

HOLEB UNIT MANAGEMENT PLAN

Public Reserved Lands System



DECEMBER 1989

DEPARTMENT OF CONSERVATION

Bureau of Public Lands

ADOPTION CITATION

In accordance with the provisions of 12 M.R.S.A., Chapter 202-B, ss585 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: 12/12/89

Thomas A. Morrison
Director
Bureau of Public Lands

APPROVED: C. Edwin Meadows, Jr. DATE: 12/28/89

C. Edwin Meadows, Jr.
Commissioner
Department of Conservation

ADOPTED DATE: 12/28/89 REVISION DATE: 12/28/99

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INTRODUCTION

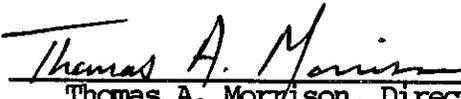
This document is the first ten-year Plan for management of the Public Lands in the Townships of Holeb -- T6 R1, Attean -- T5 R1, and Bradstreet -- T4 R7, the Holeb Management Unit. It has been designed to meet the requirements for multiple-use management plans set forth in Title 12 M.R.S.A., Chapter 202-B, ss585, and is consistent with the Planning Policies adopted June 1985 and Integrated Resource Policies adopted December 1985 by the Bureau of Public Lands (The Bureau).

The purpose of this Plan is twofold. First and foremost, it is a commitment to the public, who own these lands, that the lands will be managed well -- in accordance with the law and sound resource management practices. As such, this Plan has been designed to be readily understood by all of the using public. In this Plan, the Bureau also commits to making significant changes only after providing opportunity for further public participation. Second, this Plan is a directive to the Bureau staff; it provides clear goals and direction for them to follow in fulfilling their responsibilities.

This is not a Plan of operations. It is written to permit professional managers to respond to current situations -- to have a degree of flexibility as to how long-term goals should be accomplished. All detailed management decisions will undergo interdisciplinary review to ensure a well-balanced approach.

Because forest management objectives frequently require long periods of time to achieve, this Plan has been written broadly enough to be appropriate for many decades. However, the Bureau's policies call for a complete review and updating of this Plan every ten years to insure responsible management planning. Sections of the Plan will be updated as new information is processed.

The Bureau wishes to acknowledge the helpful participation of many Maine citizens and others in the development of this Plan. Through the assistance of the Public Advisory Group (listed in Appendix 2), and through the many comments received in response to the draft Plan, the Bureau has heard and incorporated many constructive suggestions from Maine people. We thank those persons for their assistance, and we appreciate the importance of their contributions. Continued public support will be needed to meet many of the goals and objectives outlined in this Plan.



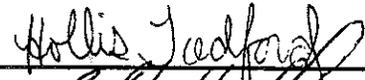
 Thomas A. Morrison, Director

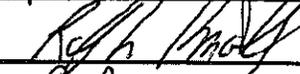
Bureau of Public Lands

November 1989

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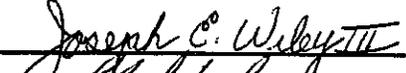
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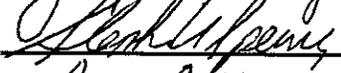


