

## ADOPTION CITATION

In accordance with the provisions of 12 M.R.S.A., Chapter 202-B and consistent with the Bureau of Public Lands' Planning Policy and Integrated Resource Policy, this management plan is hereby adopted.

RECOMMENDED: Thomas A. Morrison DATE: 11/27/95

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APPROVED: Ronald B. Lovaglio DATE: 11/30/95

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## *Preface*

This document is the first ten-year plan for management of the Nahmakanta Management Unit (the unit), which includes 42,766 acres in T1 R11 WELS, Rainbow Township (T2 R11 WELS) and T1 R12 WELS. It meets the requirements for multiple-use management plans set forth in Title 12 M.R.S.A., Chapter 202-B, section 585, and is consistent with the Planning Policy adopted June 1985 and the Integrated Resource Policy adopted December 1985 by the Bureau of Public Lands (the bureau). These laws and policies direct the bureau to provide a sustained yield of forest products, to enhance fish and wildlife resources, and to provide opportunities for quality outdoor recreation experiences, among other public benefits.

The purposes of this plan are twofold. First and foremost, it is a commitment to the public, who owns the land, that it will be managed wisely. In that regard, this plan is written to be readily understood by everyone who reads it (see Appendix III for definitions of unfamiliar terms). Second, this plan is a directive to the bureau staff; it provides clear goals and objectives to pursue in fulfilling their responsibilities as stewards and managers of the unit. If significant changes to this plan are necessary they will be made only after providing opportunity for further public participation.

This is not a plan of operations. It is written to permit professional managers the degree of flexibility needed to respond to unforeseen situations and to still achieve long-term goals. All specific management proposals necessary to implement this plan will undergo further interdisciplinary review to ensure balanced consideration of the resources and uses of the property.

This plan is intended to guide management for at least the next 10 years. After that time,

bureau policies require a complete review and update of management plans, as appropriate. If substantial changes to a plan are warranted, then the bureau will revise the plan with the assistance of a public advisory committee, and hold a public meeting to receive public comment to ensure that stated goals and objectives are appropriate for prevailing conditions. This is especially important as some of the goals for forest and wildlife management will require decades to achieve.

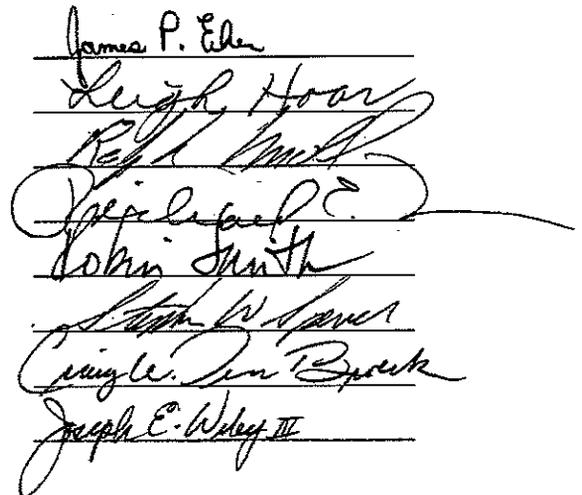
In this plan, it is the bureau's intent that the Debsconeag Lakes area, which is designated for backcountry recreation--where no timber harvesting will occur--continue to be so designated in future revisions of this plan.

The bureau acknowledges the helpful participation of the Public Advisory Committee (listed in Appendix IV), and other professional resource managers in the development of this plan. Following public comment on the final draft plan the bureau incorporated constructive suggestions. We thank everyone who has participated for their assistance, and appreciate the importance of their contributions. Continued public support is needed to achieve many of the goals and objectives outlined in this plan.

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A column of seven handwritten signatures, each written over a horizontal line. From top to bottom, the signatures are: James P. Ecker, Leigh Hoar, Ralph Knoll, Richard Morse, Robin Smith, Stephen Spencer, and Joseph E. Wiley III.

## 1. CHARACTER OF THE LAND BASE

(See Appendix I, Map #1 - Location)

The Nahmakanta Management Unit, located southwest of Baxter State Park in central Piscataquis County, contains approximately 42,766 acres making it the largest consolidated land area managed by the Bureau of Public Lands.

The unit is comprised of 29,629 acres in T1 R11 WELS and the portion of Rainbow Township (T2 R11 WELS) south of Stratton Brook acquired in 1990 by the State through the Land for Maine's Future Program from Diamond Occidental Forest, Inc. (now James River Timber Corporation). The unit also contains a substantial portion of land in T1 R12 WELS (see Appendix I, Map 1 - Location), including approximately one-third of the original public lot (321 acres) and 12,816 acres acquired by the bureau in 1984 from Great Northern Paper Company.

The unit is bisected by 1820 acres of the Appalachian Trail Corridor owned in fee simple by the National Park Service. (Management of these lands is covered under a separate plan prepared by the Maine Appalachian Trail Club for the National Park Service, see Appendix II. These acres are not included in the total for the unit.) Within the unit, James River Timber Corporation has retained a 103-acre in-holding at the north end of Nahmakanta Lake (these acres are also not included in the total for the unit); the land is subject to a National Park Service conservation easement (see Appendix I, Map 2 - Features). Nahmakanta Lake Sporting Camps are located on the James River property, and are operated under a lease arrangement.

Some impressive landscape features of the unit include Turtle Ridge in the southern part, Wadleigh Mountain in the center, and a remote roadless area northeast of Nahmakanta Lake and

Rainbow Stream in the Debsconeag Lakes region. T1 R12 WELS is an area with a network of old roads, which for most of their length are impassable, with Farrar Mountain on the west and Black and Female Ponds in the north.

A nine-mile section of the Appalachian National Scenic Trail--part of the so-called 100 mile wilderness stretching from Monson to Katahdin--traverses the unit. The trail follows the western shore of Nahmakanta Lake, then crosses the top of Nesuntabunt Mountain, offering spectacular views of Katahdin and the unit's landscape.

The character of the land base is derived from the bedrock and from the effects of glaciation which created the basins of lakes and ponds, and deposited sands and gravels, cobbles, boulders and other materials over the bedrock. Site productivity for forest and other vegetative cover is largely a function of the quality of the soils formed over the residual glacial materials.

The bedrock underlying approximately 80% of the unit, essentially all of that portion of the unit in T1 R11 WELS and Rainbow Township, is the Katahdin pluton. A pluton is a large body of igneous rock (derived from molten magma) intruded into the earth's crust. This large body of granitic rock extends northeastward to Baxter Peak and the surrounding mountains. On the Nahmakanta unit, portions of this granitic pluton are exposed at the surface due to erosion of surficial materials. Its mineral composition contributes to the formation of acidic soils, which are relatively low in productivity. The relative resistance of this formation to weathering controls the topography of T1 R11 WELS and Rainbow Township. The terrain is rugged; ledge outcrops are common, and there are many cliffs, talus slopes, granite slides and balds.

The bedrock geology of T1 R12 WELS is more complex. In the southern portion of the unit in T1 R12 WELS, the bedrock is a fine-grained, dark gray sedimentary slate with lighter brown sandy layers, and a thin layer of limy sandstone. The weathering of these rocks results in

better quality, finer textured soils compared to granites. Because sedimentary rocks are a mixture of rock types with different mineral compositions, they provide a greater nutrient supply than granites; which results in better plant growth and a greater annual addition of organic matter to the soil. In the vicinity of Black and Female Ponds the bedrock is unnamed, metamorphosed sedimentary rocks. In addition, the Ripogenus pluton, composed primarily of gabbro (a dark igneous rock), borders the western shores of Pollywog and Wadleigh Ponds. The weathering of this rock results in soils higher in clay content and less acidic and sandy than granite-derived soils.

Bedrock has the most significant effect on drainage and soil types where the soil cover is thin. This is the case on Wadleigh Mountain where the largest area of bedrock on the unit is near the surface or exposed; soils are droughty and generally low in fertility.

Glacial ice advanced across the region from northwest to southeast and retreated 13,000-14,000 years ago, leaving a blanket of glacial materials over the bedrock. T1 R11 WELS is covered by a thin till (generally less than 10 feet thick), while the portion of the unit on T1 R12 WELS is covered by a thicker till. Tills are composed of an unsorted mass of rocks, sand, silt and clay. In some places, however, water sorting occurred, which has resulted in stratified deposits of these materials.

The unit's topography is extremely diverse, characterized by many steep hills and narrow valleys through which small streams flow. The highest elevation on the unit is 2,524 feet at the top of the west peak of Farrar Mountain. The next highest peak is Wadleigh Mountain at 1,866 feet. The elevations gradually decrease from west to east, with a topographic low of 590 feet where Nahmakanta Stream crosses into T1 R10 WELS. Elevations over the unit average 1,300

feet.

All of the streams draining the unit are headwater tributaries of the West Branch of the Penobscot River. There are four separate drainage systems: Black Pond is drained by Black Brook which flows northward into Caribou Lake; Rabbit and Leavitt Ponds drain into Mud Pond via Pratt Brook; the Debsconeag Lakes eventually drain into the Debsconeag Deadwater on the West Branch of the Penobscot River; and Rainbow Stream, Penobscot Pond, the Musquashes, Wadleigh Pond and Pollywog Pond drain into Nahmakanta Lake, which flows into Pemadumcook Lake via Nahmakanta Stream. Most of the streams flow swiftly through deep, narrow, boulder strewn channels. Pollywog and Tumbledown Dick Streams have cut deep gorges through the granite bedrock. Pollywog Gorge stretches for more than a mile with cliffs rising as high as 180 feet above the valley floor; approximately one-third of the gorge is on State-owned land, the remainder being within the National Park Service AT Corridor. Tumbledown Dick is a much narrower gorge with nearly vertical granite walls.

Extensive wetland systems border the many miles of streams on the unit. There are dozens of cedar and alder swamps, open marshes, and streamside fens and bogs. Beaver impoundments and flowages have also created a mosaic of upland and wetland habitats. The largest wetland system on the unit is along Farrar Brook in T1 R12 WELS.

There are 56 lakes and ponds (over 1/4 acre in size) on the unit with a combined frontage of 45 miles and 1,460 surface acres. Twenty-four of these water bodies are great ponds (10 acres or greater in size). Nahmakanta Lake, with over 1,000 surface acres (not included in the above totals), is a significant recreational resource; however, nearly all of the frontage is owned by the National Park Service (none is owned by the State of Maine). There are fishing opportunities for brook trout in many of the smaller ponds and for togue and salmon in Nahmakanta Lake.

The forests, which cover 96% of the unit, are a product of the geomorphology, soils, cutting history, fires and spruce budworm episodes. The unit lies within a region best described as the spruce-fir, northern hardwoods forest. At the turn of the century, early surveyors called T1 R11 WELS and T2 R11 WELS "good spruce towns", and considered the soils too poor to support extensive northern hardwood stands. By 1913 the Nahmakanta forests were already second growth. Remnants of old growth are restricted to steep slopes and boulder-strewn terrain.

Three major forest fires on the unit during the earlier part of this century have resulted in extensive burn-origin stands comprised primarily of 60 to 90 year old aspen along with other hardwoods. The other stand type that occurs in extensive tracts is mixedwood. "Pure" stands of hardwoods (other than aspen) and softwoods occur mainly in scattered, smaller tracts.

Hardwoods dominated by beech and yellow birch, often mixed with conifers, occur on some of the middle elevation ridges and in coves, which are narrow passes between hills where more fertile soils have accumulated. The softwoods, primarily spruce and fir, are found on the higher ridges, steep northerly slopes, and in stream valleys. Spruce stands have become established on the granite balds left by fires.

A mosaic of forest communities in the Debsconeag Lakes area has been undisturbed since a fire in 1924. This "roadless area", in conjunction with unfragmented forest south of Rainbow Lake (north of the unit), occupies in excess of twenty five square miles. The 1924 fire removed evidence of historical logging, and since then natural communities have evolved without human disturbance. While the majority of the land contains successional forest, small stands of two hundred year old northern white cedar, pine-hemlock, spruce-fir and northern hardwoods are scattered throughout this area. This area offers some unique opportunities for natural science

research and backcountry recreation.

Elsewhere, extensive harvesting has resulted in stands composed of various age classes, and containing an abundance of snags and den trees. The most extensive timber harvesting occurred on unit lands in T1 R11 WELS prior to State acquisition. The variety of forest types, along with the streams, lakes, ponds and wetlands on the unit, provide habitats which support most wildlife species found in the forested areas of the state. There are 340 acres of Land Use Regulation Commission-zoned deer yards on the unit. During a natural resources inventory conducted in 1992, eighty-six species of birds were sighted on the unit incidental to collecting other field information; no formal breeding bird surveys were made. Large mammals include deer, moose and black bear. The unit also contains populations of a few rare plant species including pygmy water-lily, fragrant fern and luminous moss.

The Maine Historic Preservation Commission, in January, 1992, prepared a Reconnaissance Archaeological Survey for the Land for Maine's Future Board, which covered the lands acquired from Diamond Occidental in Rainbow Township and T1 R11 WELS. Field work by the commission's staff failed to find any evidence of prehistoric occupation of likely sites around Nahmakanta Lake. The Nahmakanta region is thought to have been an alternative Indian canoe route, but because of the extensive carries from other water bodies, it appears that Nahmakanta Lake received little use. No evidence of prehistoric occupation was found along Nahmakanta Stream or around Wadleigh and Pollywog Ponds. The commission's report concludes that, "Prehistoric archaeological sites around the lakes in this parcel are surprisingly scarce, below our expectations for a known (but difficult and alternative) canoe route. We suspect that the reason is heavy damage to the shorelines of these water bodies from increased water levels during log-driving activities."

In the unorganized area of the state, very little of the history has been recorded. The commission's report states that, "There are scattered remnants of logging operations throughout the area, just as there are throughout most of the Maine woods. However, none of them meet the criteria of significance established by the Maine Historic Preservation Commission."

