public and to receive preliminary comments. Another meeting shall be held to present the draft UMP and receive public comments on the document. A third public meeting may be required as part of the SEQR process.
4. A description of the methods to be used to analyze oral and written public comments and incorporate them into the UMP. The analysis of public comments should include a review of the existing resources.
5. The preparation of a responsiveness survey which documents a summary of all public comments received.

Task 3 - Prepare a Management and Policy Overview for the Area

Prepare a management and policy overview of the area that identifies the following:

1. Past Management - Assess past management activities in the unit, including NYSDEC management activities, academic research projects and activities undertaken by organizations outside the NYSDEC, such as Americorps.
2. Management Guidelines - Identify existing guidelines for the management, development or other use of the area including provisions of the state constitution, the guidelines and criteria set forth in the APSLMP, the ECL and related rules and regulations, NYSDEC policies and other federal and state laws, rules, regulations, policies and plans that are relevant to the use and management of Forest Preserve lands in the Adirondack Park classified as wild forest. Identify any deed restrictions and deeded private rights that exist for the area.
3. Management Principles - Identify management policies and principles that exist to guide the NYSDEC in managing Forest Preserve units.
4. Issues - Prepare a list of the management issues to be addressed in the UMP that were identified in Task 1.

Task 4 - Propose Management Goals, Objectives, and Actions for the Area

Based on information gathered during the resource inventory, through public input and in

consultation with the UMP Team, propose management goals, objectives, and action for the unit.

1. Develop ***Goals and Objectives*** that will guide the management of the area for the next five years. Proposed goals and objectives must reflect existing legal requirements, such as the New York State Constitution, the Adirondack Park State Land Master Plan, and the Environmental Conservation Law, as well as NYSDEC policies and established management principles. They must be refined through an analysis of the area's natural resource characteristics and an assessment of the recommendations made to the NYSDEC by local governments, organizations, and individuals in the course of the public participation process.
2. Work with the UMP Team to identify the specific ***Management Actions*** needed to meet the goals and objectives of the plan. Each action or group of actions proposed to address major issues will be presented along with a complete analysis of alternatives.

Task 5 - Prepare Draft Unit Management Plan

Prepare a Draft Unit Management Plan after completion of Tasks 1-3 above:

1. Prepare an ***Executive Brief*** . The executive brief will list the major management issues identified during the planning process, describe the level of controversy associated with each issue, and describe the management actions proposed to address the issues, along with the alternatives considered.
2. Prepare a ***Preliminary Draft UMP***. The preliminary draft UMP will present the information gathered in Tasks 1 through 3 above and the management goals, objectives, and actions as described in Task 3. The content and organization of the preliminary draft UMP will correspond to the UMP template.
3. After review of the preliminary draft UMP, incorporate necessary modifications, and prepare a ***Draft UMP for Public Review***.
4. Complete a long environmental assessment form (EAF) if necessary. The long EAF is not required when writing an environmental impact statement (EIS).
5. Prepare a positive or negative declaration.
6. Prepare the draft UMP in the form of a draft environmental impact statement (DEIS) if required.

Task 6 - Public Participation - Implement the final steps of a Department-prescribed comprehensive public participation plan. This portion of the public participation plan will involve:

1. The holding of an open house style public meeting to present the draft UMP and receive public comments on the document. The meeting may also serve to meet SEQR requirements.
2. An analysis of oral and written public comments. The results of the comment analysis will be incorporated in the final draft UMP.
3. The preparation of a comment and response summary to be included as an appendix to the final draft UMP.

Task 7 -Prepare Final Draft UMP for Determination of Master Plan Compliance by the Adirondack Park Agency

After review of the draft UMP by the public, incorporate necessary modifications and prepare a final draft UMP for submission to the Adirondack Park Agency. The final draft UMP will be

subject to the requirements of the New York State Environmental Quality Review Act. The potential impacts of various, and presently unknown, proposals within the UMP will determine whether an environmental impact statement will be required. If actions recommended within the UMP are deemed to have a significant potential for negative impacts, then appropriate changes will be made in the UMP format to incorporate the required EIS content in to the UMP. The preparation of an EIS will not involve a separate process resulting in the production of a second document, but rather a single UMP/EIS document. The most significant feature of the EIS format will be an alternative analysis for key issues deemed to have a significant potential for adverse impacts. The alternative analysis will be placed under the appropriate issue area heading shown in Section IV, "Proposed Management."

Task 8 - Prepare Final Unit Management Plan

After review of the final draft UMP by the Adirondack Park Agency, incorporate necessary modifications and prepare a ***Final UMP*** for the NYSDEC Commissioner approval. The final UMP will meet the requirements of the State Environmental Quality and Review Act. Prepare a findings statement, if required.

APPENDIX Q: ALL-TERRAIN BICYCLE (ATB) TRAIL STANDARDS AND GUIDELINES

– adapted from International Mountain Biking Association

- Look for and identify control points (i.e., wetlands, rock outcrops, scenic vistas).
- Avoid sensitive areas; wetlands and wherever water collects.
- Use existing roadways where possible that do not exceed grades of 10%
- Clear new trails to a maximum width of four feet to establish a single track route.
- Keep tread width less than 18" along a rolling grade.
- Remove vegetation at the root level - not at ground level.
- Keep routes close to the contour and avoid fall lines where water is likely to flow downhill.
- On side slopes, following the contour, cut full benches to construct the tread. Outsloping in this manner helps to remove water from the trail. Vegetate backslopes.
- Bench cuts on side slopes should be cut to a depth of the mineral soil.
- Build flow into the trail with open and flowing designs with broad sweeping turns.
- Streams should be crossed at ninety-degree angles, preferably across rock or gravel.
- Bridges may be used where steep banks prevent normal stream crossings. The latter may require an APA Wetlands Permit.
- Do not construct skid berms or extensive banked turns that may accelerate erosion.
- Avoid acute, sharp angle turns.
- Plan trails for beginners to intermediate levels of riders.
- Maintain and overall grade of 10% or less.
- Allow short changes in grade to avoid obstacles.
- Design grade dips to break up long, linear sections, and to help divert runoff from the tread.
- Monitor and inspect all trails semi-annually. Address water problems immediately.

APPENDIX R: STANDARD OPERATING PROCEDURE: TRAILHEAD REGISTER MAINTENANCE

Objective:
The following Standard Operating Procedures (SOP) is to provide a better system for collecting accurate state land user information. This information is imperative to; search and rescue activities, UMP planning, and state land user trends and also allows Forest Rangers to plan daily/seasonal activities. The procedures listed below are in place for guiding the activities of Forest Rangers and Foresters, in order to meet our objective. Please contact your chain of command when working outside of these parameters.

Guidelines:
Trailhead registers and kiosk information are the responsibility of the Forest Ranger and Lands and Forests Staff.

The Forest Ranger's duties will be to:
A. Maintain current/blank register sheets for users.
B. Maintain a working writing instrument (pencil) at the register.
C. Report any mechanical or aesthetic problems with the register or trail head kiosk to the Lands and Forests Staff utilizing an operations work request and copying appropriate Operations Staff.
D. Work in concert with Lands & Forests Staff to ensure that information at the trailhead is current and accurate.
E. Check trailhead registers and information kiosks on a frequent basis.
F. Sign trail registers, in user information fields, whenever an inspection of the register or an interior patrol is conducted, unless signing would jeopardize an enforcement action.

Trail register sheets will:
A. Be collected by the Forest Ranger who has the administrative responsibilities for such trailhead.
B. Be labeled by the Forest Ranger to show the trailhead at which they originated and the year
C. Be sent (original, photocopy, or statistically*) on a quarterly basis, to the appropriate Forester for the UMP to which the trail head belongs.
D. Be maintained by the Forestry Staff in such a manner that:
    1. Sheets are grouped by trailhead.
    2. Pages are consecutive (chronological order)
    3. Files can easily be accessed by Forest Ranger Staff at any time (day or night).
E. Be kept on record for 7 years.

*Completion of user information tallies are optional for the Forest Ranger. If tallies are kept Rangers will utilize an Excel Spreadsheet for data storage and send an electronic copy to the appropriate Forester on a quarterly basis.

Lands and Forests Staff will:
A. Send UMP user information back to Forest Rangers on a quarterly or yearly basis, depending on trail usage.

Conclusion:
Trailhead registers and kiosks are often the only interaction that state land users have with our department. For this reason it is imperative that we maintain these structures and show a routine presence in the register pages.