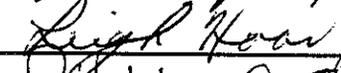


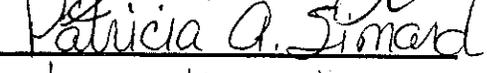


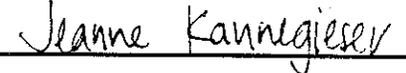






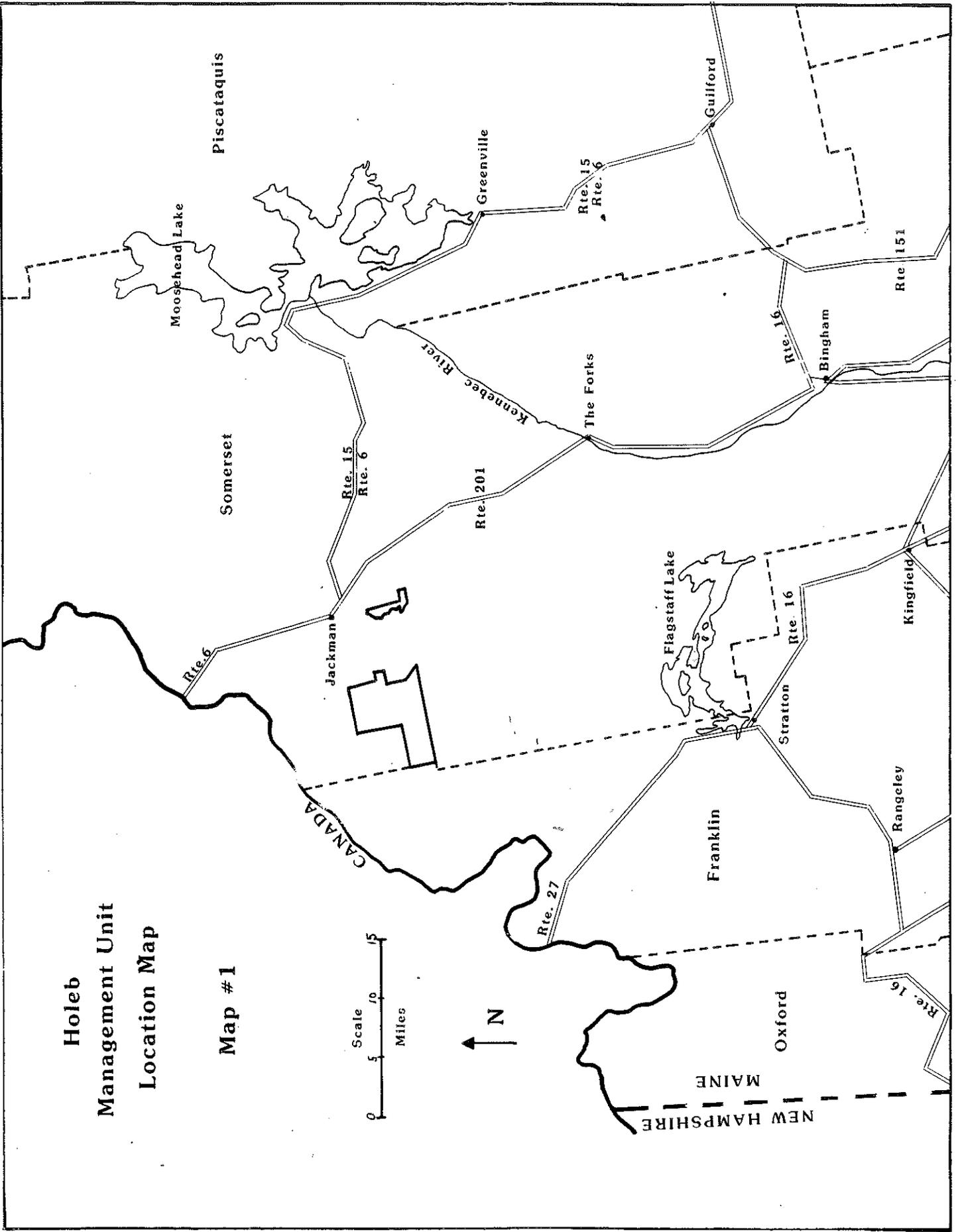
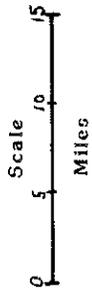






Holeb
Management Unit
Location Map

Map #1



SECTION I CHARACTER OF THE LANDBASE (Refer to Map #1)

The 19,231 acre Holeb Unit is located near the Town of Jackman in west central Somerset County. The Canadian border is five miles from the Unit at its nearest point. The Unit consists of an eastern and western section, with most of Attean Township separating the two sections. The western Unit section is the major part of the Unit at 17,851 acres in size, located in Holeb Township (T6 R1) and western Attean Township (T5 R1). The eastern Unit section is 1,380 acres in size, located in eastern Attean Township and northern Bradstreet Township (T4 R7).

The Holeb Township land was acquired by the State from Great Northern Nekoosa Corporation in 1975; northwestern and southwestern Attean lands from the Coburn Land Trust in 1982 and 1984; the southeastern Attean and Bradstreet lands are original Public Lots. Two private campplot leases are located on the Attean Pond shoreland. Ten private campplot leases came to the State with the Holeb acquisition; nine are still in effect. Birch Island on Holeb Pond is privately owned and has several camps on it.

The Holeb Unit lies within a very scenic area. Topography is alternately mountainous and flat, with much of the flat areas being wetlands. The Unit is mostly forested, with several ponds, brooks, and streams scattered throughout. The dominant physical features on the western section of the Unit are the several mountains reaching elevations of over 2,000 feet, Holeb Pond which is 1,055 acres in size, and the Moose River. The Canadian Pacific Railroad (CPR) track crosses this section of the Unit on the south side of Holeb Pond. An inactive CPR siding is located at an old mill site just to the west of the Unit.

The outlet of Holeb Pond -- Holeb Stream -- flows into Moose River, the only river on the Unit. The Moose River forms a southerly loop, leaves the

Unit, and eventually connects with Attean Pond and the easterly section of the Holeb Unit. This loop of the River, Attean Pond, Holeb Pond, and a one mile portage between the Ponds, forms the 34 mile long Moose River Bow Trip, thirteen miles of which lie within the Unit. The Trip is a popular canoeing route which can begin and end at the same spot.

Attean Pond is the dominant feature on the easterly section of the Unit, with the State owning all of the eastern shore of the Pond. The State also owns a short distance along the Moose River in Attean and Bradstreet -- the inlet of Attean Pond, and along the outlet at the northeasterly end of Attean Pond.

The western section of the Unit is well-forested with nearly equal amounts of hardwood and softwood. A wide range of wildlife species -- including fish -- are found in this area. The eastern section of the Unit's forest is mostly of burn-origin (approximately 1907), with low-quality hardwoods predominating. This forest provides more limited wildlife habitat conditions. No rare or endangered species of plants or animals are known to occur on the Unit, although great blue heron, loons, osprey, and bald eagles include the Unit within their range.