One feature of interest is the so-called Indian Camp at Pleasant Point Camps on Fourth Debsconeag Lake. The interior walls and ceiling of the camp are decorated with cut birch bark pieced together in various decorative patterns. The commission concluded that the structure is eligible for nomination to the National Register of Historic Places.

## II. UNIT RESOURCES AND MANAGEMENT ISSUES

### A. SPECIAL RESOURCES

#### 1. Description of Special Resources

The following description of special resources is based on a Landscape Analysis and Inventory of the Nahmakanta Management Unit. In addition, information collected by the bureau's Wildlife Specialist and the former Chief of Silviculture was also used in compiling this section.

The Nahmakanta Unit has a high diversity of natural communities due to several factors. There are extensive tracts of land that are not fragmented by roads or recent timber harvests. The combination of fire and rugged terrain on substantial portions of the unit has resulted in a forest shaped primarily by natural processes. The forest varies greatly in composition and structure, from the dark, closed-canopy forest of the valleys to open woodlands on granite balds. The aquatic ecosystems are diverse, and many may be pristine.

Based on the Natural Resources Inventory, 20 areas on the unit were identified as containing rare plants, old-growth trees, unique geological formations (gorge), or discrete areas which are outstanding examples of a collection of natural community types (see Table 1, page 13). A natural community is an assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of recent human intervention are minimal (see Appendix V, Reference #5). These areas offer opportunities for scientific study of natural community succession, post-fire population dynamics, and plant and animal community composition, among other possibilities. They also provide recreational opportunities for nature study. Examples of natural communities that are rare or lacking in a region may be

appropriate for protection (i.e. Special Protection designation), and eventually included as a part of a statewide ecological reserve system. In total, these 20 areas encompass approximately 2700 acres, 200 acres of which are mostly within the AT Corridor.

Maine's Endangered Species Act recognizes four levels of relative threat of extinction for rare animals and plants, which defines the urgency of management efforts to protect and/or monitor them: 1) Endangered Species; 2) Threatened Species; 3) Special Concern Species; and 4) Extirpated Species (for definitions of these terms see Appendix III, Glossary).

Two state-listed plant species were found on the unit: pygmy water lily (Nymphaea tetragona) is listed as a "Threatened Species"; and fragrant fern (Dryopteris fragrans) is listed as a "Special Concern" species. Pygmy water lily was found at Little Penobscot, First and Second Musquash, and Wadleigh Ponds, all of which are part of the same watershed. Second Musquash Pond contained the largest number of individual plants--75 to 100--growing as a discrete population in an emergent marsh community. Pygmy water lily is like other water lilies only smaller--approximately three inches in diameter---with a deep, v-notch in the leaf. Fragrant fern was found in several locations in Pollywog Gorge (within the NPS corridor) and Tumbledown Dick Stream gorge, and at one location near Eighth Debsconeag Pond. Fragrant fern looks like other ferns but is smaller and distinguished by its growth habit; it is found growing in robust tussocks, usually about 8-12 inches wide, from the sides of cliffs. Fragrant fern gets its name from the sweet, fruity smell released when the leaves are rubbed between the fingers.

Luminous moss (Schistostega pennata), so named because it reflects light like a green cat's eye, although not listed because the State Endangered Species List does not include mosses, is nonetheless very rare. It was found in Pollywog Gorge (within the NPS corridor) in a small

horizontal crack on two large granitic slabs and in a similar habitat adjacent to Eighth Debsconeag Pond.

## 2. Special Resource Management Issues

The 20 natural communities/sites identified as containing sensitive natural resources could be degraded by human disturbances such as timber harvesting, road-building, etc., unless management activities on the unit are conducted with an awareness of their location and sensitivity to disturbance.

Pygmy water lily, fragrant fern and luminous moss are protected, for the most part, due to their inaccessible locations. The largest population of pygmy water lily is located at Second Musquash Pond, which has no vehicle access. The population is also surrounded by an emergent marsh plant community, which provides a natural buffer from many potential disturbances. First Musquash and Little Penobscot Ponds also do not have vehicle access, while Wadleigh Pond has a rough boat access site suitable for launching small boats. On Wadleigh Pond, damage to the pygmy water lily population from boat propellers is a potential threat.

Table 1.

Important Natural Communities/Sites on the Nahmakanta Management Unit  
(See Appendix I, Map 3 -- for Site Locations)

Site	Site Name	Community Type	----- Acreage -----		
			Water	Land	Total
1	Farrar Brook	Beaver Flowage, Shrub Swamp, Northern White Cedar Seepage Forest, Sedge Meadow	21	486	507
2	Gould Pond	Monomictic <sup>1</sup> Mesotrophic <sup>2</sup> Lake, Beaver Flowage, Shrub Swamp	13	39	52
3	Eighth Debsconeag Pond	Monomictic Mesotrophic Lake, Acidic Fen, Northern Hardwood Forest Early Successional Forest, Dryopteris fragans, Schistostega pennata	17	110	127
4	Eighth Debsconeag Cedar Swamp	Northern White Cedar Seepage Swamp, Spruce-Fir Swamp (Area included in Site 3 above)	--	--	--
5	NE Slope of Nes-untabunt Mtn.	Mixed Hardwood-Conifer Forest Largely or entirely within NPS ownership	--	84	84
6	E Slope of Nes-untabunt Mtn.	Spruce-Hemlock Slope Forest Largely or entirely within NPS ownership	--	110	110
7	N Flank of Female Mtn.	Northern Hardwood Forest	--	36	36
8	Seep on S Side of Female Mtn.	Vernal Pools surrounded by Rich Mesic (moist) Forest (also known as Cove Forest)	--	47	47
9	Wadleigh Pond	Monomictic Oligotrophic <sup>2</sup> Lake Contains pygmy waterlily	239	152	391
10	First Musquash Pond	Contains pygmy waterlily	41	81	122
11	Second Musquash Pond	Contains a large population of pygmy waterlily, and Emergent Marsh, Spruce-Fir Swamp,	35	110	145

		Forested Bog, Dwarf Shrub Bog, Acidic Fen, Shrub Swamp			
12	Turtle Ridge	Early Successional Forest (Mature with stand of old growth red spruce)	51	257	308
13	Loon Pond	Monomictic Mesotrophic Lake	4	9	13
14	Stink Pond & Ponds to North	Monomictic Mesotrophic Lake Early Successional Forest, Cove Forest, Northern Hardwood Forest, Bog Pond	22	351	373
15	Acidic Bald E of Stink Pond	Acidic Summit/Cliff/Talus Forest	--	116	116
16	Hill S of Nahma- kanta Lake	Northern Hardwood Forest Old Growth Spruce Woodland, Spruce Forest (old growth), Northern White Cedar Seepage Swamp (old growth)	--	81	81
17	Cedar Swamp	Northern White Cedar Swamp	--	34	34
18	Tumbledown Dick Stream	Fragrant fern, Spruce Woodland Forest, Acidic Cliffs (scenic waterfall, scenic waterslide)	1	44	45
19	Leavitt Pond	Monomictic Mesotrophic Lake, Beaver Flowage	51	67	118
20	Old Growth Red Spruce SW Hedgehog P.	15 acres of 200 year old, plus Red Spruce	--	15	15
GRAND TOTALS (Acres)			495	2229	2724

<sup>1</sup> Monomictic lakes have only one period of turnover or mixing annually, while dimictic lakes completely mix or turnover twice a year, usually in spring and fall.

<sup>2</sup> Mesotrophic lakes are midway between oligotrophic and eutrophic lakes in terms of the natural aging process that lakes go through due to nutrient enrichment. Oligotrophic lakes are relatively nutrient poor, often with deep areas of cold water, while eutrophic lakes are often shallow with warm water and are nutrient rich, which often results in algae blooms.

NOTE: Special protection areas are delineated and labelled with a green circle on U.S.G.S. topographic map sheets and are in "Landscape Analysis and Inventory of the Nahmakanta Management Unit" prepared by Woodlot Alternatives, Inc., Sally C. Rooney and Janet McMahon, October 1992.

## B. WILDLIFE AND FISHERIES

### 1. Description of Wildlife and Fisheries Resources

a. Wildlife General Habitat Conditions: This unit contains a broad array of natural habitat types ranging from acidic bogs to granitic balds. The variety and distribution of habitats meet some or all of the needs of most wildlife species indigenous to the forested areas of Maine. A series of large and small wildfires have created areas of aspen-dominated, shade-intolerant hardwoods of various sizes. A dispersed stream network, which facilitated log driving, and its historical proximity to wood markets caused the unit to be harvested many times. Several of the larger ponds on the unit had small dams at their outlets to raise water levels to drive logs. (For a more detailed description of the history and status of the forest resource on the unit see Section E Timber, page 28.)

The major forest types on the unit include burn-origin forests, mixedwoods, northern hardwoods and softwoods. As a result of fires and harvests prior to State acquisition, many stands hold predominantly low quality timber with a high proportion of den trees and snags. As a result, these stands have a relatively high value for wildlife and support populations of cavity nesting and roosting birds and denning mammals. Many songbirds which winter in Central and South America prefer this habitat for breeding and rearing their young. Representative bird species with a preference for these stands include red-eyed vireo, black-throated blue warbler, black-throated green warbler, white-breasted nuthatch and sharp shinned hawk. Wildlife use associated with each of the various forest cover types on the unit is discussed below.

**Burn-Origin Type:** Nearly a third of the unit is covered by former burned areas where aspen is the dominant species. The aspen is nearly mature to over-mature. Because of the large size and full crown closure of the unit's aspen stands, the early successional plant species favored by many wildlife species, are not abundant. However, in spite of the sparse understory, the mature aspen type is heavily used by songbirds, raptors and grouse.

**Mixedwood:** About 1/3 of the unit is comprised of mixedwood stands. These stands tend to support a greater variety and number of wildlife species because they contain habitats suitable for species that prefer either hardwood or softwood plus those species that prefer mixedwood. This type tends to have more variability, which further enhances its value as habitat for a relatively larger number of species than the burn-origin type.

**Northern Hardwoods:** A few northern hardwood stands skipped by fires were also not harvested and now contain some relatively large, old trees. Some mammals with a preference for northern hardwood are white-footed mouse, porcupine and northern flying squirrel. The northern hardwood type also provides important food sources, such as beech nuts among others, for black bear, fisher and deer.

**Softwood:** These stands tend to be fairly small and scattered. Snowshoe hare are dependent on dense softwood seedling, sapling or small pole-sized trees for protection from predators. Hare are a primary prey species for the common avian (great-horned owl and goshawk) and mammalian predators (coyote, red fox and fisher), and to a large extent these predator populations fluctuate with the hare population. Reversion of some of the burn-origin stands to softwood sites has already begun due to the presence of advanced softwood regeneration in the understory.

The unit lies wholly within MDIF&W's Deer Management District (DMD) #4. This DMD is below its population objective and its deer yard habitat objective set by MDIF&W. There are 340 acres of Land Use Regulation Commission (LURC)-zoned deer yards (P-FW) on the unit. Although this is a relatively small amount of deer yard (less than 1% of the unit) it is nonetheless important for the DMD, as a whole.

The Pollywog Pond deer yard (P-FW 080517) along Gulliver Brook has 90 acres on the unit in T1 R12 WELS, and 331 acres off the unit on T2 R12 WELS, to the north. The 90 acre portion on the unit has not been harvested for at least 20 years, and provides fair winter shelter for deer. Access to this corner of the unit for management purposes is remote.

The Black Pond deer yard (P-FW 080499) encompasses 250 acres around Black Pond and its tributaries in T1 R12 WELS, and is entirely within the unit.

The Nahmakanta Stream deer yard (P-FW 080501) contains 206 acres and lies almost entirely within the National Park Service (NPS) Appalachian Trail (AT) corridor along the Stream.

Hunting: The unit is popular with hunters, although the success rate is relatively low. Deer harvests are below average because of the low population level, which may be partially due to insufficient winter shelter. Aerial reconnaissance by the Department of Inland Fisheries and Wildlife indicates that the unit has a relatively high moose population. Moose harvests are low, most likely due to limited vehicle access and the recent history of low intensity timber harvesting. The KI/Jo-Mary organization administers bear bait sites on the unit (see Recreation section for a discussion of the KI/Jo-Mary management organization).

b. Fisheries: Most of the water bodies on the unit support cold water fisheries, such as brook trout, lake trout (togue) and salmon. Only a few water bodies on the unit are periodically stocked by MDIF&W with hatchery reared brook trout; they are Fifth and Sixth Debsconeag Ponds, Leavitt Pond and Wadleigh Pond. Long Pond is stocked with splake. Lake trout are the principal species sought by anglers in Nahmakanta Lake, Wadleigh Pond and Fourth Debsconeag Lake. Lake trout were stocked in Nahmakanta and Fourth Debsconeag Lakes in the 1970's and early 1980's. The populations are now self-sustaining.

Landlocked salmon are also present in Nahmakanta Lake. Nahmakanta Stream and Pollywog Stream provide the necessary spawning and nursery habitat to maintain the wild salmon population in the lake.

MDIF&W has surveyed the fisheries in 14 Great Ponds (greater than 10 acres) on the unit; however, there are other Great Ponds and two dozen unnamed ponds with surface areas less than 10 acres on the unit that have not been surveyed. There is anecdotal information suggesting that wild brook trout fisheries exist in many of these waters. The MDIF&W plans to continue its efforts to survey the remaining Great Ponds.

All of the water bodies on the unit are open to fishing during the open-water season. Regulations vary from water body to water body to afford angling opportunity to the public while maintaining the quality of the native fisheries. Nahmakanta Lake is the only water body on the unit open during the ice fishing season.

## 2. Wildlife and Fisheries Management Issues

A primary wildlife management objective on public lands is to maintain or improve existing habitats across the landscape. Long rotations, sustained yield and allowable cut

allocations ensure a supply of habitats and forest products into the future. Wildlife management will focus on maintaining all forest types and their spatial distribution on the landbase. Management emphasis will be directed towards habitats for species of special concern, namely endangered and threatened.