APPENDIX S: INITIAL PRESS RELEASE

For Release: IMMEDIATE **Contact:** David Winchell
April 1, 2002 518/897-1211

DEC TO PREPARE MANAGEMENT PLAN/EIS ON THE WILCOX LAKE WILD FOREST

The New York State Department of Environmental Conservation (DEC) today announced the initiation of management planning for the 140,000 acre Wilcox Lake Wild Forest located in Warren, Hamilton, Saratoga and Fulton Counties. "Preparation of the Unit Management Plan (UMP) for this popular piece of Adirondack Forest Preserve furthers our strategic plan to complete UMP's for all Forest Preserve Lands in the Adirondacks and Catskills within 5 years," said DEC Region Five Director Stuart Buchanan.

"Public involvement in development of UMP's is essential and interested parties can provide us valuable input right from the start," Buchanan said. "Persons who know the Wilcox Lake Wild Forest area are encouraged to contact DEC staff at the Warrensburg Office at any time with information they feel could be useful in the formation of the UMP. People don't need to wait until a public meeting is scheduled to talk to us about our planning efforts on this area."

A public scoping meeting for the Wilcox Lake Wild Forest is scheduled for Friday March 8, 2002 from 6 p.m. to 9 p.m. at the Town Hall in Thurman. This will be the first of many opportunities for the public to be involved in the planning process. There will be additional opportunities for review and comment provided through public meetings after a draft plan is prepared.

The Wilcox Lake Wild Forest is located in the southeastern area of the Adirondack Park and encompasses Forest Preserve lands and waters located in the Towns of Johnsburg, Stony Creek, Thurman, Wells, Hope, Corinth, Day, Edinburg, Greenfield, Hadley, Providence, Broadalbin, Mayfield, and Northampton. The unit is generally bounded on the north by State Route 8, on the west by State Route 30, on the south by the Adirondack Blueline, and on the east by the Hudson River.

The Wilcox Lake Wild Forest offers many recreational opportunities, including but not limited to hiking, snowmobiling, skiing, mountain biking, canoeing, hunting, and fishing. Scattered primitive tent sites offer camping opportunities adjacent to area waters and trails. With over forty-five miles of marked trails available, the public can easily reach a variety of natural attractions such as Crane Mountain, or popular fishing and camping locations at Wilcox Lake and Round Pond. Other large waterbodies including Garnet Lake provide for a greater variety of motorized recreational uses and are popular ice fishing locations. Other unit waterways including the Hudson River and East Stony Creek enable the public to experience a unique flatwater environment.

In September 1999, Governor Pataki announced a strategic plan to complete, within five years, unit management plans for all Forest Preserve lands in the Adirondack and Catskill Parks. In conjunction with the allocation of unprecedented resources for the stewardship of these lands through the Environmental Protection Fund and the Clean Water/Clean Air Bond Act, these plans will dramatically improve the State's ability to manage these lands for public recreation.

A UMP must be completed before significant new recreational facilities, such as trails, lean-tos, parking areas or boat launches can be constructed. The plans involve an extensive analysis of the natural features of an area and the ability of the land to accommodate public use. The planning process is designed to cover all environmental considerations for the unit and form the basis for all proposed management activities for a five year time period. Possible adverse impacts from the UMP may include temporary minor erosion, increased hiking traffic in certain areas, and minor noise impacts during the construction of new facilities.

The DEC has primary responsibility for developing management plans for the State owned lands in each Forest Preserve Unit as identified under the Adirondack Park State Land Master Plan (APSLMP). This APSLMP guides the Adirondack Park Agency (APA) in developing classifications for Forest Preserve lands in the Adirondack Park as Intensive Use, Wild Forest, Primitive, Canoe or Wilderness. These classifications define the range of facilities and uses allowed within each classification. With the exception of Department campgrounds, the Wild Forest classification allows for the widest range of uses including some motor vehicle use. The APSLMP establishes management guidelines on the allowable uses and these guidelines define the basis for developing management plans for each Forest Preserve unit.

In the Adirondacks, UMPs are developed by DEC staff in consultation with APA staff. A team of DEC staff from the divisions of Fish & Wildlife, Lands and Forests, Operations and Public Protection, assisted by a private planning consultant, will be responsible for developing the first draft of the plan. Draft plans are then widely distributed for public comment and review prior to being finalized by DEC. The plans must then be reviewed by the APA, which is responsible for ensuring that the plans are consistent with the APSLMP. Typically the overall planning process takes about two years with a public meeting scheduled after the draft UMP is published.

Any interested individual or organization wanting to be included on a mailing list, wishing to provide input or make recommendations, now or anytime during the development of this plan, is encouraged to contact:
Michael Curley, NYS Department of Environmental Conservation, PO Box 220, Warrensburg, NY 12885 or by telephone at (518) 623-1275. A special e-mail address has been established for receiving comments from the public on UMP's being developed by DEC in Region 5 which encompasses the central and eastern Adirondack counties. The address is:
r5ump@gw.dec.state.ny.us. Comments can also be mailed electronically to:
mccurley@gw.dec.state.ny.us.

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APPENDIX T: INTERESTED PARTY LETTER

New York State Department of Environmental Conservation
Division of Lands and Forests, Region 5
232 Hudson Street – P. O. Box 220, Warrensburg, New York 12885-0220
Phone: (518) 623-1265 • **FAX:** (518) 623-3603
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

February 13, 2002

Dear Interested Party:

Attached is a copy of the press release regarding the initiation of the unit management plan for the Wilcox Lake Wild Forest.

A public meeting regarding the Wilcox Lake Wild Forest will be held on **Friday, March 8, 2002 from 6 p.m. to 9 p.m. at the Thurman Town Hall in Athol**. This will be the first of many opportunities for the public to be involved in the planning process. The purpose of this initial meeting will be to provide an opportunity for the public to meet with DEC staff and share thoughts, ideas, and suggest improvements related to the State lands within this particular unit. There will be additional opportunities for review and comment provided through public meetings after a draft plan is prepared.

Any interested individual or organization wanting to be included on a mailing list, wishing to provide input or make recommendations, now or anytime during the development of this plan, is encouraged to contact Michael Curley, Senior Forester, NYS DEC, P.O. Box 220, Warrensburg, New York 12885 or by telephone at (518) 623-1275. Comments can also be mailed electronically to: mccurley@gw.dec.state.ny.us.

You may wish to attend this meeting to express you ideas related to the development of the Wilcox Lake Wild Forest Unit Management Plan. Furthermore, you may wish to share this information with other individuals within your organization.

Sincerely,

Michael Curley
Senior Forester

APPENDIX U: AGENDA FOR UMP OPEN HOUSE

Wilcox Lake Wild Forest
Unit Management Planning Public Meeting
March 8, 2002 Thurman Town Hall

Agenda

6:00 Open House - opportunity for one-on-one conversation between members of the public and DEC staff. Share your thoughts and ideas on how the Wilcox Lake Wild Forest area should be managed. Share your knowledge of the area with DEC Land Managers, Forest Rangers, and Biologists.

6:30 Welcome
Tom Martin, Regional Forester
Dave Winchell, Public Affairs

6:35 Brief overview of the Unit Management Planning process, the Wilcox Lake Wild Forest, and the Adirondack Park State Land Master Plan
Michael Curley, Senior Forester

7:00 Public Comments - Please limit your comments to 3 minutes, so that everyone has an opportunity to speak.

8:30 Open House - more one-on-one conversation

If you wish to speak during the Public Comment portion of the meeting, please sign in at the front door and indicate whether you would like to submit oral comments. During the Public Comment portion of the meeting, please limit your comments to 3 minutes, so that everyone has an equal opportunity to speak.