SECTION II KEY MANAGEMENT CONCERNS

This Plan addresses the entire multiple-use management program for the Holeb Unit. There are several major concerns which provide the principal focus for this Plan. Because of the nature of multiple-use management, the resolution of these concerns will be addressed throughout. The concerns and the primary discipline which they are associated with are as follows:

1. Special Protection

a. A fifteen acre registered Critical Area (#212) is located at Holeb Falls on the Moose River in the southwest corner of Attean Township. As an exception to normal constraints, a rustic campsite which serves the Moose River Bow Trip is located within the critical area. The Bureau will designate the area for special protection as the dominant use, and monitor the area periodically to help ensure the protection of this scenic and unusual area.

b. Several areas on the Unit have been identified as potentially in need of special protection designation (see page 8). The Bureau will have these areas assessed for inclusion in the special protection use category.

2. Wildlife

a. Deer wintering areas (DWA) are important habitat types -- both for the Unit and for the region. Three DWA are located on the Unit, and another potential DWA has been identified. The Bureau will work with the Department of Inland Fisheries and Wildlife (DIF&W) in the management of the three DWA and assessment of the fourth area.

b. The fisheries found on the Holeb Unit are important, high-quality natural resources. The smaller, remote ponds are fragile and offer an ever-diminishing backcountry fishing experience. The Bureau will follow DIF&W management recommendations to help ensure the continued productivity of this resource.

3. Recreation

a. The Moose River Bow Trip is a recreational opportunity of statewide significance. The relative remoteness, scenic character of the area, and loop configuration of the 34 mile long Bow Trip combine to make it popular. The Bureau will work with the other landowners along the Bow Trip to help protect the associated resource values and properly manage this important recreational experience.

b. The Turner Beach campsite/boatlaunch area (Holeb Landing) on Holeb Pond is being designated as a vehicle-access, general recreation area which is surrounded by backcountry. Since the Beaudry Road which leads to the Holeb Pond Road is privately-owned, the Bureau will work towards entering a road-use agreement with the private landowners to help ensure continued public and management access.

c. Attean Landing is a popular site on Attean Pond and offers a boatlaunch and vehicle parking area. High water during the spring results in flooded and muddy conditions at the Landing. Parking becomes more of a problem during the spring, as this is the most popular fishing season. The Bureau will upgrade the Landing to help reduce these problems.

4. Visual Consideration

The scenic quality of the Holeb Unit is especially important because of the predominant backcountry characteristics found here. Particular attention will be paid to visual affects of management activities on land along the Bow Trip.

5. Timber

Specific timber resource information has not been gathered by the Bureau in some areas of this Unit. Lack of access to these areas has been the primary impediment to this process. Timber and other resource information will be assembled for the entire Unit within the ten-year planning period.

6. Road System

a. Roads leading to the Unit are privately-owned. The Bureau will work towards entering road-use agreements with the three private landowners involved to help ensure continued public and management access.

b. Management road access within the Unit is limited in extent and condition. The Bureau will assess management road access needs within the

framework of this Management plan, and develop a system which considers all management needs and constraints.

SECTION III RESOURCE ALLOCATION

The Bureau's multiple-use management system is based on the allocation of areas for specific uses. Because of the nature of multiple-use management, these areas may 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 within the Plan. In order to reduce conflicts, a dominant use will be identified; this dominant use will take priority over all other uses, which become secondary uses. Where a use is planned to be secondary, the resource will be managed to the greatest extent possible without negatively affecting the dominant use.

The dominant use will be determined according to the level of sensitivity. In other words, the use which requires the more careful management will dominate. The following list indicates the priority sequence for establishing dominant use.

1. Special Protection - Habitat for rare plants, some areas of old growth forests, endangered animal species habitat, important historical sites, and other areas of special concern.

2. Backcountry - Large areas containing outstanding natural resource characteristics, managed for remote recreation and characterized by no public vehicular access (excepting snowmobiles).

3. Wildlife Management - Wetlands, riparian zones, deeryards, and other special habitats.

4. Remote Recreation - Areas typically smaller in size than backcountry areas, managed for low intensity recreation, containing significant natural

resource values, and characterized by no public vehicular access (excepting snowmobiles).

5. General Recreation - Vehicle access recreation areas such as campsites, boat launches, picnic areas, and other areas of more intensive public use.

6. Visual Consideration - Areas where timber management or other activities could esthetically affect visual enjoyment (i.e. corridors along public use roads and hiking trails, slopes in view of a campsite, etc.)

7. Timber - Where no other zone has been applied, as long as it is suitable for timber production under the Bureau's general timber management standards.

The maps in the following sections describe the use areas according to wildlife and special protection, recreation and visual concern, timber, and transportation. No single map of dominant use areas is provided, as the many -- often overlapping areas appear confusing. Dominant use areas are established, however, and integration requirements must be understood according to the above priority list.

SECTION IV RESOURCE MANAGEMENT AND COORDINATION

In this section, management for each type of use will be described, and maps will show the areas defined for those uses. It is important for the reader to keep in mind that a particular area is typically used for more than one purpose during the same time period. In such cases, the dominant use will be determined by priority as explained in Section III.