Dense softwood habitat needed by deer and other wildlife for winter shelter is limited on the unit. Maintaining existing deer wintering habitat and expanding suitable wintering habitat adjacent to existing wintering areas could enhance deer survival and increase the population level on the unit.

Brook trout fisheries in remote ponds on the unit could be degraded by increased harvest as a result of improved access. If access is improved to remote ponds then the increased use could also degrade the recreational fishing experience.

The bureau lacks information on the locations of osprey and loon nesting sites, which is needed to protect the sites and to plan management activities to enhance nesting success.

## C. RECREATION

### 1. Recreation Resource Description

The Nahmakanta Management Unit is comprised of a portion of T1 R12 WELS, all of T1 R11 WELS, and the portion of Rainbow Township south of Stratton Brook. Lands within the latter two townships, which amount to approximately 3/4ths of the area of the unit, were within the boundaries of the Katahdin Iron Works/Jo-Mary Multiple Use Management Forest before they were acquired by the State of Maine. The KI/Jo-Mary Multiple Use Management Forest, encompassing 210,000 acres, contains lands owned and managed by private companies, the Nature Conservancy and the State of Maine.

Access to and recreation facilities within the KI/Jo-Mary multiple-use forest are managed by North Maine Woods. The management costs are defrayed by user fees collected at staffed checkpoints on roads leading into the area. A KI/Jo-Mary checkpoint located on the Jo-Mary Road (also known as the Church Pond Road), immediately off Route 11, controls the only existing public vehicle access into the unit.

Of the 30 major consolidated units managed by the Bureau, Nahmakanta is among the richest in terms of the variety and extent of its recreation resources. The unit is intricate in topographical arrangement and contains some 56 lakes and ponds greater than 1/4 acres in size (excluding Nahmakanta Lake, Crescent and Big Murphy Ponds, which are within the boundaries of the National Park Service ownership surrounding the Appalachian Trail).

The Bureau of Public Lands is responsible for managing all of the unit lands outside of the Appalachian Trail corridor and the James River in-holding, and has responsibility for development and management of certain recreation facilities on Nahmakanta Lake within the AT corridor.

When the National Park Service acquired the lands encompassing the Appalachian Trail and Nahmakanta Lake, it signed a Memorandum of Agreement (MOA) with the Maine Department of Conservation, which stipulates that the NPS will develop and implement a management plan for the area under its ownership. The agreement specifies that the Maine Department of Conservation will participate with the NPS (acting through the Maine Appalachian Trail Club) in the development of the management plan. The agreement calls for the establishment of management practices that "will allow the continuation of appropriate traditional uses of Nahmakanta Lake while also preserving an environment harmonious with the use of the property as a national scenic trail."

Recreation opportunities on the unit as a whole include: hike-in fishing for brook trout in remote ponds, hiking to scenic destination points, boating and fishing, hunting, trapping, camping, nature study, exploration (in extensive, roadless, backcountry areas), and in winter cross-country skiing, snowshoeing and snowmobiling.

Many of the ponds on the unit have a wild brook trout fishery. Eight of the ponds are zoned as Remote Ponds by LURC: Hedgehog, Loon, Rabbit, Gould, Stratton, Sixth Debsconeag, Murphy and Tumbledown Dick. Public vehicle access is permitted no closer than 1/2 mile to a Remote Pond by LURC regulations.

There is a rough trail up the eastern end of Turtle Ridge to Rabbit Pond. Trails have been developed by the owner of Nahmakanta Lake Camps in the roadless area north and east of Nahmakanta Lake and Rainbow Stream to provide access for guests to ponds in the Debsconeag Lakes region, and to the Murphy Ponds and Prentiss Pond.

There is a foot trail leading to the fire tower atop Wadleigh Mountain. The tower has been used informally by the public as an observation platform; however, the tower shows obvious signs of deterioration and is unsafe for continued public use without extensive repairs.

Other scenic destinations worthy of note are Pollywog Stream Gorge, and Tumbledown Dick Falls on the stream of the same name, near the easternmost boundary of the unit. Tumbledown Dick Stream is scenic and supports a native brook trout fishery, and Tumbledown Dick Falls is spectacular.

There are no trailered boat launch sites on lakes or ponds on the unit; however, small boats and canoes can be hand-carried and launched at Fourth Debsconeag Lake, Pollywog Pond and at two locations on Wadleigh Pond.

The unit is popular with hunters during the fall hunting season, and many hunters take advantage of the available camping opportunities.

There are four authorized campsites maintained by North Maine Woods on Wadleigh Pond, four on Musquash Brook, and one in a gravel pit west of Leavitt Pond. There are also six or more informal campsites on Nahmakanta Lake, which are not currently approved as fire-safe by the Maine Forest Service. There are at least three suitable locations where water access campsites could be developed on Pollywog Pond, and two potential sites on Wadleigh Pond. One of the potential sites on Wadleigh Pond is at the location of the defunct Wadleigh Pond Sporting Camps. The Camps are situated on a level, grassed knoll at the north end of Wadleigh Pond; the location has a commanding southerly view of the pond and beyond. Most of the camps are dilapidated and unusable; however, two of the camps are sound enough to be used to house a crew of workers conducting management activities on the unit. The location could accommodate a sufficient number of campsites to support use by several parties or a small group. Other ponds that would be attractive for hike-to camping, if suitable campsites can be found, include Penobscot, Sing Sing, Rabbit, Tumbledown Dick, and some of the ponds in the Debsconeag Lakes area.

The Debsconeag Lakes area, in Rainbow Township and T1 R11 WELS, includes a collection of remote ponds and rugged terrain offering superb potential to be managed as a Backcountry preserve. Although miles of rudimentary trails have been created, this region still retains a wild character where people can explore, camp or hike to ponds to fish. Except for the area along Nahmakanta Lake and Stream, this region has not been subject to disturbance from human activities for many decades. The portion of this region in Rainbow Township is roadless today, although much of it was harvested in the past. Surveys of the roadless area in Rainbow

Township in 1913 and 1922 indicated that at that time much of the forest was second growth, and that most large trees had been removed.

Another area that offers excellent potential for backcountry recreation is Turtle Ridge in the southern part of T1 R11 WELS. This area has a collection of ponds, ridge tops and ledges offering distant views, and mature successional forests.

There are extensive opportunities to study nature on the unit because of the diversity of natural community types, and the presence of extensive wetlands and numerous streams and ponds. Because of the travel distance to the unit from surrounding communities, it is unlikely that a formal nature interpretive trail system would receive much use; however, the unit lends itself to informal study and use by researchers pursuing scientific interests.

The following recreation resources (water bodies and mountains) are potential destination points. They have been arranged into groups that could potentially be served by one or more trailheads from existing roads proposed for public vehicle access (that are shown on Map 2 - Features, Appendix I). This is only an inventory of potential recreation destinations; it is not intended that all of these resources be made readily accessible, in fact, some destinations should remain remote to provide a mix of recreation opportunities.

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Inventory of Recreation Resources on Nahmakanta Unit

<u>General Area Designation</u>	<u>Water Body/Mountain</u>
Turtle Ridge Long Pond Rabbit Pond(s)	Turtle Ridge Complex
Loon Pond Sing Sing Pond	
Hedgehog Pond(s)	
Harding Pond Little Penobscot Pond(s) Penobscot Pond	Penobscot Pond Group
Leavitt Pond(s) Tumbledown Dick Pond(s) Tumbledown Dick Falls Deadwater Brook	SE Corner
Prentiss Pond Nesuntabunt Mt(s)	Middle Ground
First Musquash Pond Second Musquash Pond Third Musquash Pond Wadleigh Mt. Wadleigh Pond Pollywog Pond	Wadleigh/Musquash Complex
Fourth Debsconeag Lake Fifth Debsconeag Lake Sixth Debsconeag Pond Seventh Debsconeag Pond Eighth Debsconeag Pond Gould Pond Stink Pond Stratton Pond(s) "NE Corner Ponds"	Debsconeag Area

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The Nahmakanta Unit is certainly one of the busier units for snowmobiling of any in the state because a main artery trail--the ITS 86 (Interconnected Trail System)--bisects T1 R11 WELS (east to west) (see Appendix I, Map 7, Recreation Facilities). This trail funnels the bulk of snowmobilers from the Moosehead and Rangeley Regions, and Quebec eastward to Millinocket, Baxter State Park and the Aroostook County trail system. This portion of ITS 86 is part of a designated international trail, N.E.S.T. (North East Snowmobile Trail), which connects New York, Vermont, New Hampshire, Quebec, Maine and New Brunswick together. When snow is adequate, 2,000 to 3,000 snowmobiles (on average) a week use this trail. The trail utilizes extensive portions of the existing road system on the unit. For the winter of 1993/94 the Bureau granted a lease for a trail across T1 R12 WELS, which connects the ITS 86 with points north and west. (The lease was not requested for the winter of 1994/95.) A local trail over the Jo-Mary Road provides access to the main trail. Primitive, non-maintained trails on the unit access several ponds off the main trail. Historic, primitive trails connect the main artery ITS 86 to Rainbow Lake, Chesuncook Lake, Caucomgomoc Lake, Moosehead Lake and the Allagash Region. These trails offer snowmobilers opportunities for primitive experiences away from the congestion of the ITS 86 trail.

The State owns rights of way over the woods roads that cross the AT Corridor south of Nahmakanta Lake, south of Crescent Pond, and at Pollywog Stream. The bureau can authorize the use of motorized vehicles (including snowmobiles) and the use of non-motorized vehicles over these roads, but not off these roads on other AT Corridor lands.

To provide snowmobile access to Nahmakanta Lake the Maine Appalachian Trail Club has endorsed working with the State of Maine to find a means to provide for snowmobile access

from the Nahmakanta Stream Road onto Nahmakanta Lake. Nahmakanta Lake is the only lake on the unit open to ice fishing.

Pleasant Point Camps, a rustic set of log sporting camps, is located on the north shore of Fourth Debsconeag Lake. The five acre site is under a 15-year lease with the bureau. The current lease extends through December 31, 2006. Access to the camps for lessees and clients has been by boat from the carry-in boat access west of the camps. The lease requires that the camps remain available for public use at a reasonable fee.

## 2. Recreation Management Issues

The bureau will need to develop a work plan (in accordance with the MOA) for establishing recreation facilities on Nahmakanta Lake, which is within the Appalachian Trail Corridor. The plan should identify the specific facilities to be provided, time-frame for development, and a strategy for maintaining the sites.

Balancing the popularity of fishing for brook trout in remote ponds with the fragility of the fishery--small ponds can be easily impacted if access is improved and crowding lowers the quality of the experience--will be one of the major challenges in developing the recreation component of the unit management plan. There are existing carry-in boat access sites on Fourth Debsconeag Lake, Pollywog and Wadleigh Ponds, and one proposed to be developed at the south end of Nahmakanta Lake.

The road to the boat launch on Fourth Debsconeag Lake is only single lane with no opportunity for turnouts to allow vehicles to pass each other. This road continues to the outlet stream of Fifth Debsconeag Lake, where vehicle travel ends because there is no bridge across the stream. At the boat launch area there is difficult parking for two or three vehicles.

To provide a variety of recreational fishing opportunities, other ponds should be accessed

by a hiking trail only, and still others should remain without trails to them so that people seeking a remote experience can bushwack to them.

Given the bureau's recreation management policies, it would have specifically chosen not to develop hiking trails to some of the remote ponds, which currently have trails leading to them, in the Debsconeag Lakes area. In designing a hiking trail system for the area, the bureau will need to decide which trails should be maintained, actively closed or allowed to grow over naturally.

There is a need to evaluate the location of existing campsites and their associated facilities to determine if they should be continued, improved or "relocated".

There are opportunities to develop new water-access campsites on some of the ponds on the unit. On ponds with existing campsites, use of these sites should be monitored to determine the need for additional sites. Additional sites should be developed only if the likely impact of their use, in combination with existing sites, will be environmentally and socially acceptable.

Winter timber operations will have to be thoughtfully planned to avoid conflicts between truck traffic and snowmobilers. Relocating the ITS 86 from the major east-west road through T1 R11 WELS to an off-road trail system could substantially reduce these types of conflicts. The location and use of other snowmobile trails should be discussed with local snowmobile clubs. Snowmobile access to Nahmakanta Lake across AT Corridor lands is discussed in the NPS Plan for the Management of Nahmakanta Lake Lands.

Access to T1 R12 WELS for recreational purposes is limited due to the disrepair of the road system. Timber management activities on the portion of the unit in this town will eventually result in improvements to the road system, so that timber products can be transported to markets.

Improvements to the road system will also allow for public vehicle access to formerly inaccessible areas. The bureau will need to assess the management implications of access on natural areas, recreation and wildlife resources.

#### D. VISUAL RESOURCES

##### 1. Visual Resource Description

A few elevations on the unit offer excellent vistas; outstanding among these is the fire tower atop Wadleigh Mountain. Another vantage point from the easternmost summit of the Turtle Ridge group of nubbles offers a superb view of Mt. Katahdin to the northeast. Mt. Katahdin, as well as much of the unit, can also be seen from the AT where it crosses the top of Nesuntabunt Mountain. Views from Nahmakanta Lake are of forested mountain sides within the Appalachian Trail Corridor and the unit.

##### 2. Visual Resource Management Issues

During the planning process the bureau carefully considers the potential impacts of management activities, including timber harvesting, gravel mining, road construction and recreation facility development on the visual character of an area. These activities, if not planned and conducted in a sensitive manner, could have significant adverse effects on the visual resources of the property.

Management roads will need to be located so as to avoid or minimize impacts on hikers using trails. Timber harvests, where visible from vantage points, will need to be conducted in a way that leaves a residual stand that appears to the casual observer to blend in with the surrounding landscape.