You may also submit any written comments at the meeting or mail them to:

NYS DEC
Attn: Michael Curley
PO Box 220
Warrensburg, NY 12885
mccurley@gw.dec.state.ny.us
623-1275

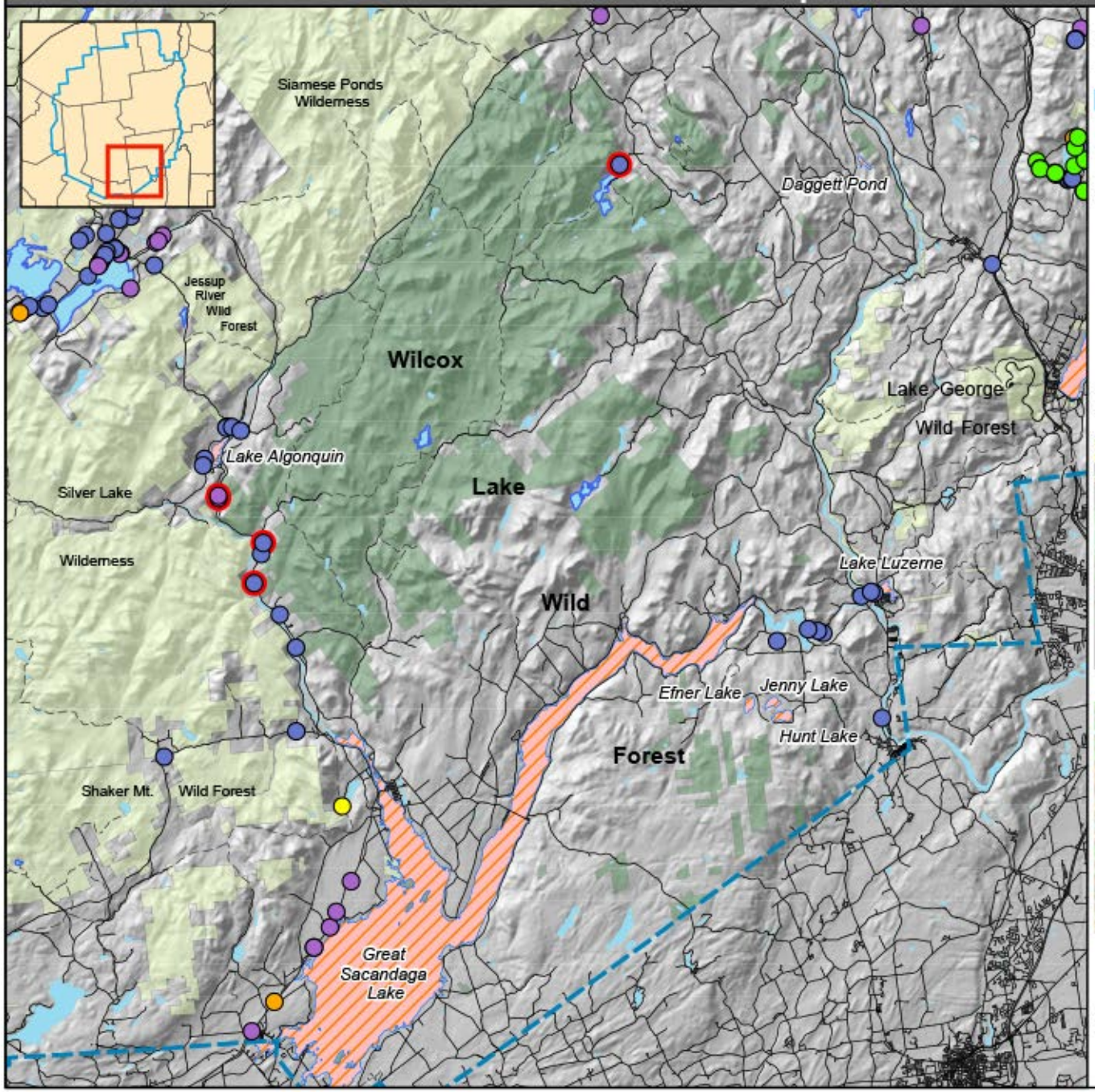
For more information about Wilcox Lake Wild Forest and other Forest Preserve lands, check out the DEC website at: http://www.dec.state.ny.us/

APPENDIX V: INVASIVE PLANT LOCATION MAP

Wilcox Lake Wild Forest

Documented Terrestrial & Aquatic Invasive Plant Species

New York State Department of Environmental Conservation



Legend

- Trails
- APA Blueline
- Wilcox Lake Wild Forest
- Other Public Lands

Terrestrial Invasive Plants*

- Garlic Mustard
- Japanese Knotweed
- Phragmites
- Purple Loosestrife
- Shrubby Honesuckle

Aquatic Invasive Plants

- No Infestation Found
- Infested Lake
- No Data

**Occurrences highlighted in red are of immediate concern to Wilcox Lake Wild Forest.*


Shrubby Honeysuckle


Purple Loosestrife


Phragmites


Garlic Mustard


Japanese Knotweed


Eurasian Watermilfoil

N

0 1 2 4 6 8 Miles

Scale 1:340,000
1 inch = 5.37 Miles

Map produced by the SUNY-ESF Adirondack Ecological Center under the auspices of the UMP-GIS consortium.
Photos used with permission of The Nature Conservancy.
Ownership boundaries are not for legal use.
5/9/06

APPENDIX W: INVASIVE PLANTS BEST MANAGEMENT PRACTICES

APPLICABILITY

These Best Management Practices (BMP's) are intended for use by those applying for and implementing terrestrial invasive plant species management activities on State Lands under an Adopt-A-Natural-Resource Agreement (AANR). The following document contains acceptable practices for control of the following terrestrial invasive species: purple loosestrife *(Lythrum salicaria),* Japanese, giant and bohemian knotweed *(Fallopia japonica* ssp. *japonica, F. sachalinensis,* and *F.* x. *bohemica),* common reed *(Phragmites australis* ssp. *australis),* garlic mustard *(Alliaria petiolata*), Japaneses, Morrow's, tatarian, Amur and Bell's honeysuckles *(Lonicera japonica, L. morrowii, L. tatarica, L. maackii, L.* x. *bella),* and yellow iris *(Iris pseudacorus).*

The following management options, should be selected with consideration for the location and size of the infestations, the age of the plants, past control methods used at the site, time of year, weather conditions and adjoining and nearby land uses.

Other management approaches not identified here may be appropriate but must be approved by the Regional Land Manager of the DEC in the region where the proposed invasive plant control activity will take place.

Within the Park there are several geographic and geophysical settings (at the location of the target plant(s)) that need to be considered when determining appropriate BMP's and the regulatory instruments needed prior to their implementation. These settings and relevant action are:

1. In or within 100' of a wetland on private or public lands -- requires a general permit from the Adirondack Park Agency.
2. In wetlands with standing water -- only the Rodeo® glyphosate formulation may be used.
3. In wetlands with no standing water -- either the Rodeo®, Roundup® or the Aquamaster® formulation may be used.
4. In uplands either Roundup®, Aquamaster® or Glypro may be used.
5. Forest Preserve lands -- requires an AANR from the Department of Environmental Conservation and, if wetlands are involved, an Adirondack Park Agency permit.

GENERAL PRACTICES

1. ***Erosion Control*** - Some of the methods described below require actual digging or pulling of plants from the soil. In all cases they require removal of vegetation whether or not there is actual soil disturbance. Each situation must be studied to determine if the proposed control method and extent of the action will destabilize soils to the point where erosion is threatened. Generally if more than 25 square feet of soil surface is cleared or plant removal occurs on steep slopes staked silt fencing should be installed and maintained.

2. ***Revegetation*** - Although not a specific condition, replanting or reseeding with native species is highly desired. All of the control methods below are aimed at reducing or eliminating invasive species so that natives are encouraged to grow and re-establish stable conditions that are not conducive to invasive colonization. In most cases removal or reduction of invasive populations will be enough to release native species and re-establish their dominance on a site.

3. ***Herbiciding*** - The only herbicide application allowed is spot treatment to individual plants using a back pack or hand sprayer, wick applicator, cloth glove applicator, stem injection or herbicide clippers. *No broadcast herbicide applications using, for example, a truck-mounted sprayer, are allowed.* The only herbicides contemplated and approved for use are glyphosate which is marketed under the trade names Roundup®, Rodeo®, Glypro or Aquamaster® and triclopyr marketed under the trade name Garlon®. Roundup® may be used only in situations where there is no standing water including wetlands, whereas Rodeo® may be used where standing water is present. Garlon® is to be used only in upland situations. *In all cases all herbicide directions for use and restrictions found on the label must and shall be followed by a New York State Certified Applicator or Technician in an appropriate category.* Glyphosate and triclopyris are non-selective herbicides that are applied to plant foliage or cut stems and are then translocated to the roots. The application methods described and allowed are designed to reduce or eliminate the possibility that non-target species will be impacted by the herbicide use. All herbicide spot treatments require follow-up inspection later in the growing season or the following year to re-treat any individuals that were missed.

4. ***Equipment Sanitation*** - All equipment used for invasive species control, whether it be hand or power driven, must be cleaned prior to entering onto a control site and prior to leaving the site. This is an effort to reduce transport of invasive plant seeds or plant propagules and reduce the potential for new invasive introductions. Use steam or hot water to clean equipment.