The areas delineated on the maps are subject to only minor adjustment by Bureau personnel without formal changes in this Plan. For each section of the Plan, appropriate management actions will be described for each use as if it

Western Section

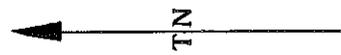
Public Reserved Lands Holeb Management Plan

Map #2A

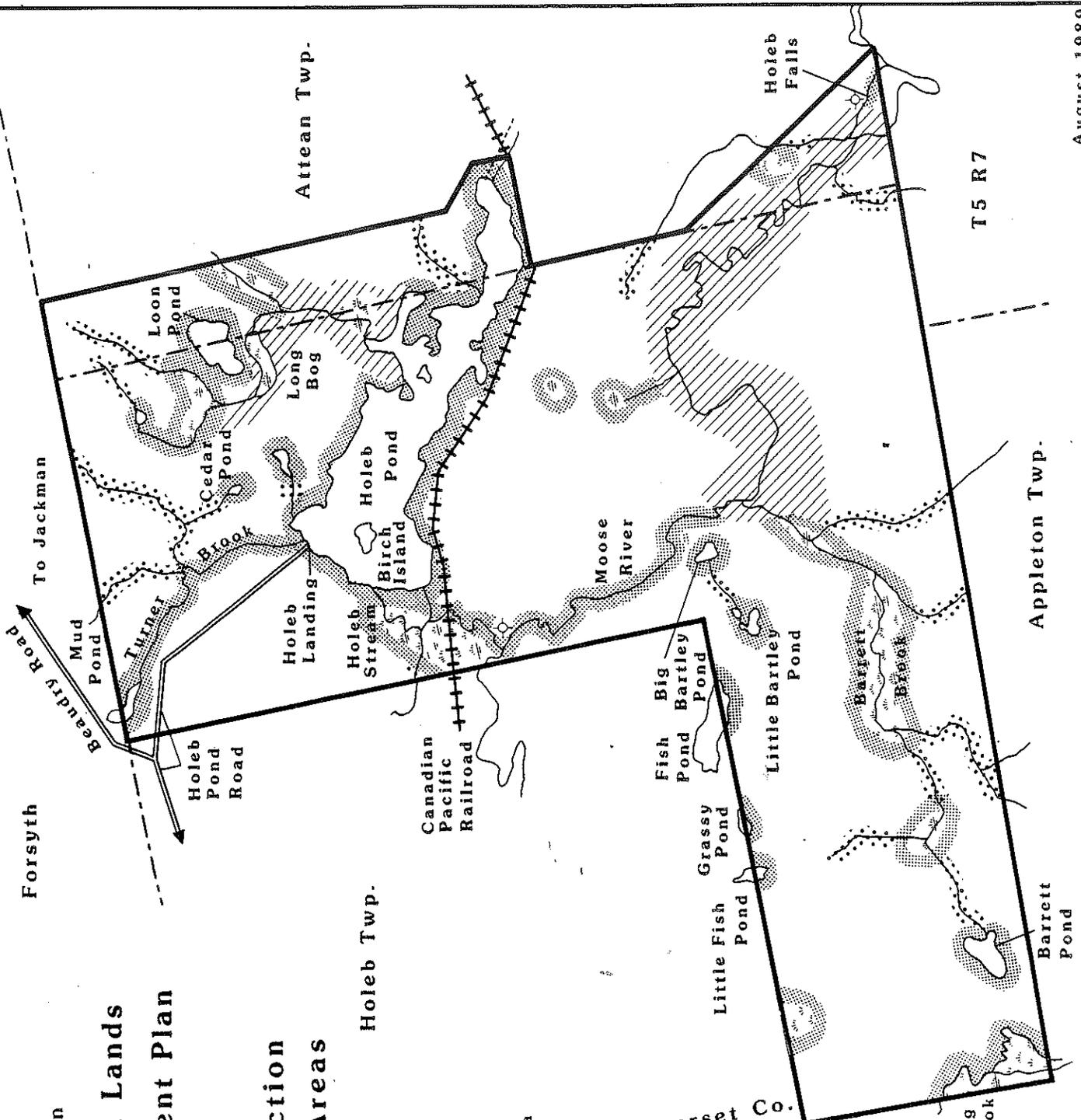
Special Protection and Wildlife Areas

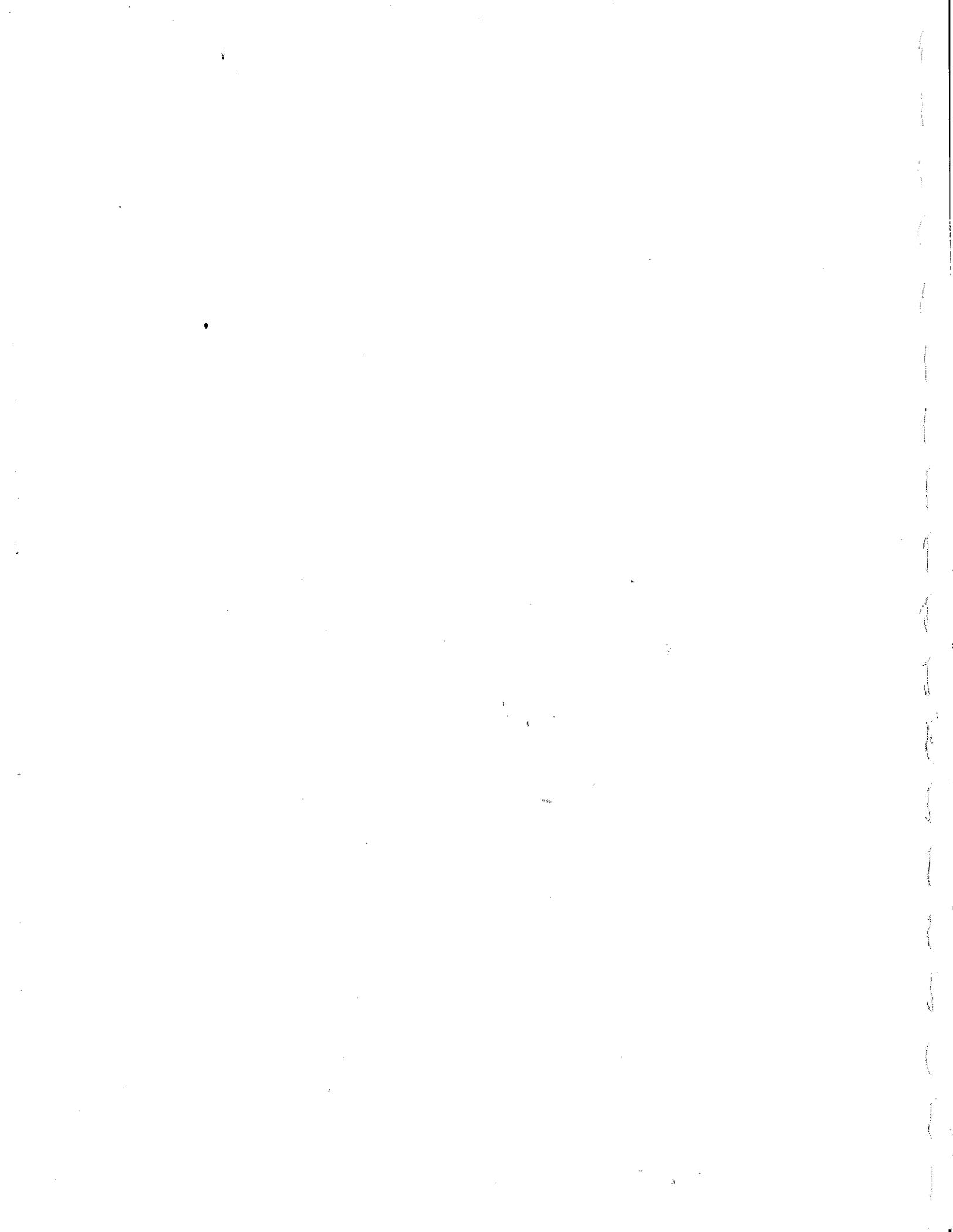
-  Major Riparian
-  Minor Riparian
-  Wetland
-  Deer Wintering Area
-  Special Protection

Somerset Co.
Franklin Co.