#### E. TIMBER (See Appendix I, Map 9 - Timber Management Areas)

##### 1. Timber Resource Description

The following is a brief overview of the recent history of the forests on the Nahmakanta Unit. The forests are a reflection of regional geomorphology, soils, cutting history, fires and the spruce budworm episodes. At the turn of the century, early surveyors called T1 R11 WELS and T2 R11 WELS "good spruce towns", and considered the soils too poor to support extensive northern hardwood stands. Hardwoods occurred on some of the middle elevation ridges and in coves, but these were dominated by beech and yellow birch and were often mixed with conifers. Sugar maple and ash were less common. Extensive northern white cedar swamps and black spruce flats occurred in valleys and along dead waters. As a result of past cutting practices, white pine and hemlock occurred as single trees or in small isolated stands. By 1913, the Nahmakanta forests were already second growth. Most of the large trees had been removed (three and four foot diameter stumps were scattered through the region), and pulpwood operations were in full swing. Remnants of old growth were restricted to steep slopes and boulder-strewn terrain.

Although general vegetation patterns resemble those of a hundred years ago, fire and the budworm epidemic of 1913-1922 have reshaped the ecosystems of the region. Fires resulted in the growth of extensive stands of poplar (primarily big-tooth aspen) that are now between 60 and 90 years old. Coniferous forests that were not burned were devastated by the budworm, which killed 45% of the spruce and 93% of fir by 1922 (Penobscot Development Company, 1922). Today, spruce and fir are regenerating in the successional hardwood forests, and stands occur on the higher ridges, on steep northerly slopes, and in stream valleys. Spruce woodlands have become established on pockets of impoverished soil on the granite balds left by fire.

In the late 1960s and 1970s, after a fifty year hiatus, cutting resumed on the unit. A new budworm outbreak was controlled with insecticides (extensive spraying occurred in T1 R12

WELS, and the western halves of T1 R11 WELS and T2 R11 WELS). Cutting was heaviest in T1 R12 WELS, in the Wadleigh Valley area, and around the Musquash Ponds. Today, the oldest and most extensive forest community type on the unit is the successional hardwood forest that has grown on old burn land.

This section provides a general overview of the timber resources of the unit; much more extensive information will need to be collected to provide the basis for making management decisions. This in-depth information will be collected during the compartment examination process (see discussion in Section III. Resource Allocation and Management Recommendations, page 35). In preparation for the compartment examination process the bureau contracted to have a detailed forest stand type map prepared for the unit.

Nearly 96% of the unit's land is forested. Of the forested land, approximately 8,000 acres or 20% has been identified as unregulated. The bureau defines "unregulated forest acreage" as forest land which, although it may be harvested on occasion, is not expected to produce a regular flow of forest products. The number of unregulated acres often increases following detailed field examination.

In addition to these unregulated acres there are another approximately 9,300 acres or 23% of the forest land that will be placed completely off limits to timber harvesting. These areas include those acres designated as Backcountry no-cut (Debsconeag Lakes area -- 9,200 acres) and Special Protection areas outside of the Backcountry no-cut area (80 acres) and not subsumed in the unregulated acres category, (see Special Protection Areas Designated as the Dominant Use on the unit, page 37; and "Backcountry Areas Designated as the Dominant Use on the Unit", page 39).

Combining unregulated acres (17%) with those acres entirely off limits to timber

harvesting (24%), means that approximately 40% of the forested land base will have no or only limited harvesting, thus leaving 60% (approximately 25,000 acres) of the land base available for sustained production of forest products.

Mixedwood is the predominant type due to the varied and abrupt changes in terrain and to the management history of these acres. Softwood is slightly more represented than hardwood on the unit as a whole, though the tract on T1 R12 WELS has more hardwood than softwood.

Stand Distribution - From a silvicultural standpoint, there are four broad stand types on the unit, two of which occur in extensive, contiguous tracts: burn-origin stands mainly composed of aspen interspersed with other hardwoods and mixedwood stands. The remaining two types are northern hardwoods--not of burn-origin--and softwoods; both of these types occur in scattered, small stands.

Stands established on burned areas are the most extensive of all of the forest types on the unit. These stands are mostly hardwood dominated by aspen with lesser amounts of white birch, maples, fir and spruce. The vast majority of the forest in the roadless area is of fire origin, with a series of burns covering perhaps 6,000 plus acres during the first quarter of this century. Fires in the 3,000 acre range occurred 80-90 years ago around Deadwater, Tumbledown Dick and Farrar Brooks. Smaller burns occurred on Turtle Ridge and east of Wadleigh Mountain. In total, forests of burn-origin cover one-third of the unit.

Mixedwood stands, most of which have been partially cut, are the second largest component of the forest land base. Mixedwood stands have been harvested during the last 30 or so years; the older cuts, in particular, were relatively light and their effects have been largely obscured. Total acres in this type probably also approach one-third of the unit.

Individual stands of northern hardwoods (not of burn-origin) are very dispersed, except for the slopes of Farrar Mountain. Individual stands of softwoods are mainly composed of spruce and fir, the state's most common forest type. Softwoods while occupying many acres on the unit, occur almost exclusively in small stands; only a few places not on mountains hold stands of over 100 acres. The remaining one-third of the unit includes these scattered northern hardwood and softwood stands.

Stand Characteristics - Burn-origin Stands - The Deadwater/Tumbledown Dick area supports mature to over-mature aspen mixed with white birch, maples, fir and spruce. Bigtooth aspen is a major component--1/3 to 1/2 of all aspen--and appears to be of good to excellent quality. Areas heavy to this species also tend to have the most and best white birch. Quaking aspen is closer to over-maturity and decadence, and is often of impressive height. The Farrar Brook stands are less familiar to bureau staff, but appear slightly younger. Quaking aspen is more dominant and the quality appears reasonably good. Most of these burn-origin areas have adequate to abundant understory softwood seedlings and saplings, an indication that softwoods were more important prior to the occurrence of fire.

Mixedwood - These stands range in quality from good in some spots along the Deadwater Brook Road, to poor east of Wadleigh Pond or north of Turtle Ridge. Often these poor quality overstories have much better saplings underneath. Many of these sites have the potential to grow better quality trees than currently exist.

Northern Hardwoods - Northern hardwood stands have predominantly low-quality stems remaining after repeated past harvests. Stands on T1 R12 WELS have slightly better quality than those on the other two townships of the unit.

Softwoods - Spruce is dominant in most of the older stands (50 plus years). Hemlock,

pine, fir and cedar occur most often as individuals or in small groups. Cedar swamps are present although not extensive. Younger stands tend to hold a larger percentage of fir. Stand health is generally good; vigor depends on site conditions, principally soil depth. Significant areas support spruce growing slowly on thin-to-ledge sites.

## 2. Timber Management Issues

1. Land Use Decisions - Decisions on the designation of Special Protection and Backcountry no-cut areas, and the designation and management of trail corridors, visual areas and riparian zones will have a profound effect on which acres are available for timber management and how it will be conducted.

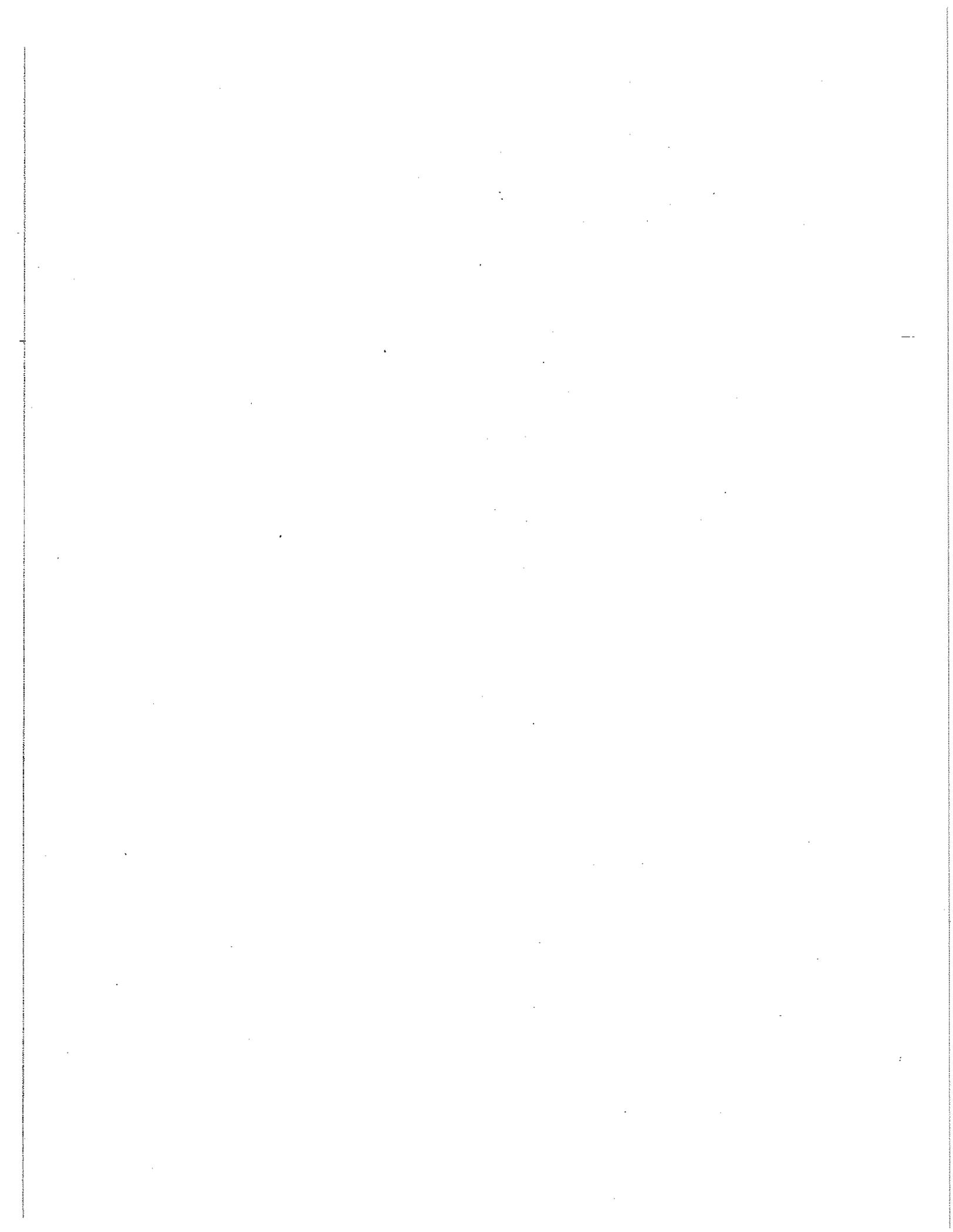
2. Softwoods - Any sizable areas of softwood should be managed to remain in this type, as it tends to occur in scattered, small stands. Over time, softwood acres will increase because of its prevalence in the understory of most aspen stands. As these aspen stands are harvested softwoods will emerge as the predominant type.

3. Older Aspen - The silviculture situation needing the most immediate attention is the large, declining aspen along the Deadwater Brook Road, where some sort of partial overstory removal will occur by the year 2000. Other aspen stands visited are in a less decadent state, although they would benefit from silvicultural treatment. It is possible that some aspen stands, as yet unidentified by the bureau, are in more pressing need of treatment than the Deadwater Brook Road stands. If they exist, they will be identified during the more detailed compartment examination process.

4. Mixedwood - Most of the partial-cut mixedwood stands can be left growing for the 10-year planning period; however, in some stands removal of low-quality hardwoods, if there is a

market, could enhance future quality. Further exploration in partial-cut mixedwood stands may result in the discovery of high-risk residuals which, if extensive, could move some of these areas to the top of the priority list for harvesting. The extent of this type increases its priority for management attention, especially over the long-term.

5. Northern Hardwoods - The quality and management future for these stands is similar to the partial-cut mixedwood stands. This is due to the fact that both stand types were harvested during the same periods of time.



### III. RESOURCE ALLOCATION AND MANAGEMENT RECOMMENDATIONS

#### A. THE BUREAU'S RESOURCE ALLOCATION SYSTEM

Planning for the management of public lands units is a two step process: first a conceptual unit management plan is prepared and adopted; it then guides the more detailed planning for discrete areas (known as compartments) on the unit. These compartments usually encompass between 500 and 2,000 acres, and are delineated using geographical and cultural features such as rivers and roads for compartment boundaries. Compartments are examined on a 10-year cycle to identify timber types and volumes, wildlife habitats and species, and recreational opportunities. Based on the information collected, management/work plans--referred to as prescriptions--are developed to assure adequate protection of special resources and a sustained yield of forest products including timber and wildlife, while providing for appropriate recreational uses of the compartment resources.

This plan is the first step in the planning process; it presents the conceptual basis for managing the Nahmakanta Unit's resources. The Legislature has directed ". . . that the Public Reserved Lands shall be managed under the principles of multiple-use and to produce a sustained yield of products and services. . ." (see Appendix V, #1). In response, the bureau has developed a multiple-use management system based on the allocation of certain areas for specific uses. Because of the nature of multiple-use management, these areas frequently overlap, creating zones where management is designed to accommodate a variety of uses. In such areas, the objectives for each type of use will be defined. To resolve potential conflicts, a dominant use is identified; this dominant use takes priority over all other uses, which become secondary uses. Where a use

is planned to be secondary it will be managed for in a manner so as not to adversely affect the dominant use. The dominant use is determined according to the relative level of sensitivity of the specific area under consideration and the degree of impact of the proposed use on the area. The use which requires the more careful management will typically dominate. The priority sequence for establishing dominant use areas from the most sensitive to the least sensitive designation is:

1) Special Protection; 2) Backcountry Recreation; 3) Wildlife Management; 4) Remote Recreation; 5) General Recreation; 6) Visual Consideration; and (7) Timber Management.