5. ***Material Collection and Transportation*** - While on the control site place all cut plant material in heavy duty, 3 mil or thicker, black contractor quality plastic clean-up bags. Securely tie the bags and transport from the site in a truck with a topper or cap in order to prevent spread or loss of the plant material during transport from the control work site to the appropriate staging or disposal location. The main root structure, root fragments and/or horizontal rhizomes from harvested controlled Japanese, giant or bohemian knotweed infestation should be bagged only to facilitate transport to an appropriate staging area. All knotweed root structure, root fragments and rhizome propagules should be separately bagged from any cut, aerial canes and crowns. Over an open bag, remove as much adherent soil as possible from the root/rhizome structure prior to spreading the root/rhizome parts out onto a secure, impervious surface. Once completely dried out the root/rhizome structure may be burned or disposed of in an approved landfill.

The mature, upright stems and canes of common reed and the knotweeds can be cut, formed into bundles and securely bound with rope or twine. The bundles may then be transported to an appropriate staging or disposal location that has an impervious or near-impervious surfaced area. After the bundles have completely dried out they may be burned at an approved incinerator or burn pit with appropriate permit.

6. ***Composting*** - Because of the extremely robust nature of invasive species, composting in a typical backyard compost pile or composting bin is not appropriate. However, methods can be used whereby sun-generated heat can be used to destroy the harvested plant materials. For instance, storage in a sealed 3 mil thickness (minimum) black plastic garbage bags on blacktop in the sun until the plant materials liquefy is effective. If a larger section of blacktop is available, make a black plastic (4 mil thickness minimum) envelope sealed on the edges with sand bags. The plant material left exposed to the sun will liquefy in the sealed envelope without danger of dispersal by wind. The bags or envelopes must be monitored to make sure the plants do not escape through rips, tears or seams in the plastic. *When composting is suggested later in the text it is understood that liquefying the plant material in or under plastic is the desired action; not disposal in backyard composters or open landfill composting piles.*

CONTROL METHODS FOR PURPLE LOOSESTRIFE (*Lythrum salicaria*)

Plant Description

Purple loosestrife is a wetland perennial native to Eurasia that forms large, monotypic stands throughout the temperate regions of the U.S. and Canada. It has a vigorous rootstock that serves as a storage organ, providing resources for growth in spring and re-growth if the plant has been damaged from cuttings. New stems emerge from the perennial roots enabling the plant to establish dense stands within a few years. Seedling densities can approach 10,000-20,000 plants/m² with growth rates exceeding 1 cm/day. A single, mature plant can produce more than 2.5 million seeds annually which can remain viable after 20 months of submergence in water. In addition, plant fragments produced by animals and mechanical clipping can contribute to the spread of purple loosestrife through rivers and lakes.

Management Options

1. Digging/pulling

Effectiveness:

Can be effective in small stands i.e.,<100 plants, low-medium density(1-75% cover of the area), and <3 acres, especially on younger plants.

Methods:

Hand-pull plants <2 years old. Use mini-tiller for plants >2 years - gets most of roots w/minimum soil disturbance, has 3 heavy duty prongs on 1 side that are pushed under base of plant, then pry back on handle to leverage plant out of ground. Tamp down all disturbed soil surfaces. Use weed wrench for plants >2 years old - good with minimal soil disturbance. In mucky conditions, put base of wrench on small piece of wood (e.g. piece of 2x4) to keep wrench from sinking into mud. Use shovel for plants >2 years old - dig up plant, then replace soil and any existing cover.

Cautions:

May increase habitat disturbance & increase spread of loosestrife. Requires follow-up treatments of sites for 3 years to eliminate re-sprouting from rhizome fragments left behind. Must pull/dig ENTIRE rootstock or re-rooting will occur. Must pull/dig before the plants begin setting seed or must remove flower/seed heads first (cut and place into bags) to prevent spread of seeds. Also remove previous year's dry seed heads. Erosion control may be necessary if greater than 25 square feet of soil surface is disturbed.

Disposal:
Bag all plant parts & remove from site. Compost at DOT Residency, dispose of in a approved landfill or incinerate with appropriate permits.

Sanitation:
Clean all clothing, boots, tools, equipment and transport vehicle to prevent spread of seed.

2. Cutting

Effectiveness:
Can be effective in small stands, i.e. <100 plants, low-medium density (1-75% cover of the area), and <3 acres, especially on younger plants.

Methods:
Remove flower heads before they go to seed so seed isn't spread during the cutting or mowing activity. Must do repeated cutting & mulching to permit growth of grasses.

Cautions:
Need to repeat for several years to reduce spread of plants. Doesn't affect rootstalk & thus, cut pieces can be spread that will re-sprout. Once severed, stems are buoyant and may disperse to other areas and re-sprout. Removal of seed heads should be done as late in the growing season as possible yet before seed set. Early cutting without additional seed head harvest could allow re-sprouting with greater subsequent seed production.

Disposal:
Bag all plant parts & remove from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

3. Herbicide

Effectiveness:
Use when >100 plants and <3-4 acres in size.

Methods:

Use glyphosate formulations only. If possible spray seedlings before they reach 12" in height. Cut and bag flower heads before applying herbicide. Apply prior to or when in flower (late July/Aug) so plants are actively growing.

For spot application use:
- sponge tip applicator w/wick.
- injection into stem(w/large gauge needle).
- 32 oz. commercial-grade spray bottle with adjustable nozzle.

Cautions:
This herbicide is not selective (kills both monocots & dicots), thus should be applied carefully to prevent killing of non-target species. All treatment mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

4. Biocontrol

Two species of leaf-feeding beetle, *Galerucella calmariensis* and *G. pusilla*, have been shown to be effective in controlling purple loosestrife. Over five million of these beetles have been released in 30 states including New York, the northeastern and midwestern states as well as all of the Canadian Provinces. The beetles have shown dramatic decreases in purple loosestrife populations with subsequent increases in populations of native species. The scientific literature indicates that the beetles are very specific to purple loosestrife with only minor "spillover" effects that do not compromise non-target plant populations.

Effectiveness:
Use if site has at least a half acre of purple loosestrife of medium to thick density.
Best type of control for large patches of loosestrife, i.e. >3-4 acres.

Methods:
The number of beetles released per site should be based on the size of the site, the density of loosestrife and the economics of purchase. More beetles are generally better than fewer.

Cautions:
Use only if mowing, pesticide and herbicide use are not active practices on the site.
The site must not be permanently flooded and should be sunny. Use only if winged loosestrife, *(Lythrum alatum)* and waterwillow *(Decodon verticillatus)* are not major components of the plant community on the release site.

CONTROL METHODS FOR COMMON REED (*Phragmites australis* ssp. *australis*)

Plant Description
Phragmites is a perennial grass that can grow to 14 feet in height. Flowering and seed set occur between July and September, resulting in a large feathery inflorescence, purple-hued turning to tan. Phragmites is capable of vigorous vegetative reproduction and often forms dense, virtually monospecific stands. It is unclear what proportion of the many seeds that Phragmites produces are viable. *Please note that identification of phragmites should be done by a professional botanist prior to treatment to distinguish the invasive non-native race from the non-invasive native.*

Management Options

1. Cutting / Mulching

Effectiveness:
Need to repeat annually for several years to reduce spread of plants. Hand-pulling, though labor intensive, is an effective technique for controlling common reed in small areas with sandy soils. Can be effective in small stands, i.e.<100 plants, low-medium density (1-75% cover of the area), and less than three acres. The cutting of larger stands having high stem densities is not an effective control method unless coupled with an immediate application of glyphosate to the freshly-cut, stem cross sections or with a cut-stem injection of glyphosate.

Methods:
The best time to cut common reed is when most of food reserves are in aerial portion of plant when close to tassel stage, e.g. at end of July/early August to decrease plant's vigor. Some patches may be too large to cut by hand, but repeated cutting of the perimeter of a stand can prevent vegetative expansion. Common reed stems should be cut below the lowest leaf, leaving a 6" or shorter stump.

Hand-held cutters and gas-powered hedge trimmers work well. Weed whackers with a circular blade were found to be particularly efficient, though dangerous.

Cut and mulch dead stems in winter to remove them and promote germination of other species. Repeat in second year and then every 3-5 years.

Cautions:
Since common reed is a grass, cutting several times during a season, at the wrong times, may increase stand density. However, if cut in late July/early August, most of the food reserves produced that season are removed with the aerial portion of the plant, reducing the plant's vigor. This cutting regime may eliminate smaller colonies if carried out annually for several years. Manual or mechanical cuttings of larger, high density, monospecific common reed stands without the application of glyphosate, is not recommended.