Scale
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Mile





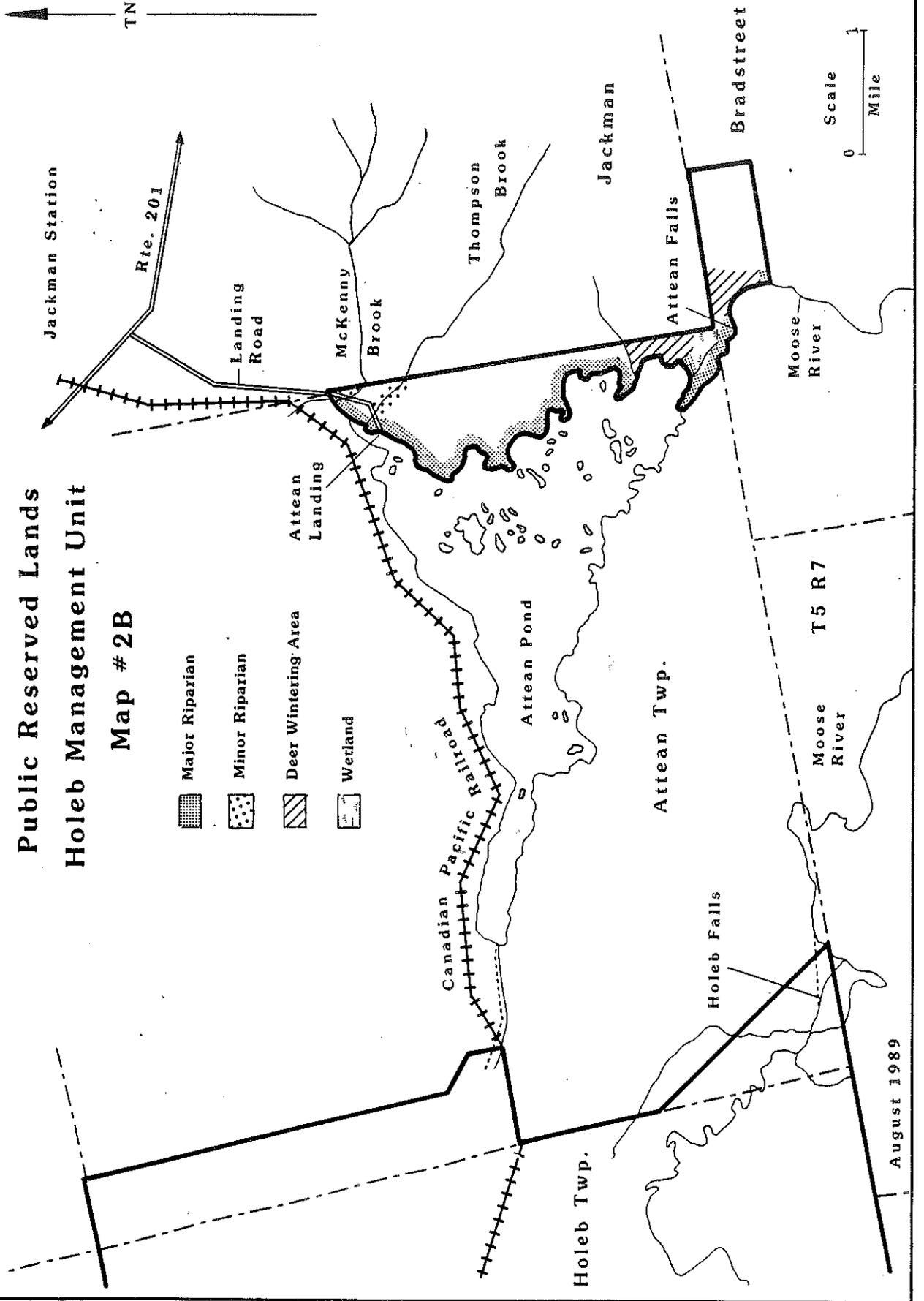
Special Protection and Wildlife Areas

Eastern Section

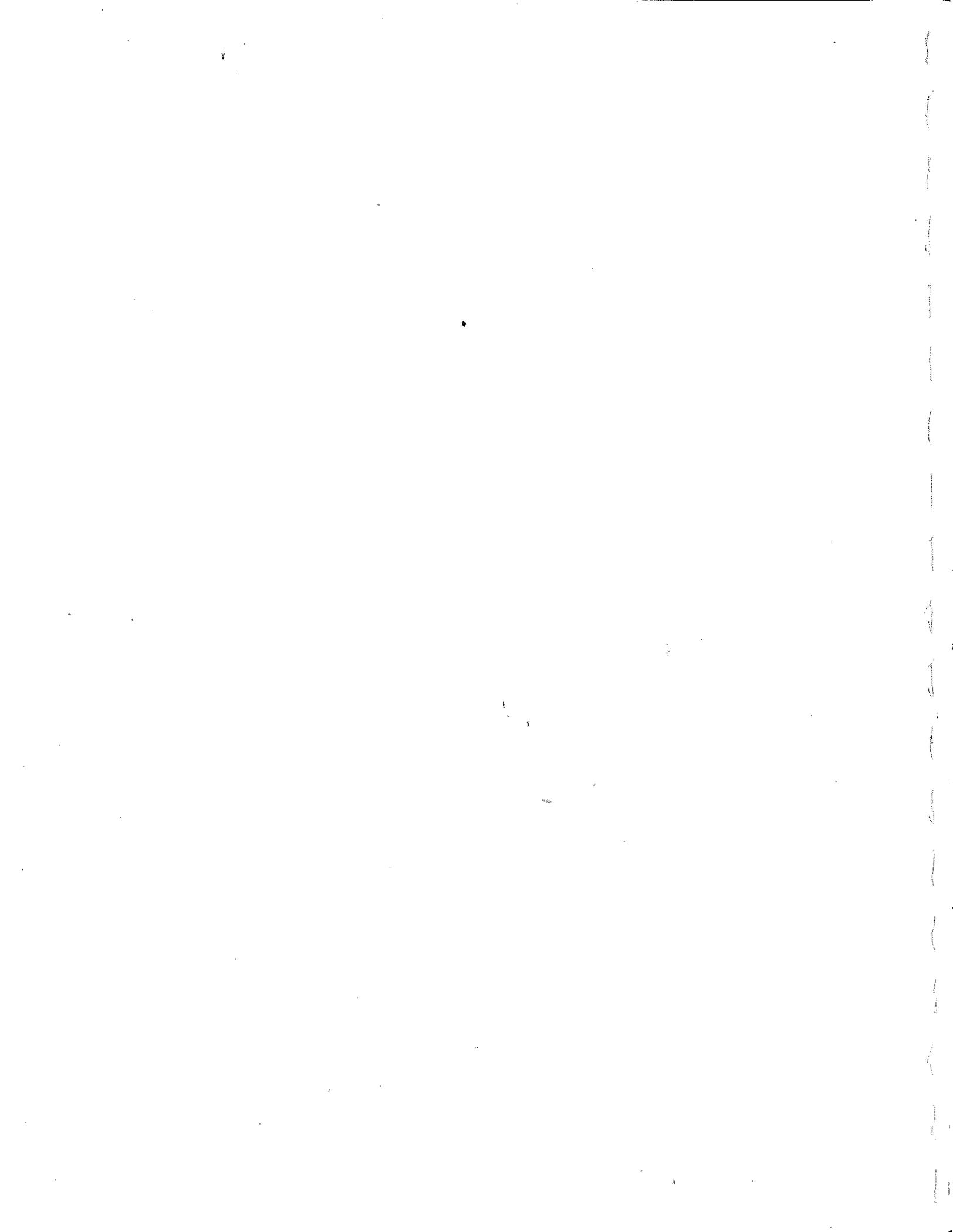
Public Reserved Lands Holeb Management Unit

Map # 2B

- Major Riparian
- Minor Riparian
- Deer Wintering Area
- Wetland



August 1989



was the dominant use. Where the use is a secondary use (for example, timber management within a riparian zone), management will be modified to accommodate the requirements of the dominant use. For convenience in this Plan, management actions will be described in the following sequence: Special Protection, Wildlife, Recreation, Visual Consideration, Timber, Transportation, and Special Uses.