The next section explains what each designation encompasses and how it is applied to the Nahmakanta Management Unit.

#### B. APPLICATION OF THE RESOURCE ALLOCATION SYSTEM TO THE UNIT

The maps in Appendix I of the plan depict the allocation of various areas on the unit for various purposes including special protection, wildlife, recreation and timber. No single map exists to show all of the uses, as the overlap of the various uses would be too confusing. It is important for the reader to bear in mind that a particular area may be used for more than one purpose. In such cases, the dominant use will be determined by the priority sequence as explained in Section III. A. above.

The bureau has formulated a long-term vision, in light of the unit's resources and public uses, to guide its management for the next 10 years and beyond.

Vision Statement: The bureau's primary goals in managing the Nahmakanta Unit will be: to protect special resources such as rare plants and unique natural features; to protect important natural communities; to manage extensive areas for backcountry and remote recreational use; to maintain and where feasible enhance the quality of fish and wildlife habitats; to support traditional fishing and hunting uses; and to protect the water resources of the unit, while

managing its forest resources to provide a sustained yield of high-value products.

1) SPECIAL PROTECTION (See Appendix I, Map 4 - Special Protection Areas)

Special Protection areas include locations containing rare and endangered species of wildlife and/or plants, geological formations and other notable natural features, and valuable archaeological, educational, scientific or historic sites. Discrete areas with important natural communities or which have outstanding examples of a collection of natural community types may, if other allocations would not provide adequate protection, be protected by the Special Protection designation. Management of Special Protection areas is always protective in nature.

Special Protection Areas Designated as the Dominant Use on the Property: The exact location of each important natural area is delineated on an aerial photograph (see Appendix V, References, 11. Landscape Analysis and Inventory of the Nahmakanta Management Unit). Eighteen of the 20 important natural communities/sites identified during the natural resource inventory (see Appendix I, Map 3, and Table 1., page 13) will be protected by an appropriate allocation. Natural areas within the Backcountry no-cut area will be protected by virtue of being within an area where no timber harvesting will occur. Even within the Backcountry no-cut area around water bodies/wetlands the additional level of protection afforded by riparian zoning will overlay the Backcountry designation to limit any impacts to the identified natural areas that could occur from recreational development or use. Outside of the Backcountry no-cut area natural areas that encompass water bodies/wetlands will be protected by riparian zoning. Where no other designation is appropriate and where the highest level of protection is required to safeguard the resource values of a natural area it will be designated as Special Protection.

The boundaries of important natural communities will be delineated on the ground--

based on the locations shown on the aerial photographs---prior to conducting any management activities that could adversely impact them.

These eighteen areas encompass approximately 2500 acres of land and water surface. Two areas immediately west of Nahmakanta Lake (see Table 1., page 13, sites 5 and 6) will not be so designated by the bureau because they appear to be mostly or wholly within the boundaries of the AT Corridor. These two areas encompass approximately 200 acres. If upon further reconnaissance, portions of either of these two areas are found to be on lands managed by the bureau they will be zoned Special Protection.

Natural communities to be protected by the Special Protection designation (see Appendix I, Map 3, and Table 1., page 13) include: 7. North Flank of Female Mountain; 8. Seep on South Side of Female Mountain; 12. Turtle Ridge; 16. Hill South of Nahmakanta Lake; 17. Cedar Swamp; 18. Tumbledown Dick Stream; and 20. Old Growth Red Spruce Southeast of Hedgehog Pond. In total, the areas allocated for Special Protection encompass 566 acres (514 acres of land and 52 acres of surface water).

When osprey or loon nest sites are identified they will be placed in a Special Protection zone 660 feet in radius around the nest site. In this zone human disturbances will be avoided during the nesting period from April 15 through August 15. All management activities planned to be undertaken in these Special Protection areas will be discussed, prior to implementation, with DIF&W personnel and their recommendations will be followed. If harvesting is recommended it will be conducted outside of the nesting season. Only uneven aged timber management will occur in these areas; there will be no construction of permanent structures or roads.

Secondary Uses within Special Protection Areas: Because of their typically sensitive nature, Special Protection areas can seldom accommodate active manipulation or intensive use. No secondary uses other than scientific research and dispersed recreation will be allowed in Special Protection areas.

Other Specific Management Recommendations: Osprey and loon nesting sites should be identified on the unit through field survey work, and protected by designating an area encompassing a 660 foot radius around the nests as Special Protection during the nesting season from April 15 to August 15.

2) BACKCOUNTRY RECREATION (See Appendix I, Map 6 - Recreation Use Areas)

The bureau classifies the capability of lands it manages to support recreation into three broad categories: Backcountry Recreation; Remote Recreation; and General Recreation. Backcountry areas are defined below, while Remote Recreation areas and General Recreation areas are defined on pages 50 and 51, respectively.

Backcountry areas are relatively large, extraordinary in terms of scenic quality, remoteness and natural character, and are managed for primitive recreation without public vehicle access. The main objective of bureau management of Backcountry areas is to retain the area's natural character. Secondary uses in a Backcountry area are more restricted than in a Remote Recreation area; where allowed, timber harvesting is generally conducted using an uneven-aged system.

Backcountry Areas Designated as the Dominant Use on the Unit: Three areas will be designated as Backcountry on the unit (see Appendix I, Map 6), encompassing approximately 17,600 acres or 40% of the unit.

North of the Appalachian Trail Corridor is a 9,200-acre area that is almost entirely

roadless (hereinafter referred to as the Debsconeag Backcountry area). This area will be designated as a Backcountry "no-cut" area, in other words no timber harvesting or new road development will occur. Included within this 9,200-acre area are: Fourth and Fifth Debsconeag Lakes; Sixth, Seventh, and Eighth Debsconeag Ponds; Stink Pond; Gould Pond; and the Stratton Ponds, among others. The area will provide opportunities to fish for brook trout in the ponds, and bushwack and camp in a roadless area with a wilderness-like character. No management activities other than those related to dispersed, low-intensity recreation will occur in this area; however, the area may offer opportunities for conducting scientific research and wildlife management activities that do not conflict with Backcountry recreation values.

Five of the 20 natural areas identified during the natural resources inventory occur in the Debsconeag Backcountry. These areas, which are listed in Table 1., page 13, and shown on Map 3. Important Natural Areas, are: 2. Gould Pond; 3. Eighth Debsconeag Pond; 4. Eighth Debsconeag Cedar Swamp; 14. Stink Pond & Ponds to the North; and 15. Acidic Bald East of Stink Pond. These areas will be protected by virtue of being in the Backcountry no-cut area. Furthermore, the ponds in the Debsconeag Backcountry and their associated streams will receive additional protection by placing them within a major riparian zone, which will extend 330 feet inland from the normal high water line. Recreational development that occurs in the area will be conducted in such a manner that the resources associated with each natural area will be protected. While hiking trails will occasionally cross streams or run along them for short distances where terrain is suitable to add variety to the hiking experience, in general, for most of their length trails will be routed outside of this zone.

The second Backcountry area encompasses 3,800 acres surrounding Turtle Ridge (including two Special Protection areas, see Table 1., page 13, sites 12 and 20), in the southern

part of T1 R11 WELS. The area has a trail that climbs the east end of Turtle Ridge leading to Rabbit Pond. No trails have been identified that lead to Loon or Hedgehog Ponds. An old woods road, which approaches Sing Sing Pond from the west, is used by fishermen to gain access to the pond. The Turtle Ridge Backcountry area will continue to attract people interested in fishing for brook trout in the ponds, and those who want to explore in a largely roadless and trail-less area, and enjoy views of Mount Katahdin from the top of Turtle Ridge. In this Backcountry area timber harvesting will be a secondary use, conducted in a manner compatible with maintaining the character of the area for low intensity, dispersed recreational uses.

The third Backcountry area on the unit encompasses 4,625 acres and includes Pollywog Pond, Wadleigh Pond, First and Second Musquash Ponds and Wadleigh Mountain. Public vehicle access is not allowed within Backcountry Recreation zones; however, existing drive-to campsites and locations where carry-in boats can currently be launched will continue to be allowed "in" this zone, and where they exist they will be designated as General Recreation areas. No new vehicle access campsites or boat launches will be developed. This area includes some of the unit's most popular recreation destinations for camping, boating, fishing and hiking. In this Backcountry area timber harvesting will also be a secondary use.

Other Specific Management Recommendations:

In the Debsconeag Backcountry area there are two public access roads; the existence of these roads is not consistent with the bureau's standards for Backcountry areas; however, both of these roads pre-date State ownership of the property. Vehicles will continue to be able to use these roads.

One public access road running south of Nahmakanta Lake and through the Appalachian Trail Corridor extends from the eastern boundary of the corridor for 1 1/4 miles to an existing

carry-in boat launch site on the western end of Fourth Debsconeag Lake (see Appendix I, Map 6). Allowing public use to continue over this road is necessary to provide public vehicle access to Fourth Debsconeag Lake for launching carry-in boats to fish the lake. Existing woods roads branching off the road to Fourth Debsconeag Lake will be closed to public vehicle travel.

The other road traverses for three-quarters of a mile through the western extension of the Backcountry area between the Appalachian Trail Corridor and Pollywog Stream (see Appendix I, Map 6). This road provides access to Nahmakanta Lake Camps and to unit lands west of the AT corridor.

The existing carry-in boat launch on Fourth Debsconeag Lake will be replaced by a new launch site approximately 1/4 mile west of the current access. The exact location of the launch site will be determined after verifying a report that loons have nested at the west end of the lake. Bureau staff visited the area in the late summer of 1995 and did not find any evidence of recent nesting activity. The area will be examined again during the 1996 season to determine if and where nesting activity is occurring. If loons are found to be nesting at the west end of the lake, the boat launch will be sited sufficiently far from the nest site so that boat launching does not disrupt nesting activity.

The character of the road from the Nahmakanta Stream bridge to the new carry-in launch site will be maintained, and only minor improvements will be made to alleviate erosion problems and to allow for the safe travel of vehicles. The road will continue to be a single lane, and some locations will be widened to allow for passage of oncoming vehicles.

Public parking for six to eight vehicles will be provided at the new launch site. A separate vehicle parking area will be provided nearby for Pleasant Point Camps. After completion of the new boat launch facility, the section of road beyond it will be blocked with

large boulders to exclude automobile and pickup truck travel, but allow for snowmobile passage. Closing this section of road will eliminate 1/4 mile of public access road from the Backcountry area. This section of road bed will be stabilized to prevent further movement of sediment downhill into the lake. A small bridge will be constructed over Fifth Debsconeag Lake Stream for snowmobile use. The bureau will designate as a snowmobile trail, the section of old tote road extending west from Pleasant Point Camps to Fifth Debsconeag Lake Stream, from this point continuing over the section of old road to the boulder blockage, and from there over the public access road to Nahmakanta Stream. The bureau will work with the lessee of Pleasant Point Camps to provide suitable administrative arrangements for access over the snowmobile trail to the camps to facilitate the movement of building materials and camp supplies.

In the Debsconeag Backcountry area the bureau will develop a loop hiking trail, which will access several scattered, primitive campsites to provide a multi-day backpacking experience. The locations of these campsites will be determined by additional field reconnaissance. The loop trail will be designed to bypass some of the remote ponds to make them accessible only to people willing to bushwack to them. This loop will utilize existing trails where appropriate with trailheads at small parking areas (suitable for 8 to 10 vehicles); one will be located north of Nahmakanta Lake and the other west of Fourth Debsconeag Lake (see Appendix I, Map 7 - Recreation Facilities). Existing trails that are not incorporated into the new trail network will be phased out by painting over the blazes, brushing them in or not actively maintaining them.

A draft "Plan for the Management of Nahmakanta Lake Lands" prepared by the Maine Appalachian Trail Club (October 30, 1994) has been circulated for review (a copy is included as Appendix II of this plan). Pursuant to the Memorandum of Agreement between the National Park Service and the State of Maine, the MATC plan provides for the development of a carry-in

access to Nahmakanta Lake for launching small boats and canoes, and an associated public parking area along the Nahmakanta Stream Road. The plan also provides for the rehabilitation of several traditionally used primitive campsites along the shoreline.

The costs of developing, maintaining and monitoring these recreation facilities are to be borne by the State (Bureau of Public Lands), as provided for in the Memorandum of Agreement between the State and the National Park Service.

The Bureau will develop water access or hike-to campsites at several locations on the unit. All campsites will have an authorized campfire site (no permit required) with a fire ring, a privy or backcountry toilet, and a picnic table if space permits; however, no picnic table will be provided at campsites in the Debsconeag Backcountry. Camping is allowed in locations other than at authorized campsites, so long as no open fire is kindled.

An existing trail system on Turtle Ridge will be upgraded and extended, where necessary, to create a new loop hiking trail. The loop trail will be designed so as to bypass Loon and Hedgehog Ponds, which are not currently accessible by trails. This will help to maintain the recreational experience for people willing to reach these remote ponds without the benefit of a trail. The loop trail system will be accessible from a trailhead located on the public access road running along the east side of the foot of Turtle Ridge, and possibly from another trailhead on a public access road west of Turtle Ridge. (The major impediment to developing access from the west to the Turtle Ridge trail system is posed by the need to cross Musquash Stream with a substantial foot bridge.) The trailhead on the east side of Turtle Ridge will also serve as the departure point for a trail running to the east to Leavitt and Tumbledown Dick Ponds. Tumbledown Dick Falls will be accessible by a side trail off the AT. This side trail will leave the AT near the east unit boundary line and run southerly roughly paralleling that line. Before

implementing this proposal, the bureau will need to seek the endorsement of the MATC Executive Committee.

Two new hike-to campsites will be developed, one each at Sing Sing and Rabbit Ponds. Both ponds are popular destinations for brook trout fishing. The development of unauthorized campsites at these ponds will be discouraged to maintain a high quality remote camping experience.