Disposal:

Cut material should be removed from the site and composted or allowed to decay on the upland to prevent sprouting and formation of rhizomes. Do not attempt to compost rhizomes.

Sanitation:
Clean all clothing, boots, and equipment to prevent spread of seed.

2. Herbicide

Effectiveness:
Herbicide use is a two-year, two-step process because the plants may need a "touch-up" application, especially in dense stands since subdominant plants are protected by thick canopy & may not receive adequate herbicide in the first application.

Methods:
Use glyphosate formulations only. Apply after tasseling stage when nutrients going back to rhizome and will translocate herbicide into roots. After 2 to 3 weeks following application of glyphosate, cut or mow down the stalks to stimulate the emergence and growth of other plants previously suppressed. If the plants are too tall to spray, cut back in mid summer and apply glyphosate using a spray bottle for individual foliar spot treatments or swab, syringe w/large gauge needle or Nalgene wide-mouth, Unitary wash bottle to apply 1-2 drops of 50% glyphosate solution directly into each cut stem.

Cautions:
This herbicide is not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants. Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

3. Black Plastic

Effectiveness:
Can be effective in small stands, i.e. <100 plants, low-medium density (1-75% cover of the area). Plants die off within 3-10 days, depending on sun exposure.

Methods:
Cut plants first to 6-8" (hand-pushed bush hog or week whacker w/blade). After cutting a stand of common reed, anchor a sheet of black plastic or dark tarp over the cut area using sand bags or rocks. High temperatures under the plastic will eventually kill off the plants. This technique works best when the treated area is in direct sunlight. Plastic should be at least 6 millimeters thick. Hold plastic in place with sandbags, rocks, biodegradable stakes, etc. Can treat runners along the plastic edges with a spot application of Rodeo® or Roundup®. The plastic can be

removed the following year when the covered plants have been killed. A few common reed shoots may return. These can be cut, hand-pulled or re-treated with appropriate herbicide.

Cautions:
Must monitor to determine if shoots are extending out from under the plastic.

Disposal:
Can leave cut material under plastic or bag all plant parts & remove from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits.

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

4. Pulling

Effectiveness:
Can be effective in small stands, i.e. <100 plants. Very labor intensive control method, best results when infestation occurs in sandy soils.

Methods:
Hand-pull plants <2 years old. Use shovel for plants >2 years old-dig up plant, then replace soil and any existing cover.

Disposal:
Bag all plant parts & remove from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

6. Excavation

Effectiveness:
Can be effective for patches up to ½ acre. Cost is the limiting factor.

Methods:
When working in wetlands only tracked equipment shall be used. Rubber-tired excavators can operate from adjacent pavement or upland areas.

Cautions:
The patch should be excavated to below the depth of rhizome development. Follow-ups later in the season or the following year must be conducted to verify that all the plants have been removed

Disposal:
Bag all plant parts & remove from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

CONTROL METHODS FOR GARLIC MUSTARD (*Alliaria petiolata*)

Plant Description
Garlic mustard is a naturalized European biennial herb that typically invades partially shaded forested and roadside areas. It is capable of dominating the ground layer and excluding other herbaceous species. Its seeds germinate in early spring and develops a basal rosette of leaves during the first year. Garlic mustard produces white, cross-shaped flowers between late April and June of the following spring. Plants die after producing seeds, which typically mature and disperse in August. Normally its seeds are dormant for 20 months and germinate the second spring after being formed. Seeds remain viable for up to 7 years.

Management Options

1. Pulling.

Effectiveness:
Hand pulling is an effective method for removing small populations of garlic mustard, since plants pull up easily in most forested habitats. It is best to pull plants when seed pods are not yet mature, but they can be pulled during most of the year.

Methods:
Soil should be tamped down firmly after removing the plant. Soil disturbance can bring existing garlic mustard seed bank to the surface, thus creating a favorable environment for additional germination within the control site.

Cautions:
Care should be taken to minimize soil disturbance but to remove all root tissues. Re-sprouting may occur from mature plants root systems if not entirely removed. Cutting is preferred to pulling when garlic mustard infestations are interspersed amongst native grasses/forbs or other sensitive or rare flora.

Disposal:
If plants have capsules present, they should be bagged and disposed of to prevent seed dispersal. Bag all plant parts & remove from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, & equipment to prevent spread of seed.

2. Cutting

Effectiveness:
Cutting is effective for medium-to large-sized populations depending on available time and labor resources. Dormant seeds in the soil seed bank are unaffected by this technique due to minimal disturbance of the soil.

Methods:
Cut stems when in flower (late spring/early summer) at ground level either manually (with clippers or a scythe) or with a motorized string trimmer. This technique will result in almost total mortality of existing plants and will minimize re-sprouting.

Cautions:
Cuttings should be conducted annually for 5 to 7 years or until the seed bank is depleted.

Disposal:
Cut stems should be removed from the site when possible since they may produce viable seed even when cut. Bag all plant parts & remove from site (compost at DOT Residency, dispose in approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

3. Herbicide

Effectiveness:
Roundup will not affect subsequent seedling emergence of garlic mustard or other plants.

Methods:
Use glyphosate formulations only. Should be applied after seedlings have emerged, but prior to flowering of second-year plants. Application should be by spray bottle or wick applicator for individual spot treatments.

Cautions:
This herbicide is not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

CONTROL METHODS FOR JAPANESE, GIANT AND BOHEMIAN KNOTWEED (*Fallopia japonica* ssp. *japonica, F. sachalinensis,* and *F.* x. *bohemica)*

Plant Description

The knotweeds are herbaceous perennials which forms dense clumps 1-3 meters (3-10 feet) high. Its broad leaves are somewhat triangular and pointed at the tip. Clusters of tiny greenish-white flowers are borne in upper leaf axils during August and September. The fruit is a small, brown triangular achene. Knotweed reproduces via seed and by vegetative growth through stout, aggressive rhizomes. It spreads rapidly to form dense thickets that can alter natural ecosystems. Japanese knotweed can tolerate a variety of adverse conditions including full shade, high temperatures, high salinity, and drought. It is found near water sources, in low-lying areas, waste places, and utility rights of way. It poses a significant threat to riparian areas, where it can survive severe floods.

Management Options

1. Digging

Effectiveness:
This method is appropriate for very small populations.

Methods:
Remove the entire plant including all roots and runners using a digging tool. Juvenile plants can be hand-pulled depending on soil conditions and root development.

Cautions:
Care must be taken not to spread rhizome or stem fragments. Any portions of the root system or the plant stem not removed will potentially re-sprout.

Disposal:
All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (stockpile at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, & equipment to prevent spread of seed.

2. Cutting

Effectiveness:
Repeated cutting may be effective in eliminating Japanese knotweed. Manual control is labor intensive, but is a good option where populations are small and isolated or in environmentally sensitive areas.

Methods:
Cut the knotweed close to the ground at least 3 times a year. Plant native species as competitors as an alternative to continued treatment.

Cautions:
This strategy must be carried out for several years to obtain success. Both mechanical and herbicidal control methods require continued treatment to prevent reestablishment of knotweed.

Disposal:
Bag all plant parts and remove from site (stockpile at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation:
Clean all clothing, boots, and equipment to prevent spread of seed.

3. Herbicide

Effectiveness:
Glyphosate treatments in late summer or early fall are much more effective in preventing re-growth of Japanese knotweed the following year.

Methods:
Use glyphosate formulations only. In late June/early July cleanly cut or mow down existing stalks/canes. Allow the knotweed to re-grow. After August 1, spray knotweed all re-growth with Roundup® or Rodeo®.

A cut-stem treatment utilizing glyphosate formulations can be an effective control for smaller colonies of knotweed. In early to mid-July cut the existing stems just below the 2nd or 3rd node above the soil surface. Immediately after cutting apply by swab or small spray bottle a 50% solution of glyphosate to the freshly-cut cross section and into the internodal cavity of each stalk/cane. Monitor treatment area by early to mid-August and repeat cut-stem treatment to any residual stems.

Stem injection is another promising control method for smaller colonies of knotweeds. Currently, a supplemental label for Aquamaster® (glyphosate) herbicide exists for this stem injection method. In late June/early July inject 5 mls of Aquamaster® below the second node above the ground of each stem in the clump. Use suitable equipment that must penetrate into the internode region. JKInternational manufactures a stem injection tool that is suitable and recommended for this control method.