A. Special Protection (Refer to Maps #2A and #2B)

1. Description of the Resource

Bureau policy defines special protection resources as particularly unusual and important areas in need of protection from disturbance. These areas include habitat for rare plants or animals, certain areas of old-growth forest, rare geologic formations, and important historic sites. The Maine Critical Areas Program, within the State Planning Office, maintains a critical areas register. They define critical areas as "natural features of unusual natural, scenic, scientific, or historical significance from a statewide perspective." Critical areas are included within the Bureau's special protection category.

The only registered critical area on the Unit is Holeb Falls, CA #212, located on the Moose River in the southwest corner of Attean Township. This scenic fifteen acre area includes one large waterfall, several small falls, and unusual geologic formations. A rustic authorized campsite for the Bow Trip is located at Holeb Falls, partially located on the Unit and partially on the abutting landowner. The area falls within a zoned DWA.

A small cemetery with headstones dating from the mid-1800's has been located just to the east of the intersection of Holeb Stream and the Moose River. A short trail leads to the site from an old road found here. This small area will be designated as special protection. No other areas in need

of special protection have as yet been identified on the Unit. Several areas of potentially significant plant and wildlife species habitats have been noted for further field evaluation.

Several stands of jack pine -- a tree species uncommon in Maine -- have been located around Holeb Pond and on the eastern shore of Attean Pond. Another stand of trees on the northeastern shore of Holeb Pond contains large red, white, and jack pine. This stand has potential for being classified as old-growth, and inclusion as a special protection area.

The larger of two islands created by a fork in the Moose River before Holeb Falls is another unusual area. Approximately one-half of the island is on the Unit. The island exhibits interesting geology, plants, mushrooms, and contains a small bog. Further examination of this island, other bogs on the Unit, and other locations, may reveal rare plants or other natural features in need of special protection.

Great blue heron, osprey, and loons are commonly seen on the Holeb Unit. Although these species are not endangered or even rare in Maine, the Bureau works with other agencies and groups in affording special protection status to their nesting areas. All three species are particularly sensitive to disturbance during nesting season, although no sites have as yet been located on the Unit. Bald eagle sightings have also been reported, although no nests have been located in the area by the Department of Inland Fisheries and Wildlife (DIF&W) or others.

2. Dominant Use

Special protection areas contain some of the more fragile and/or unusual features of the Public lands resource base. Management of these areas will be protective in nature, keeping them available for scientific study, public enjoyment, and similar purposes.

The fifteen acre Holeb Falls Critical Area includes a campsite serving the Moose River Bow Trip, and is within a zoned DWA. Management of this area will include maintaining the scenic character found here, minimizing disturbance caused by users, and coordinating protective efforts with the co-owners of the area. Periodic evaluation will identify particular management needs. The Bureau will work with the Critical Areas Program and others to further evaluate features in need of protection both within and surrounding the Critical Area.

During the normal course of resource assessment (compartment examinations), the Bureau will identify features in potential need of special protection. Particular attention will be paid to the jack pine stands, potential old-growth pine stands, bogs, and other areas identified in the "Moose River Bow Trip: Resource Assessment" (see Appendix 3), and by aerial surveys conducted by the Bureau during the summer of 1988. When recommended, the Bureau will ask the Critical Areas Program, Natural Heritage Program, University of Maine, or other appropriate groups, to provide detailed reports on specific locations or resources.

The Bureau will work closely with the DIF&W to identify any great blue heron, loon, bald eagle, or other important bird species nesting sites on the Unit. If located, the Bureau will follow the guidelines prepared by the DIF&W's Endangered and Non-Game Species Program.

3. Secondary Use

The Holeb Falls Critical Area will be managed for water-access-only, backcountry recreation -- in the form of the rustic campsite mentioned previously. The other secondary use will be management for deer wintering habitat. All management actions will be conducted with the critical area values as the highest priority. Secondary uses of any special protection areas identified in the future will be determined on a case-by-case basis.

B. WILDLIFE (Refer to Maps #2A and #2B)

1. Description of the Resource

Upland wildlife habitat on the Unit is quite diverse, primarily because of land management practices by previous owners. Habitat diversity usually translates into habitat richness -- or numbers of different species present. The forest generally contains a good ratio of softwood to hardwood, a fair diversity of tree ages, heights, and species, and is interspersed with many wetlands and brooks. Beech is the only important mast-producing (nut) tree species found on the Unit, and is important as a wildlife food source. Upland wildlife species present include moose, deer, snowshoe hare, ruffed grouse, and three-toed woodpeckers. Ospreys and great blue heron are commonly sighted on the Unit, and several sightings of bald eagles around Attean Pond have been reported. (The "Moose River Bow Trip: Resource Assessment" contains an excellent compilation of wildlife species present in the area.)