A new water access campsite will be developed on the east shore of Wadleigh Pond. Several campsites suitable for use by individual parties or a small group will be developed at the north end of Wadleigh Pond on the site of the former Wadleigh Pond Sporting Camps. All but one of the old cabins will be removed. The one cabin that is retained will be used to house staff conducting management activities on the unit.

Three new water access campsites will be developed on Pollywog Pond, two on the west shore and one on the east shore. A vehicle accessible, unauthorized campsite on the east shore has a 75 foot trail to the pond, which can be used for launching carry-in boats. There is suitable off-road parking for two or three vehicles in the area, which has been used for unauthorized camping. To facilitate launching of carry-in boats at this location, the campsite will be closed so that vehicles can be parked where camping formerly occurred.

The existing hiking trail to the top of Wadleigh Mountain will be improved, and a small trailhead parking area will be developed (the parking area will be at the edge of the Backcountry area and designated as General Recreation). The bureau will consult with the Maine Forest Service to determine the extent of repairs that would be necessary to make the Wadleigh Mountain fire tower safe for continued public use. If it can be made safe at a reasonable cost, then the bureau will formalize an agreement with the Maine Forest Service allowing the bureau to

repair the tower and cab, with the Forest Service providing technical assistance.

3. WILDLIFE MANAGEMENT (See Appendix I, Map 5 - Wildlife Areas)

Wildlife management efforts by the bureau are coordinated with the DIF&W staff, the lead State agency for management of these resources. The bureau's Integrated Resource Policy provides the basic policy guidance used in managing fish and wildlife resources on public lands. In addition, through a DIF&W position assigned to the bureau, the two agencies have developed the document Wildlife Guidelines, which establishes the specific management strategies for coordinating wildlife management with other management activities on Maine's Public Lands. The unit has the potential to provide good to excellent habitat for many species of wildlife.

Important wildlife areas include wetlands, riparian zones, deer yards and other special habitats. The following describes management goals and objectives for the various wildlife habitats on the unit.

Wildlife Management Areas Designated as the Dominant Use on the Property:

Riparian and Wetland Areas - The forest edge around lakes, ponds, wetlands, rivers and streams makes up the riparian zone. These areas are among the most productive of the forest environment because in addition to providing habitat for certain range-limited species they also serve as wildlife travel corridors connecting watersheds and providing access to adjacent uplands. The bureau protects riparian zones by designating a 330 foot wide area around or along major water bodies; in this area wildlife is the dominant use. On smaller water bodies and intermittent streams, that are unlikely to serve as major travel corridors for large mammals, the riparian zone may be reduced to a width of 75 feet with the approval of the staff Wildlife Specialist.

By bureau policy timber harvesting in riparian zones is accomplished by uneven-aged methods; where harvesting takes place it is specifically planned to benefit wildlife, and must be

approved by the staff Wildlife Specialist. In riparian zones wildlife management is the dominant use, and other uses such as recreation and timber management are secondary uses.

The areas designated as major riparian zones are shown on Map 5, Appendix I. Minor riparian zones will be identified during the compartment examination process and protected; however, they are too numerous and extensive to show on the map. Specifically, the following important natural aquatic communities listed in Table 1., page 13, will be protected by major riparian zoning: 1. Farrar Brook (including its tributaries and immediately adjacent wetland areas); 2. Gould Pond (and Brook); 3. Eighth Debsconeag Pond (and Brook); 4. Eighth Debsconeag Cedar Swamp; 14. Stink Ponds and ponds to the north; 9. Wadleigh Pond; 10. First Musquash Pond; 11. Second Musquash Pond; 13. Loon Pond; 18. Tumbledown Dick Stream; and 19. Leavitt Pond. All of the lakes, ponds, wetlands and streams in the Debsconeag Backcountry no-cut area and the Tumbledown Dick Stream Special Protection Area will have an overlying riparian zone, because even though timber harvesting will not occur in these areas, recreational facilities (such as hiking trails) are permissible uses, and trails will need to be sited so as to avoid compromising riparian zone values.

Existing habitat quality and condition determines whether the riparian zone is managed or not during each management cycle. Timber management in most riparian areas will be accomplished by single tree and group selection removal, primarily designed to enhance diversity and cover conditions for wildlife. The first 75 feet of the zone may be lightly harvested, or not at all, depending on the recommendation of the staff Wildlife Specialist, to retain shade over water courses and avoid siltation. In major riparian zones the remainder may be managed by uneven-aged methods. Management will be undertaken in such a way that visual amenities are protected.

Selected tall softwood trees, especially white pine, in riparian areas will be retained for perching, roosting and nesting by eagles and other raptors.

Deer Wintering Areas - Deer yards are often associated with riparian zones and may encompass adjacent upland areas with softwood cover. Deer use defines the limits of the yards, which may "expand" or "contract" from time to time depending on snow conditions, other weather extremes and harvesting activities. There are 340 acres of LURC-zoned deer yards (P-FW) on the unit. Because of the limited deer yard acreage on the unit, it should be managed so as to maintain the existing yard area, and where possible to develop additional winter shelter by favoring softwood regeneration in areas adjacent to existing yards. Most of the deer yard along Nahmakanta Lake and Stream is within the National Park Service ownership and the balance is within the bureau's Backcountry no-cut area; these factors preclude any active management by the bureau designed to maintain the long-term winter shelter value of the yard to deer.

The bureau and DIF&W will jointly develop a long-term deer yard management plan. This plan will be patterned after the model guidelines developed by DIF&W. The plan will coordinate management prescriptions to establish three or more softwood height/age classes within the yards.

Forested areas - No other forested areas on the unit will be allocated specifically for wildlife; however, the bureau will employ the Wildlife Guidelines in planning timber harvests to benefit wildlife wherever timber is managed on the unit.

The bureau will manage timber on the unit as a whole, with the objective of maintaining a diversity of stand types across the landscape to assure that habitats are maintained for resident wildlife species. In a few areas the bureau will seek to increase softwood to provide additional

deer wintering shelter.

Mast, such as beechnuts and red oak acorns, is an extremely important food source for many species of wildlife in this part of the state. Where practical, timber management prescriptions will favor mast production.

Secondary Uses within Wildlife Management Areas: Recreation and timber management are important secondary uses in most wildlife areas. A diversity of wildlife species, balanced population levels and healthy animals are among the benefits of sound wildlife management. Timber harvesting is a key management tool that benefits wildlife through forest habitat development and maintenance. Harvesting in designated wildlife areas will be incorporated within the bureau's timber program, and will be designed for particular wildlife benefits by the bureau's Wildlife Specialist.

Recreational use of wildlife dominant areas typically will be hiking, camping, fishing, hunting and sight-seeing.

Other Specific Management Recommendations: Throughout the non-wildlife dominant areas of the unit wildlife habitat will be managed under the general guidelines for forest management activities. These guidelines are described in the bureau's Integrated Resource Policies and Wildlife Guidelines, and include the following requirements: to create and maintain a diversity of vegetation; to seed disturbed areas, such as logging roads, with a herbaceous seed mix to prevent erosion and provide wildlife food; to preserve den trees and snags for wildlife; and for the staff Wildlife Specialist to make specific recommendations for wildlife habitat improvements as opportunities are identified.

4. REMOTE RECREATION (See Appendix I, Map 6 - Recreation Use Areas and Map 7 - Recreation Facilities)

Remote Recreation areas are managed for low intensity, dispersed recreation, and contain significant natural resource values; public access is by foot only. Where recreation facilities are provided they are typically rustic in nature. Secondary uses in a Remote Recreation area are less restricted than in a Backcountry area, and in general, these areas are smaller than Backcountry areas. Remote Recreation areas usually include travel/visual zones along trails or shorelines; however, they may encompass extensive areas or entire units if the units are small and primarily allocated for recreational uses.

Remote Recreation Areas Designated as the Dominant Use on the Unit: Ten areas will be designated as Remote Recreation (see Appendix I, Map 6, ). Remote Recreation areas around water bodies will encompass, at a minimum, a 330 foot upland zone to buffer these areas from adjacent management activities.

Remote Recreation areas will encompass Black Pond, Little Female Pond, Female Pond, Third Musquash Pond, Prentiss Pond, Harding Pond, Deadwater Brook, the eastern end of Penobscot Pond on the unit, Little Penobscot Pond, and Tumbledown Dick Pond and Stream (in the vicinity of Tumbledown Dick Stream Gorge the Remote Recreation area will overlies the Special Protection zone).

Secondary Uses in Remote Recreation Areas: Timber harvesting can be a compatible secondary use within Remote Recreation areas, subject to management constraints. Primary goals of harvesting in Remote Recreation areas are to enhance recreational values and wildlife habitat, while permitting limited management of timber.

Other Specific Management Recommendations:

Three additional hike-to campsites will be developed, one each at Penobscot, Leavitt and Tumbledown Dick Ponds.

5. GENERAL RECREATION (See Appendix I, Map 7 - Recreation Facilities)

Bureau policy defines General Recreation areas as those being managed for medium-density recreational use levels. This recreation designation allows for vehicle access, and typically the facilities provided are somewhat primitive, but tend to be more developed than Backcountry/Remote Recreation facilities.

General Recreation Areas Designated as the Dominant Use on the Unit: The General Recreation designation will be applied to: the nine drive-to campsites currently maintained by North Maine Woods; the carry-in boat launches on Pollywog Pond, Wadleigh Pond and Fourth Debsconeag Lake; and the parking area/trailheads west of Fourth Debsconeag Lake, at the base of Wadleigh Mountain, north of Nahmakanta Lake, east and west of Turtle Ridge; and the small parking area located south of a gate to be erected across the Murphy Pond Road (the gate will prevent vehicles from approaching closer than one half mile to this LURC-zoned Remote Pond). General Recreation areas are shown on Map 6.

Secondary Uses in General Recreation Areas: Timber and wildlife management are often compatible secondary uses within a General Recreation area. To the extent that any management does take place, it will be geared towards visual, wildlife and safety considerations. For example, wherever possible around parking areas a herbaceous seed mix will be used to stabilize the soil surface and lessen the visual impact of human disturbance.

Other Specific Management Recommendations: Parking areas and other appropriate

locations will have a sign board on which will be posted information regarding recreation facilities and the bureau's rules concerning public use of the unit. Also, at some of these locations the bureau may provide a log book so that people intending to camp can indicate the campsite they will occupy; this will let other people know which sites may already be taken. Additionally, the bureau may also use some sign board locations to collect other user information to enable the bureau to better manage recreation facilities and public use.

The bureau will work with the Maine Appalachian Trail Club to develop recreation facilities on the shore of Nahmakanta Lake, which is within the Appalachian Trail Corridor (see Appendix II for description of proposed recreation facilities). Among the proposed recreation facilities is a carry-in boat launch at the south end of Nahmakanta Lake. At this location, the bureau will provide a wheeled boat carrier to facilitate the movement of small boats between the turn-around/unloading area and the lake.

Provisions will be made for pedestrian and snowmobile passage around the gate on the Murphy Pond Road. The Murphy Pond Road is used by snowmobilers as a part of a "primitive" trail system, which extends north of the unit.

Snowmobiling is a significant recreational use of the property, which because of the time of year that it takes place, does not result in extensive conflicts with other existing recreational uses, with the possible exception of a relatively small number of cross-country skiers and snowshoers who occasionally use the property. As use of the property increases over time, there is a potential for more frequent conflicts among various winter sports enthusiasts. To reduce user conflicts, snowmobiling will occur on designated trails only.

The bureau will designate for continued public use the existing ITS 86 trail (or a relocated

route off the public access roads on the unit). The bureau will also designate for public use the primitive loop trail that extends up the Wadleigh Pond Road, runs north of the unit, bisects the extreme northeast corner of T1 R11 WELS and then eventually returns onto the unit over Fourth Debsconeag Lake and back down the Nahmakanta Stream Road. A short section of trail--off this primitive loop trail--leading to Fifth Debsconeag Lake will be closed. No new snowmobile trails will be designated in Backcountry areas. The bureau will work with local snowmobile clubs to identify and designate other trails not discussed here, where and when they do not conflict with other uses or management activities.

There is potential for serious conflicts between snowmobiles and logging trucks. To alleviate the hazard of snowmobiles on roads used by logging trucks and to provide a more interesting trail, the bureau will work with the Snowmobile Program in the Maine Bureau of Parks and Recreation and local snowmobile clubs to relocate portions of the existing ITS 86 trail, and other trails receiving substantial use, from roads to new permanent off-road locations.

The bureau and the MATC will work together to provide for snowmobile access across AT Corridor lands to Nahmakanta Lake to allow for traditional snowmobiling and ice fishing on the lake.

#### 6. VISUAL CONSIDERATION (See Appendix I, Map 8 - Visual Consideration Areas)

Many bureau-managed properties have natural settings that are intrinsic to the enjoyment of recreational users. Roads and gravel pits, timber harvests which create large openings, and stumps and slash detract significantly from the visual enjoyment of an area. To protect the land's aesthetic character, the bureau uses a two-tier classification system based on the sensitivity of the visual resource to be protected to guide management planning. Scenic areas are classified as

either Visual Class I or Visual Class II.

Visual Class I areas are the most visually sensitive. The natural character of features in the foreground have a direct effect on visual enjoyment. These areas receive the highest priority with regard to mitigating the visual effects of management activities. Timber harvesting in Visual Class I areas is permitted under stringent limitations aimed at retaining the appearance of an essentially undisturbed forest. Openings will be contoured to the lay of the land and limited to a size that will maintain a natural forested appearance. Within trail corridors, stumps may be required to be cut at ground level or covered with dead branches. Branches, tops and other slash will be pulled well back from any trails. To enhance visual enjoyment in Class I areas, individual trees or small groups may be removed in some locations, particularly along trails, to provide scenic vistas.