Cautions:
Established stands of Japanese knotweed are difficult to eradicate even with repeated herbicide treatments. However, herbicide treatments will greatly weaken the plant and prevent it from

dominating a site. Adequate control is usually not possible unless the entire stand of knotweed is treated (otherwise, it will re-invade via creeping rootstocks from untreated areas).
These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

CONTROL METHODS FOR JAPANESE, MORROW'S, TATARIAN, AMUR AND BELL'S HONEYSUCKLES (*Lonicera morrowii, L. tatarica, L. japonica, L. maackii, L. x. bella*)

Plant Description - Japanese Honeysuckle
Japanese honeysuckle *(Lonicera japonica)* is a perennial trailing or climbing woody vine of the honeysuckle family (Caprifoliaceae) that spreads by seeds, underground rhizomes, and aboveground runners. It has opposite leaves that are ovate, entire (young leaves often lobed), 4-8 cm long, with a short petiole, and variable pubescence. In the southern part of the range the leaves are evergreen, while in more northern locales the leaves are semi-evergreen and fall off in midwinter. Young stems are reddish brown to light brown, usually pubescent, and about 3 mm in diameter. Older stems are glabrous, hollow, with brownish bark that peels in long strips. The woody stems are usually 2-3 m long, (less often to 10 m). *Lonicera japonica* creates dense tangled thickets by a combination of stem branching, nodal rooting, and vegetative spread from rhizomes.

Lonicera japonica (including the varieties) is easily distinguished from native honeysuckle vines by its upper leaves and by its berries. The uppermost pairs of leaves of *Lonicera japonica* are distinctly separate, while those of native honeysuckle vines are connate, or fused to form a single leaf through which the stem grows. *Lonicera japonica* has black berries, in contrast to the red to orange berries of native honeysuckle vines. The fruits are produced September through November. Each contains 2-3 ovate to oblong seeds that are 2-3 mm long, dark-brown to black, ridged on one side and flat to concave on the other.

The fragrant white (fading to yellow) flowers of *Lonicera japonica* are borne in pairs on solitary, axillary peduncles 5-10 mm long, supported by leaflike bracts. The species has white flowers tinged with pink and purple. Individual flowers are tubular, with a fused two-lipped corolla 3-4(-5) cm long, pubescent on the outside. Flowers are produced late April through July, and sometimes through October.

Management Options

1. Mowing and Pulling

Effectiveness
Removing the above-ground portion of *Lonicera japonica* reduces current-year growth but does not kill the plant, and generally stimulates dense regrowth. Cut material can take root and should therefore be removed from the site (not practical with most infestations).

Methods
Hand pulling is highly effective. Pull out Japanese honeysuckle by the roots in winter wherever it climbs, aim the roots upward and tie them in place. The absence of light energy causes the trailing vines to decline precipitously next year. This method greatly reduces spraying requirements.

Cautions
Mowing is an ineffective control method, stimulating growth and encouraging formation of dense, albeit shorter, mats. Bush-hogging is an ineffective control, as *Lonicera japonica* re-invades within one growing season.

2. Herbicide

Effectiveness
In northern states, *Lonicera japonica* retains some leaves through all or most of the winter (semi-evergreen or evergreen), when most native plants have dropped their leaves. This provides a window of opportunity from mid-autumn through early spring when it is easier to spot and treat with herbicides, fire or other methods without damaging native species.

Controls
A foliar application of 1.5% glyphosate shortly after the first frost appears to be the most effective treatment, applied after native vegetation is dormant and when temperatures are near and preferably above freezing. Applications within 2 days of the first killing frost are more effective than applications later in the winter. *Lonicera japonica* is less susceptible to herbicides after the first hard frost (-4^{o}C).

Cautions
Soil disturbance should be avoided in infested areas to minimize germination of seed in the seedbank. Treated plants should be re-examined at the end of the second growing season, as plants can recover from herbicide application.

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

Plant Descriptions - Bush Honeysuckles

Exotic bush honeysuckles (Morrow's, Bell's, Amur and tatarian) are upright, multi-stemmed, oppositely branched, deciduous shrubs that range in height from 2 m to 6 m. The opposite leaves are simple and entire, and paired, axillary flowers are showy with white, pink, or yellow corollas. The fruits of *Lonicera* spp. are red, or rarely yellow, fleshy berries (Gleason and Cronquist 1991).

In flower, exotic bush honeysuckles can be distinguished from all native bush honeysuckles except swamp fly-honeysuckle (*L. oblongifolia*) by their hirsute (hairy) styles. In fruit, the red or rarely yellow berries of the exotics separate them from the blue- or black-berried natives waterberry (*L. caerulea*) and bearberry honeysuckle (*L. involucrata*). The exotic bush honeysuckles also generally leaf-out earlier and retain their leaves longer than the native shrub honeysuckles.

Within the exotic bush honeysuckles, *L. maackii* alone has acuminate, lightly pubescent leaves that range in size from 3.5 to 8.5 cm long and peduncles generally shorter than 6 mm. Its flowers are white to pink, fading to yellow, 15-20 mm long. Its berries are red or with an orange cast. Height ranges to 6 m.

In North America, there has been considerable confusion regarding the correct identification of *L. morrowii, L. tatarica,* and *L.* x *bella,* their hybrid. The literature contains a number of references to plants called by the name of one of the parents, but described as having characters more like those of the hybrid. *L.* x *bella*. The hybrid therefore, may be more common than the literature would indicate, and accurate field identification may be similarly problematic.

The two parent species of *L.* x *bella,* however, are dissimilar. *L. morrowii* has leaves that are elliptic to oblong gray-green, soft-pubescent beneath, and are 3-6 cm long. Its flowers are pubescent, white fading to yellow, 1.5-2 cm long, on densely hairy peduncles 5-15 mm long. The fruits are red. The height ranges to 2 m. *L. tatarica* has leaves that are ovate to oblong, glabrous, and are 3-6 cm long. Its flowers are glabrous, white to pink, 1.5-2 cm long, on peduncles 15-25 mm long. The fruits are red or rarely yellow. Height ranges to 3 m.

L. x *bella* has intermediate characteristics. The leaves are slightly hairy beneath. Flowers are pink fading to yellow, on sparsely hairy peduncles 5-15 mm. long. Fruits are red or rarely yellow. Height ranges to 6 m.

Management Options

1. Grubbing, Pulling, Cutting

Effectiveness

Mechanical controls include grubbing or pulling seedlings and mature shrubs, and repeated clipping of shrubs. Effective mechanical management requires a commitment to cut or pull plants at least once a year for a period of three to five years.

Methods
Grubbing or pulling by hand (using a Weed Wrench or a similar tool) is appropriate for small populations or where herbicides cannot be used. Mature *L. maackii* shrubs growing in shaded forest settings can be eradicated by clipping once a year, during the growing season, until control is achieved. Other bush honeysuckles growing in more open settings can be managed by clipping twice yearly, once in early spring and again in late summer or early autumn.

Cautions
Any portions of the root system not removed can resprout. Because open soil can support rapid re-invasion, managers must monitor their efforts at least once per year and repeat control measures as needed. Winter clipping should be avoided as it encourages vigorous re-sprouting.

2. Herbicides

Effectiveness
Most managers report that treatment with herbicides is necessary for the control of *L. maackii* populations growing in full sun and may be necessary for all large bush honeysuckle populations.

Controls
Use formulations of glyphosate (brand names Roundup®, and for use near waterbodies, Rodeo®) as foliar sprays or cut stump sprays and paints with varying degrees of success. Glyphosate is a non-selective herbicide which kills both grasses and broad-leaved plants. For cut stump treatments, 20-25% solutions of glyphosate can be applied to the outer ring (phloem) of the cut stem. A 2% solutions of glyphosate can be used for foliar treatments. Glyphosate should be applied to the foliage late in the growing season, and to the cut stumps from late summer through the dormant season.

Cautions
The subsequent flush of seedlings following all herbicide treatments must also be controlled. These herbicides are not selective (kills both monocots & dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

CONTROL METHODS FOR YELLOW IRIS (*Iris pseudacorus*)

Plant Description
Yellow iris *(Iris pseudacorus)* is a robust, clumping perennial herb in the Iridaceae (Iris family). *Iris pseudacorus* is easy to identify in flower, since it is the only totally yellow-flowered *Iris* in wildlands in the United States (Ramey 2001). At maturity, *I. pseudacorus* grows to a height of 0.40-1.5 meters (1.3-4.9 ft) tall. Its thick fleshy rhizomes often form dense horizontal mats, with each rhizome measuring 1 to 4 cm in diameter with roots that may extend vertically 10-20 (30) cm deep. The stiff, sword-like leaves are glaucous, number approximately 10 per ramet, are about 50-100 cm long by 10-30 mm wide, have raised midribs, and are arranged with sheathing and overlapping leaf bases (Crawford 2000; Jepson 1993; Sutherland 1990; Hitchcock and Cronquist 1973; Bailey 1949).

Flowers of *I. pseudacorus* are borne on tall erect peduncles. Each inflorescence may have one to several large, showy flowers (Hitchcock and Cronquist 1973). The flowers measure 8-10 cm in diameter and vary from pale yellow to almost orange in color (Sutherland 1990; Bailey 1949). The flowers are bisexual. The perianth segments (3 sepals and 3 petals) are fused at the base, and form a flaring tube with the sepals spreading and reflexed. The 3 stamens are each individually fused by their filaments to the sepals, and the showy tongue-shaped sepals are often adorned with brown spots or purple veins, and are generally less than 6 cm long. The petals are erect and less conspicuous, and are narrower than the sepals. The 3 style branches are petal-like with two-lobed lips, are mostly <25 mm long, and are opposite and curved over the sepals (Jepson 1993; Hitchcock and Cronquist 1973). *I. pseudacorus* has an inferior, 3-chambered ovary. Fruits are elongated capsules.

Seeds of *I. pseudacorus* are pitted, pale brown, disc-shaped (roughly circular and flattened), and measure approximately 2.0-5.0 mm in diameter and 0.5-3.0 mm tall (Crawford 2000; Jepson 1993; Bailey 1949). Seeds are arranged in three densely packed vertical rows within the seed pod or capsule (Sutherland 1990). These erect capsules at maturity are a glossy green color and measure 4-8 cm in length, 5.0-8.0 mm in width, and are 3-angled and cylindrical (Jepson 1993; Hitchcock and Cronquist 1973).

Management Options

1. Digging, Pulling, Cutting

Effectiveness
Manual or mechanical methods that remove the entire *I. pseudacorus* rhizome mass can successfully control small, isolated patches.

Methods
Pulling or cutting *I. pseudacorus* plants may provide adequate control, but only if it is repeated every year for several years to weaken and eventually kill the plant. Dead-heading (removing the flowers and/or fruits) from plants every year can prevent seed development and seed dispersal, but will not kill those plants.

Cutting the foliage, followed by a herbicide application (see below for details), can provide good control with minimal off-target effects.

Cautions
These methods, however, are very time and labor-intensive, since even small rhizome fragments can resprout. Additionally, digging disturbs the soil, may fragment rhizomes, and promote germination of *I. pseudacorus* and other undesirable species from the soil seed bank.
Care should be taken when pulling, cutting, or digging *I. pseudacorus*, since resinous substances in the leaves and rhizomes can cause skin irritation.

2. Herbicide

Effectiveness
Iris pseudacorus can be effectively controlled by herbicides. Since it usually grows in or adjacent to water, an aquatic-labeled herbicide and adjuvant must be used. Glyphosate (for example, tradenames Rodeo®, Aquamaster® or Glypro®) applied in a 25% solution (13% a.i.) using a dripless wick/wiper applicator, or applied in a 5-8% solution if sprayed, when used with the appropriate non-ionic surfactant adjuvant, can effectively kill *I. pseudacorus*. *I. pseudacorus* can be effectively controlled by stem injection utilizing Aquamaster® applied at 0.5 to 0.7 ml of product per flowering stem.

Controls
The timing and choice of application technique will determine control efficacy and should work to minimize off-target effects. *Iris pseudacorus* can be controlled by either directly applying the herbicide to foliage, or by immediately applying herbicide to freshly cut leaf and stem surfaces. Herbicides can be directly applied to *I. pseudacorus* foliage or cut stems by a dripless wick system or using a backpack sprayer.

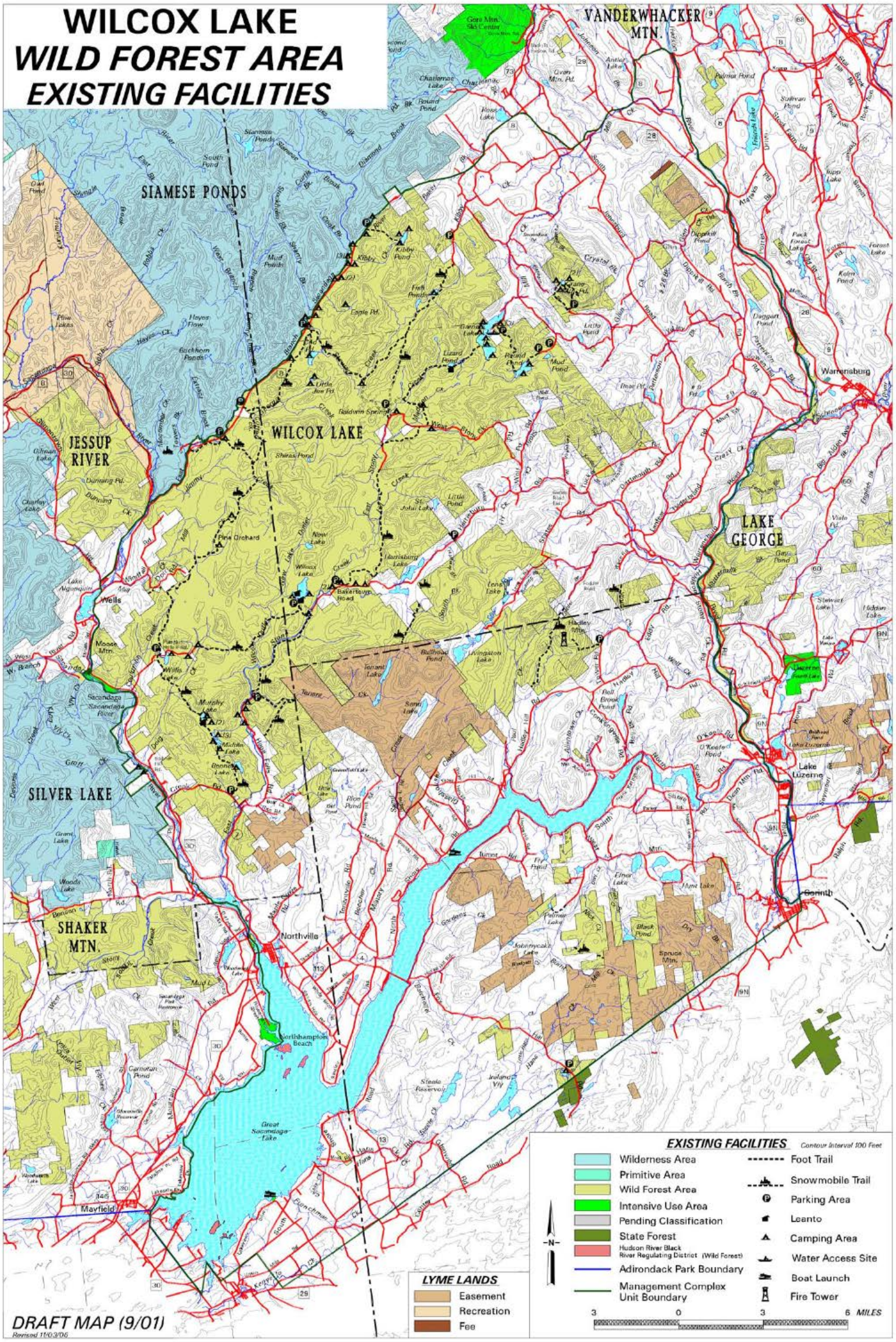
Cautions
These herbicides are not selective (kills both monocots & dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

Be sure to always take appropriate precautions and wear suitable clothing and equipment, and follow all instructions on the herbicide label. Use a biodegradable tracer dye in the herbicide mix so you can watch for accidental contact or spill of the herbicide.