Visual Class II areas are visually less sensitive than Class I areas. Class II areas typically include views of forest canopies from a ridgeline or the forest interior as it fades from the foreground of the observer. Interior views beyond the Visual Class I zone are likely to be seen from a trail or when the hiker leaves a trail to bushwhack through the woods. Class II areas are less sensitive to change from the visual standpoint of the observer, but will nonetheless be managed to avoid creating any obvious alterations to the landscape. The casual observer may notice a slight change in the character of the area following timber harvesting or road building activities, but the alteration will be as minimal as practicable. Openings will be of such a size and orientation as to not unduly draw attention, and slash will be kept low to the ground.

The bureau's Integrated Resource Policy calls for the coordination of all timber harvesting operations with staff specialists, including the Recreation Specialist who is responsible for

making visual resource management recommendations.

Visual Consideration Areas Designated as the Dominant Use on the Unit: Class I Visual zoning will overlie all Backcountry and Remote Recreation areas on the unit. Hiking trails not within Backcountry or Remote Recreation areas will be protected by Class I Visual zoning, which will extend at least 100 feet on either side of the trail. Also, Class I Visual zoning will be applied along all public access roads and around lakes and ponds.

Class II Visual zoning will overlie areas in Rainbow Township and T1 R11 WELS not zoned Visual Class I, and will also be applied in T1 R12 WELS to the eastern portion of the town and on Female and Farrar Mountains. The Visual Class II zoning recognizes the visual sensitivity of these areas as seen from Nesuntabunt and Wadleigh Mountains.

Secondary Uses in Visual Consideration Areas: In Visual Consideration areas where other more restrictive provisions do not apply, recreation, road construction and timber harvesting are permissible uses. Timber harvesting will be as unobtrusive as possible, while still enhancing forest growth and regeneration.

Other Specific Management Recommendations: The Recreation Specialist when laying out hiking trails will use topographic high points, such as ridgelines and ledge outcrops, to provide opportunities for distant vistas.

7. TIMBER (See Appendix I, Map 9 - Timber Management Areas)

Where no other use is dominant an area will be managed primarily for timber, as long as the area is suitable for timber production under the bureau's policies for timber management. Where other uses are dominant, timber will be managed as a secondary use, so long as it can be conducted in a way that does not conflict with the dominant use.

In all Special Protection areas and in the Debsconeag Backcountry area no timber management activities will occur.

In general, the bureau manages timber on public lands based on long rotations-- creating several age classes---with the objective of producing sustained yields of high quality forest products, such as saw logs and veneer. The bureau seeks to maintain timber types that best utilize each site. This management approach creates diversity in the forest, which benefits the forest ecosystem, improves wildlife habitats, and provides natural barriers against the spread of disease and insects resulting in healthier, more vigorous forest growth.

Timber Management on the Property: Although much of the unit has been extensively harvested in the past, it has substantial potential to produce a variety of forest products. In the near term, hardwood products will dominate; in time softwood regeneration and careful management will increase the flow of spruce, fir, pine and hemlock.

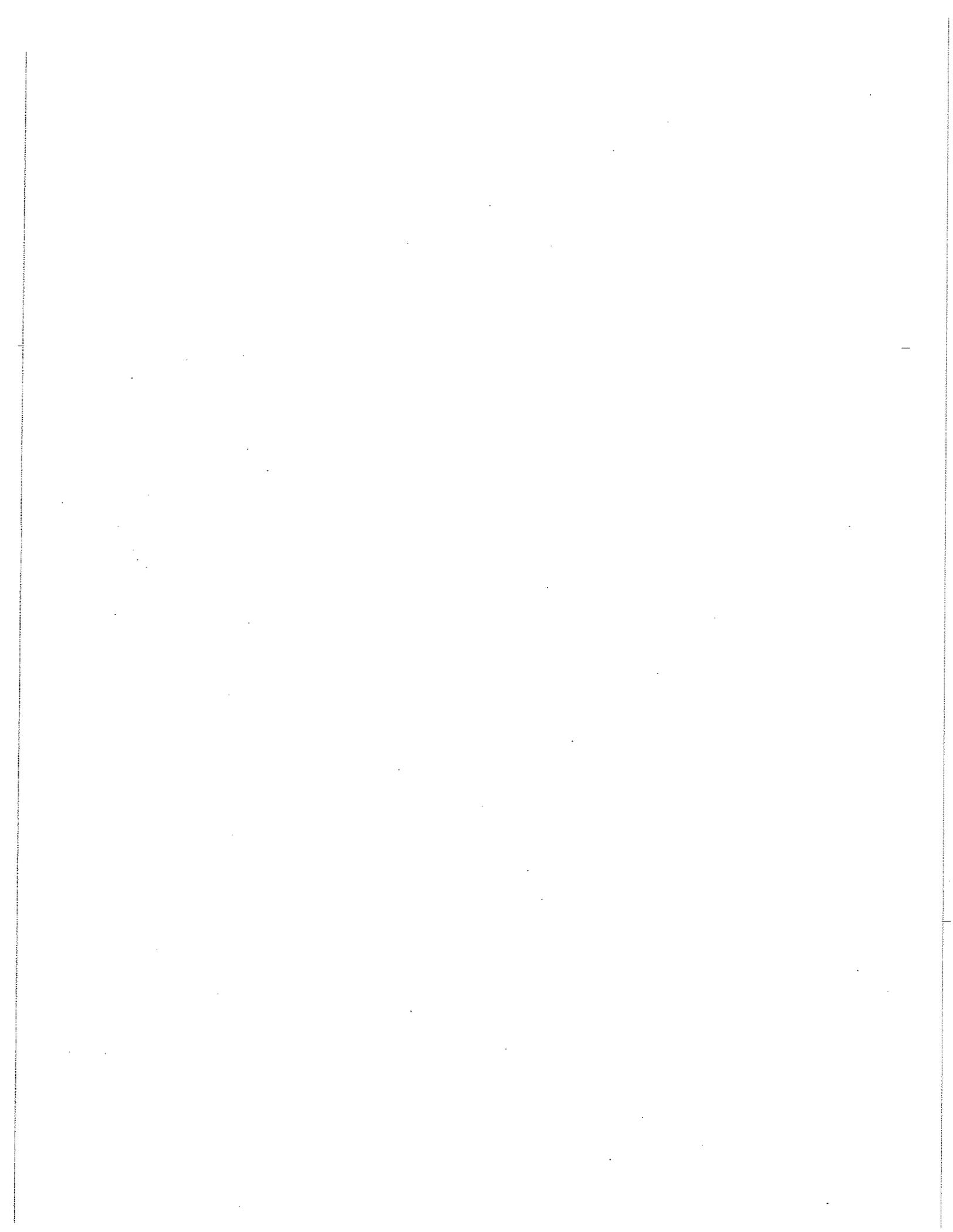
The main timber management objective for the unit will be the commercial production of the highest possible quality timber using sound silvicultural practices. Timber harvest planning will consider the visual effects of harvesting and avoid conflicts with recreational objectives for the unit. Harvesting will employ a variety of management techniques, uneven-aged as well as even-aged, to attain the desired objectives for timber, wildlife and recreation in light of the constraints of each site.

Other Specific Management Recommendations: The boundaries of Special Protection areas will be delineated at the time an adjacent area is being prepared for a timber sale if there is a likelihood that harvesting activities would impact sensitive resource values.

Stands of mature to over-mature aspen along the Deadwater Brook Road will be given priority for development of initial silvicultural prescriptions. A reconnaissance of the unit will be

made, early on during the term of this plan, to identify other stands requiring prescriptions and timely treatment to avoid loss of timber resource values.

Sizable areas of softwood will be managed to remain in this type.



## IV. ADMINISTRATIVE CONCERNS

### A. PUBLIC ACCESS (See Appendix I, Map 10 - Primary Transportation System)

The bureau realizes that providing vehicle access to the unit for public recreational use and to facilitate management activities is an important and complex issue. The unit does not have direct access from a public road. The entire unit is surrounded by privately owned land. Part of the unit has been within an existing recreational management system (KI/Jo-Mary), and the entire unit is east of and adjacent to another system (Great Northern Paper's West Branch District).

In developing an access strategy, the bureau examined many factors including benefits to the potential users, administrative needs, short and long term development and maintenance costs, historical public access patterns, and compatibility with the current transportation system surrounding the unit.

The following is a brief description of the existing and historical public access routes, after which is presented the bureau's recommendations for providing public access to the unit.

#### Existing and Historical Public Access to the Unit

##### Jo-Mary Road Access

Unit lands in T1 R11 WELS and T2 R11 WELS have been within the KI/Jo-Mary Recreational Management system. The principal access to the unit has been from the southeast over the privately owned and maintained Jo-Mary Road, which is entirely within the KI/Jo-Mary System. The unit can be reached by passing through the Jo-Mary checkpoint off Route 11 in Long A Twp.. At the checkpoint, individuals register and pay day use and camping fees depending on length of stay and type of use. From the checkpoint, the road proceeds northwest 17 miles into the unit at its southeastern corner. This road has been the only public access to T1

R11 WELS and T2 R11 WELS since 1987. To allow the transportation of forest products from the unit over the Jo-Mary Road, the bureau will need to negotiate road use agreements with the landowners.

#### Bear Pond Road Access

Land in T1 R12 WELS has not been a part of the KI/Jo-Mary system. The public has been able to access the Black Pond/Female Pond area in T1 R12 WELS by passing through Great Northern Paper's West Branch District Sias Hill gate, taking the Greenville Road east to the Bear Pond Road, and then proceeding into the unit over the Black Pond Road. It is not possible to travel over the deteriorated road system in T1 R12 WELS to reach the rest of the unit in T1 R11 WELS and T2 R11 WELS.

#### Penobscot Pond Road Access

Formerly, access to lands now in the unit, was provided from the west over a Scott Paper Company road running north of First and Second Roach Ponds, and Penobscot Pond through a staffed checkpoint on the west line of T1 R11 WELS. During the period of time that this access and checkpoint were used, the cost of maintaining the checkpoint was not covered by the revenues generated by user fees, so KI/Jo-Mary removed it in 1987. Subsequently, the previous landowner created a barrier ("tank trap") to maintain the integrity of the KI/Jo-Mary system.

#### Recommendations For Providing Public Access

The following are the Bureau's recommendations to provide public access to the Nahmakanta Unit:

1. Inform the KI/Jo-Mary Corporation that the Bureau of Public Lands will remove the land in T1 R11 WELS and T2 R11 WELS from the KI/Jo-Mary Recreational Management System.

2. Provide unrestricted free public access from the west over the Penobscot Pond Road to the unit by removing the existing barrier. (The Penobscot Pond Road is now owned by South African Pulp and Paper Inc., (SAPPI, formerly S.D. Warren Company). The company has indicated that they intend to continue S. D. Warren Company's long-standing policy of allowing free public access over their road system.)

3. Work with KI/Jo-Mary to establish a staffed checkpoint on the Jo-Mary Road somewhere in the vicinity of the unit's southern boundary in T1 R11 WELS, so that the public can continue to access the unit from the east. The checkpoint will be operated by KI/Jo-Mary and they will keep any fees collected. People using the Jo-Mary Road to reach the unit will continue to pay day use fees at the KI/Jo-Mary checkpoint off Route 11. No additional fee will be charged to enter the unit through the checkpoint near the unit boundary; however, fees will be collected from people leaving the Nahmakanta Unit and entering the KI/Jo-Mary system.

This checkpoint will be in lieu of a tight gate or barrier, so that vehicles can flow between public lands and lands in the KI/Jo-Mary system. People who want to access the KI/Jo-Mary system from the west can do so by travelling to the unit over the Penobscot Pond Road, passing through the unit, and then entering the KI/Jo-Mary system through the checkpoint near the unit's southern boundary.

The bureau will bear the initial costs of establishing the new checkpoint. Revenue generated from this checkpoint will go to the KI/Jo-Mary organization. Within three to five years after establishing the checkpoint the bureau will review with the KI/Jo-Mary organization the trend in public use of the Jo-Mary Road to access the unit, to determine if continued operation of the checkpoint is warranted. If this analysis shows that public use of this access point into the unit is not substantial then the checkpoint will be closed and a tight gate or barrier will be

established on the Jo-Mary Road where it enters the unit. While the bureau will subsidize the costs of operating the checkpoint (beyond receipts), the bureau's primary concern will be the utility of the checkpoint in facilitating public access from the east to the unit, and not the costs incurred to maintain it.

4. Establish a tight gate or blockage on the Bear Pond Road where it enters the unit to prevent vehicle traffic between the Nahmakanta Unit and the Bowater West Branch Recreation Management System.

In summary, these actions will provide: access to the unit from the west without day use or camping fees being charged; maintain the availability of traditional access from the east through the KI/Jo-Mary gate off Route 11; and reduce the time required to gain access to the unit from the west for land management, fire control and other administrative activities. Public access to the unit is not guaranteed, but will continue to be subject to the policies of the private landowners over whose roads the public must travel to reach the unit.

#### Road Maintenance

The bureau has two broad categories of roads, public access and management. Public access roads provide for public vehicle access into and around on a unit, and are developed and maintained to different standards than management roads. Management roads are designed for timber management and administrative use, and may be taken out of service at the conclusion of operations. Public vehicles can use management roads as long as they remain in service, and where there is no likelihood of compromising high quality recreational experiences, the integrity of areas containing special resources or environmental regulations. Along main artery management roads, which have extended periods of use, aesthetic and visual concerns related to

timber harvesting will be considered in the compartment examination and prescription process. Existing roads on the unit designated for public access will be improved and maintained to the bureau's standards for this class of road, and both sides of these roads will be zoned Visual Class I.

The unit has a variety of roads of varying conditions already in place, which will influence compartment planning in the future. The 17 mile section of the Jo-Mary Road leading to the unit is in varying condition; timber hauling over the road causes minor degradation at times, and bridges require periodic maintenance. The bureau will cooperate with the abutting landowners to ensure that this road is well maintained.

The extension of the Jo-Mary Road onto the unit is in relatively good condition, though it shows the result of only limited maintenance in recent years. In particular, roadside brush needs to be removed and in some locations drainage needs to be improved by road ditching and installing culverts. Management roads off the main stem are in poorer condition. Major portions of roads in T1 R12 WELS are suitable for winter use only because of original design or deterioration. Deteriorating bridges pose significant maintenance and safety problems. These roads will be upgraded to management road standards during the conduct of timber management activities.

Improvements to the internal road system will occur in two stages. Initially the bureau will identify those roads and bridges essential to public travel, and they will be improved to render them safe and stable, after which other roads necessary for the transportation of forest products will be improved as needed. Due to safety concerns the bureau has already replaced the decking on three bridges located over Pratt, Musquash and Pollywog Streams. Topographic considerations dictate that roads remain largely as currently located. The roads depicted on Map

10 are the main routes. The compartment planning process will identify locations for subsidiary travel ways.

#### Pollywog Stream Gate

Located on the bridge over Pollywog Stream is a gate that precludes public vehicle access beyond this point to Big Murphy Pond and lands under bureau management. This gate will be relocated to the Murphy Pond Road at a point no closer than 1/2 mile from Big Murphy Pond, to be in accord with the Land Use Regulation Commission's Remote Pond protection standards. The location of the gate will be selected so as to minimize the likelihood of people finding a way to drive vehicles around it. Vehicle use of the road beyond the new gate will be restricted to land management and administrative purposes only. A small public parking area will be developed south of the gate to accommodate four or five vehicles. People will be able to walk around the gate and along the road to reach the Murphy Ponds.

#### Gravel

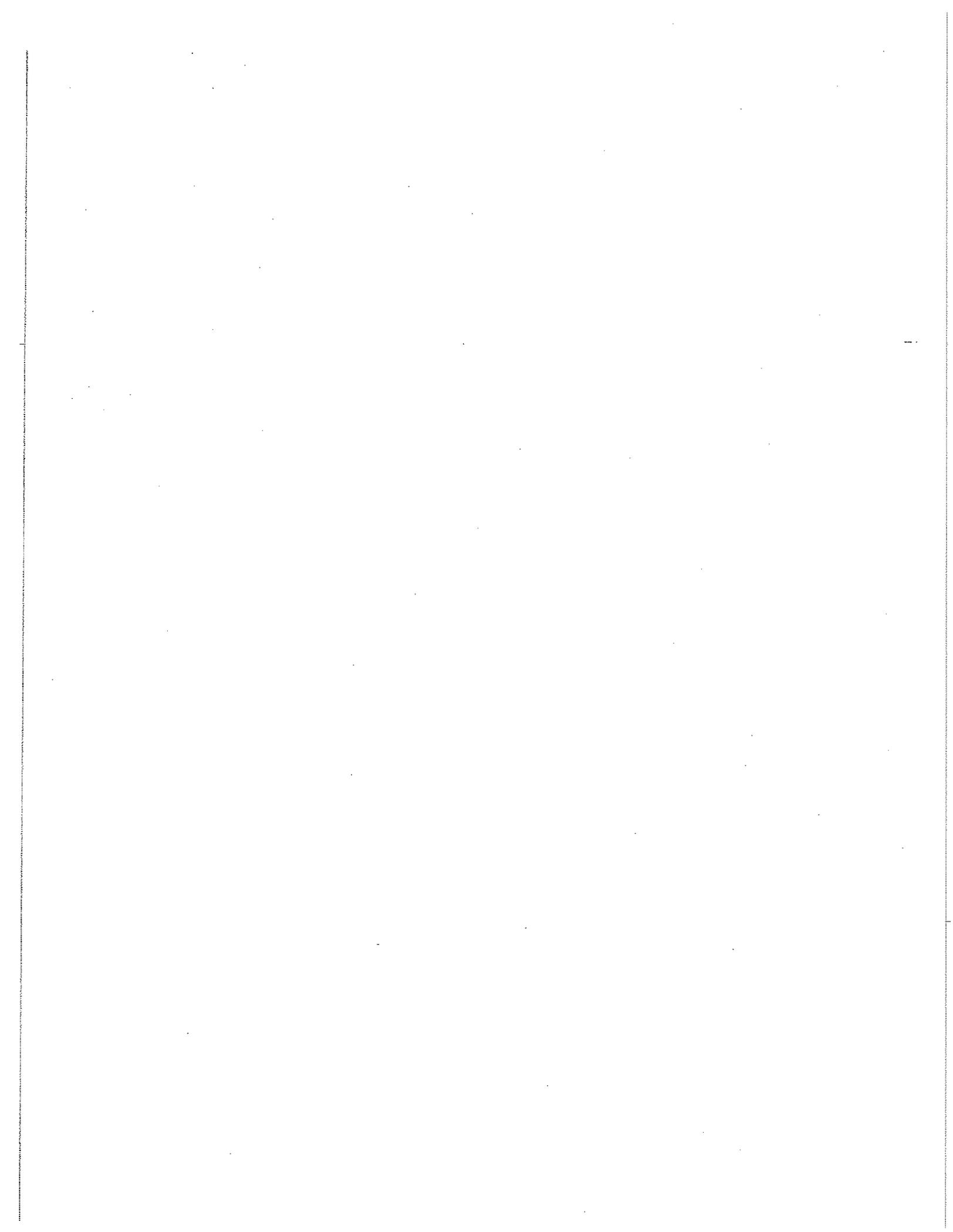
Exploration has confirmed that existing gravel resources on the unit, outside of the Backcountry no-cut area, are sufficient to meet management needs. No gravel mining will take place in the Backcountry no-cut area.

Along the Jo-Mary and Wadleigh Pond Roads there are several gravel pits that are adjacent to the Turtle Ridge and Wadleigh/Pollywog Pond Backcountry areas, and one pit that is located in the south central part of the latter Backcountry area. The James River Company retained rights to remove gravel from these pits for use on the portion of the road system that provides access to Nahmakanta Lake Camps, and on the property associated with the camps. In addition, the bureau will use these pits and others, to secure the gravel necessary to maintain public access and

management roads on the unit. All gravel extraction will be done with the objective of minimizing the visual impacts as seen from adjacent roads and vantage points.

B. FIRE CONTROL

The bureau will coordinate with the Maine Forest Service in planning for the prevention and control of forest fires on the Nahmakanta Unit. Such efforts are undertaken on a regional basis, and intended to assure that Department of Conservation staff and equipment can respond quickly to fires. Bureau staff with the assistance of the Maine Forest Service will identify specific locations as helicopter landing sites to provide access for fire suppression activities and medical emergencies. In Backcountry areas landing sites will be located in existing clearings.



## V. SUMMARY OF MAJOR RECOMMENDATIONS

This plan describes the major features of the Nahmakanta Management Unit and identifies how the Bureau of Public Lands proposes to manage the property's resources and uses. The plan contains the following specific recommendations.

### Resource Allocation and Management Recommendations:

#### Special Protection (See page 37)

\* Seven important natural areas encompassing 566 acres (514 acres of land and 52 acres of water) will be designated as Special Protection areas where no timber harvesting, road construction or other development activities will occur.

\* Identify osprey and loon nesting sites on the unit and protect them by designating an area encompassing a 660 foot radius around the nests as Special Protection during the nesting season.

#### Backcountry (See page 39)

\* Designate as a Backcountry "no-cut" area the 9,200-acres in the Debsconeag Lakes region north of the Appalachian Trail Corridor.

\* In the Debsconeag Backcountry area develop a new loop hiking trail, using appropriate portions of existing trails, with trailheads at small parking areas, one north of Nahmakanta Lake and the other west of Fourth Debsconeag Lake. Develop a few campsites on lake or pond shores accessible from the trail.

\* Develop a new carry-in boat access site on the west end of Fourth Debsconeag Lake with public parking for six to eight vehicles, block the road beyond the new site to vehicle access, but allow for snowmobile passage, and stabilize the old road bed to prevent further erosion. Maintain

the character of the road from the Nahmakanta Stream bridge to the new carry-in launch site by making only minor improvements to facilitate safe vehicle travel and alleviate erosion problems.

\*Designate as a Backcountry 3,800 acres encompassing Turtle Ridge (which also includes two Special Protection Areas, sites 12 and 20).

\*Improve and extend existing hiking trails in the Turtle Ridge Backcountry to create a loop trail accessible from a trailhead on the public access road east of Turtle Ridge, and if feasible, from another trailhead west of the ridge. Also, develop two new hike-to campsites, one each at Sing Sing and Rabbit Ponds.

\*Designate as a Backcountry 4,600 acres encompassing Pollywog Pond, Wadleigh Pond, First and Second Musquash Ponds and Wadleigh Mountain.

\*Develop a new water access campsite on the east shore of Wadleigh Pond, and develop several individual campsites suitable for use by individual parties or a small group at the north end of the pond on the site of the former Wadleigh Pond Sporting Camps.

\* Retain one of the Wadleigh Pond Sporting Camp cabins to be used to house staff conducting administrative work on the unit.

\* Develop three new water access campsites on Pollywog Pond.

\* Improve the Wadleigh Mountain trail and determine the extent of repairs necessary to make the Wadleigh Mountain fire tower safe for public use, and if feasible formalize an arrangement with the Forest Service allowing the bureau to repair the tower with the Forest Service providing technical assistance.

\*Develop campsites on Nahmakanta Lake in accord with the Maine Appalachian Trail Club's "Plan for Managing Nahmakanta Lake Lands" (see Appendix II).

\* Develop a parking area and carry-in boat access site at the south end of Nahmakanta Lake

in accord with the MATC plan, and provide a wheeled boat carrier to facilitate moving boats to and from the lake.

Wildlife (See page 46)

\* Designate major riparian zones around Black Pond, Little Female Pond, Female Pond, Farrar Brook, Third Musquash Pond, Musquash Brook, Pollywog Pond, Penobscot Pond, Little Penobscot Pond, Harding Pond, Long Pond, Prentiss Pond and outlet stream, Tumbledown Dick Pond and Stream, Deadwater Brook, and the outlet stream from Leavitt Pond, as well as all of the lakes, major ponds and wetlands in the Debsconeag Backcountry area.

\* Designate minor riparian zones around minor water bodies.

\* Manage existing deer yard acreage on the unit to maintain winter shelter and where possible develop additional shelter by favoring softwood regeneration in adjacent areas.

\*The bureau and the DIF&W will jointly develop a long-term deer yard management plan.

Remote Recreation (See page 50)

\* Designate ten areas on the unit as Remote Recreation.

\* Develop three additional hike-to campsites one each at Penobscot, Leavitt and Tumbledown Dick Ponds.

General Recreation (See page 51)

\* Evaluate the suitability of the location and facilities at existing campsites and determine which, if any, should be discontinued or relocated.

\* Designate General Recreation areas around the nine existing drive-to campsites currently maintained by North Maine Woods.

\* Designate General Recreation areas around the four carry-in boat access sites.

\* Designate General Recreation areas around the following proposed facilities: parking area/trailhead at the base of Wadleigh Mountain; the parking area/trailhead north of Nahmakanta Lake; the parking area/trailhead west of Fourth Debsconeag Lake; and the small parking area located south of a gate to be erected across the Murphy Pond Road, which will prevent vehicles from driving within 1/2 mile of this LURC-zoned Remote Pond.

Visual Consideration (See page 53)

\* Apply Class I Visual Consideration zones to all Backcountry and Remote Recreation areas on the unit.

\* Apply Class I Visual Consideration zones to both sides of all public access roads and hiking trails (not already receiving protection by virtue of being in Backcountry or Remote Recreation areas).

\* Apply Class II Visual Consideration zones to areas in Rainbow Township and T1 R11 WELS not zoned Visual Class I, and in T1 R12 WELS to the eastern portion of the town and on Female and Farrar Mountains.

Timber (See page 55)

\* No timber harvesting will occur in Special Protection areas or in the Debsconeag Backcountry area.

\* When preparing areas for timber sales the bureau will delineate Special Protection areas on the ground if it is likely that adjacent management activities could impact sensitive resources.

\* Softwood areas should be managed to remain in this type.

\* Give priority to the development of silvicultural prescriptions for the stands of mature to over-mature aspen along the Deadwater Brook Road.

Administrative Concerns:

Public Access (See page 58)

- \* Remove lands in T1 R11 WELS and T2 R12 WELS from the KI /Jo-Mary Recreational Management System.
- \* Provide unrestricted access from the west over the Penobscot Pond Road to the unit. (No day use or camping fees will be charged for use of unit lands.)
- \* Work with KI/Jo-Mary to establish a staffed checkpoint on the Jo-Mary Road somewhere in the vicinity of the unit's southern boundary in T1 R11 WELS, so that the public can continue to access the unit from the east. (People accessing the unit from the east through the KI/Jo-Mary checkpoint off Route 11 will have to pay the required day use fees to the KI/Jo-Mary organization.)

Pollywog Stream Gate (See page 63)

- \* Relocate the gate over Pollywog Stream to the Murphy Pond Road at a point no closer than 1/2 mile from Big Murphy Pond (LURC-zoned Remote Pond).
- \* Develop a small public parking area south of the new gate to accommodate four or five vehicles; design the gate such that snowmobiles can drive around it, which will also allow people to walk around it to reach the Murphy Ponds on foot.

Gravel (See page 63)

- \* No gravel mining will take place in the Backcountry no-cut area.
- \* Gravel extraction will be done in a way that minimizes visual impacts from roads and vantage points.

Fire Control (See page 64)

\* Coordinate fire control efforts with the Maine Forest Service to assure that department staff and equipment can respond quickly to fires.

\* Explore with the Maine Forest Service the desirability of establishing an appropriate number of helicopter landing sites in Backcountry areas to allow for rapid access to conduct fire suppression activities and to respond to medical emergencies.

\* Within Backcountry areas helicopter landing sites will be located in existing clearings.