APPENDIX X: EXISTING FACILITIES MAP

WILCOX LAKE
WILD FOREST AREA
EXISTING FACILITIES

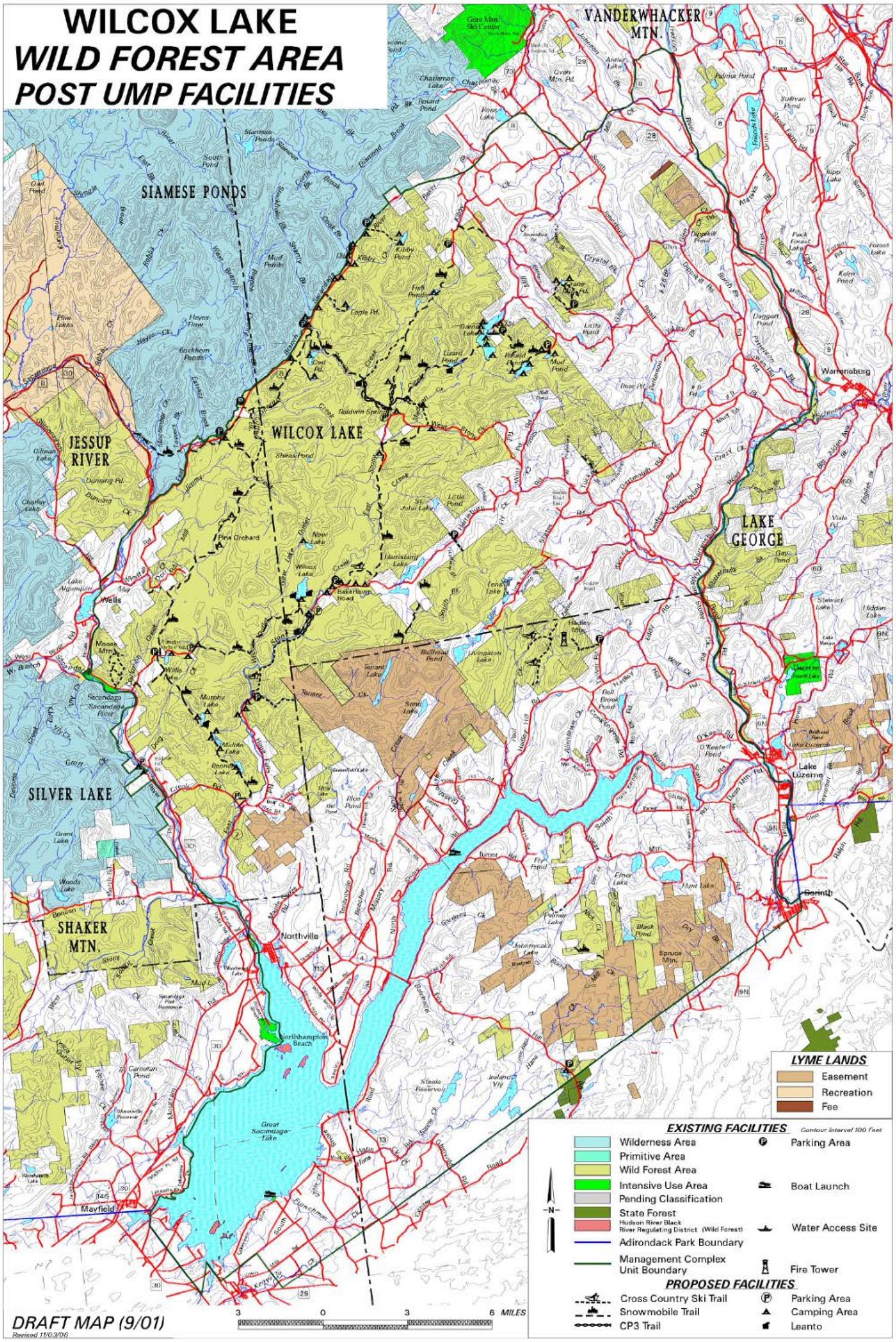


DRAFT MAP (9/01)

Revised 11/03/06

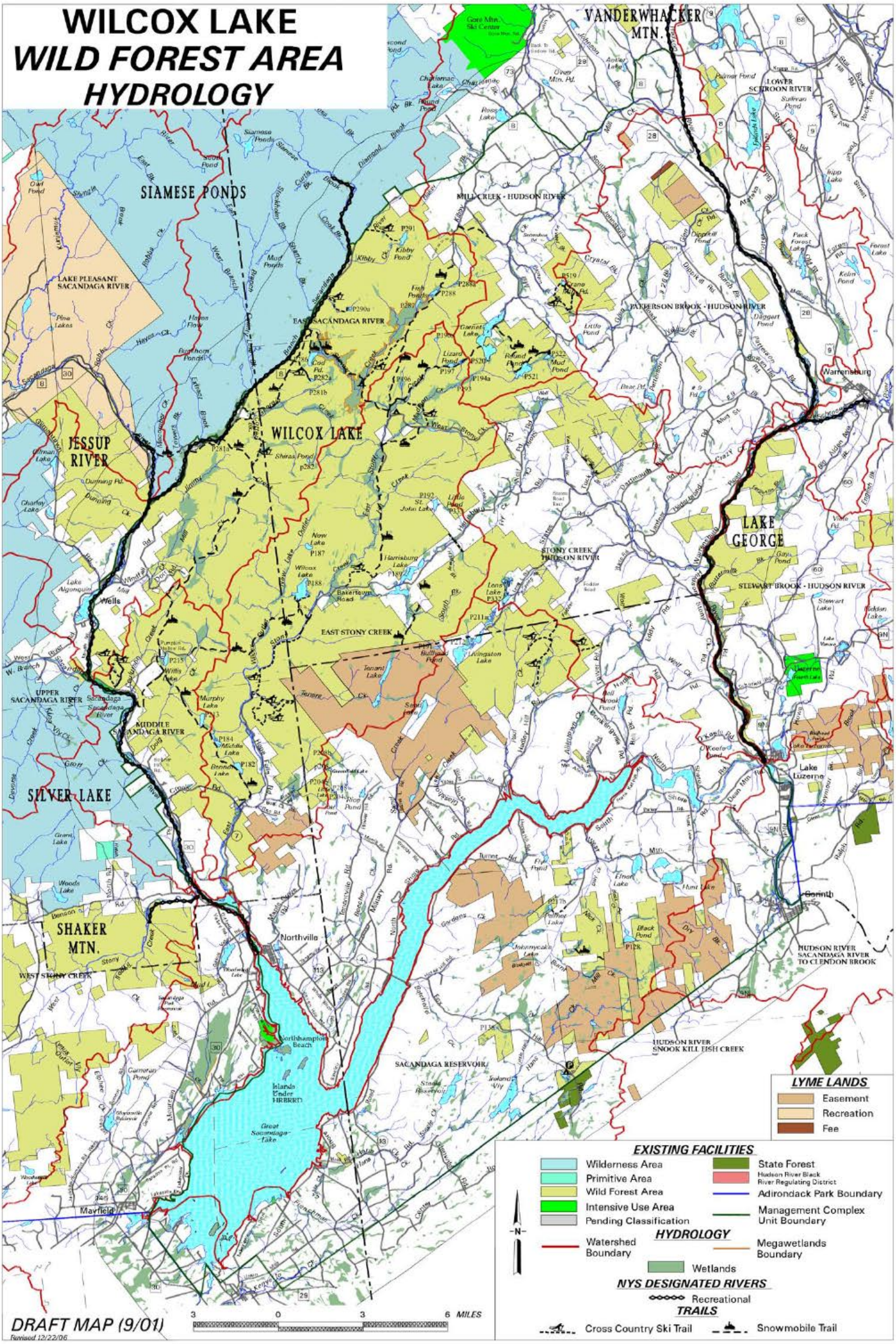
APPENDIX Y: POST-UMP FACILITIES MAP

WILCOX LAKE
WILD FOREST AREA
POST UMP FACILITIES



APPENDIX Z: HYDROLOGY AND WETLANDS MAPS

WILCOX LAKE
WILD FOREST AREA
HYDROLOGY



Wetlands Map for the Wilcox Lake Wild Forest

N

Map Legend

Wetland Types

- Lacustrine (Limnetic) - Open Water, Unknown Bottom
- Palustrine - Aquatic Bed
- Palustrine - Emergent
- Palustrine - Forested, Broad-leaved Deciduous
- Palustrine - Forested, Needle-leaved Deciduous
- Palustrine - Forested, Needle-leaved Evergreen
- Palustrine - Forested, Dead
- Palustrine - Open Water, Unknown Bottom
- Palustrine - Scrub-Shrub, Broad-leaved Deciduous
- Palustrine - Scrub-Shrub, Needle-leaved Deciduous
- Palustrine - Scrub-Shrub, Broad-leaved Evergreen
- Palustrine - Scrub-Shrub, Needle-leaved Evergreen
- Palustrine - Scrub-Shrub, Dead
- Palustrine - Unconsolidated Bottom, Cobble-Gravel
- Palustrine - Unconsolidated Bottom, Sand
- Palustrine - Unconsolidated Shore, Cobble-Gravel
- Palustrine - Unconsolidated Shore, Sand
- Riverine (Lower Perennial) - Open Water
- Riverine (Upper Perennial) - Open Water
- Planning Area Boundary
- Streams
- Forest Preserve

0 10 20 Miles