The LURC has zoned three deer wintering areas on the Unit: #080426 -- 1,024 acres along the Moose River in southeast Holeb Township and southwest Attean Township; #080425 -- 493 acres of Long Bog in northeast Holeb and northwest Attean Townships; and #080414 -- 72 acres by Attean Falls. A potential deer wintering area (DWA) has been identified along Barrett Brook in south central Holeb Township.

Riparian areas managed by the Bureau are 330 foot wide margins of habitat adjacent to lakes, ponds, and wetlands, and along each side of major watercourses. Seventy-five foot wide margins are managed along the lesser watercourses. Wildlife use of riparian areas is particularly high, as this habitat provides protection, food, water access, and travel routes.

The Unit provides good habitat for waterfowl, as ponds, brooks, and wetlands are abundant and well distributed throughout. Twelve waterfowl (duck) boxes are maintained on the Unit by the Bureau, providing nesting sites where adequate natural conditions for this purpose do not exist. Extensive wetlands are found in the north central part of the Unit in Holeb Township, south of Loon Pond, along the western shore of Holeb Pond, along the Moose River and Holeb Stream, and on the southeast shore of Attean Pond. Wetlands serve a number of important ecological purposes, including absorption of nutrients, storage of ground water, stabilizing surface water, curbing erosion, and providing part of the life cycle requirements for many species of wildlife.

The following is a list of the ponds on the Unit which are ten acres in size or larger (great ponds). All of these ponds are located in the western Unit section, with the exception of Attean Pond. Attean Pond is included, although it is only partly bordered by the Unit.

POND NAME	SIZE (Acres)	MAXIMUM DEPTH (Feet)
Attean	2,745	55
Holeb	1,055	52
Loon	37	10
Barrett	34	6
Big Bartley	10	8

Attean Pond contains native populations of brook trout and salmon. Periodically, hatchery-reared salmon are stocked by the DIF&W to supplement the existing population. However, large areas of shallow water provide marginal habitat for these coldwater gamefish during the summer months. Only about 600 acres of the Pond have water deeper than twenty feet. Large populations of yellow perch, suckers, and minnows compete with coldwater

species. Lake trout are occasionally found in Attean Pond. These fish have moved upstream from Big Wood Pond where they have been stocked by the DIF&W. Other species in Attean Pond include smelts and burbot (cusk). Attean Pond is closed to ice fishing.

Holeb Pond is a large, shallow, productive pond whose principal fishery is brook trout and salmon. However, large populations of yellow perch, suckers, and minnows severely limit the coldwater fishery. Periodically, the DIF&W stocks the Pond with salmon. Lake trout were stocked on an experimental basis in 1986. The small area of deep water does not have enough dissolved oxygen below 25 feet for optimum conditions. Other species present include smelt, burbot (cusk), sticklebacks, sunfish, and sculpins. Holeb Pond is open to ice fishing.

The section of the Moose River within the Holeb Management Unit contains diverse habitat which is not only important to the seasonal river fishery, but also to the fisheries of the surrounding ponds. A large portion of the native populations of salmon and brook trout in Holeb and Attean Ponds are sustained by natural reproduction in the Moose River. Some sections of the River are fast moving with a mixture of riffles, boulders, and pools. These sections provide suitable spawning, development, and parr habitat for native salmon. Other sections of the River are slow and meandering with sandy substrate and pools as deep as fifteen feet. These areas can provide cover and cooler water for adult fish in the River.

Loon Pond is a shallow pond surrounded by bog and coniferous forest. It is zoned as a remote pond (P-RR) by the Land Use Regulation Commission (LURC). Fish species present include brook trout, suckers, and minnows. Barrett Pond is shallow and has no tributaries. Fish species include brook trout and minnows. Big Bartley is a small, shallow pond with only one small tributary.

Fish species include brook trout, yellow perch, suckers, and minnows. Cedar Pond is less than ten acres in size and is not surveyed by the DIF&W. It is zoned as a remote pond by the LURC, and by definition is supposed to support a coldwater fishery and have no recreational-use road access. Big Fish Pond, Little Fish Pond, and Grassy Pond are small, shallow ponds in Holeb Township and only partly on the Unit. Little Fish and Grassy Ponds are closed to fishing by the DIF&W.

2. Dominant Use (See Appendix 3, "Wildlife Guidelines")

a. Deer Wintering Areas. The Bureau goal for management of the three DWA on the Unit is to maintain at least 50% of the forest in high quality softwood cover at any one time, while regenerating the remainder to softwood for future cover. Any DWA harvesting will be designed to create a distribution of tree age classes, develop beneficial edge effects, browse and otherwise provide long-term, quality deer wintering habitat.

The three DWA will be monitored during the ten-year planning period to assess their conditions and make management recommendations -- such as the need to adjust their size. The potential DWA along Barrett Brook will be assessed for use by deer, to determine if zoning is warranted. All management decisions affecting a DWA will be coordinated with the staff wildlife biologist and the DIF&W.

b. Riparian Areas

The three major goals of riparian area management are:

1. Maintain vegetative diversity, both in terms of height and species types.
2. Maintain continuity of travel cover for wildlife throughout the watershed and adjoining ecosystems.
3. Protect adjacent aquatic environments from degradation.

The shores of all ponds and major streams, and margins surrounding wetlands, are designated as 330 foot wide riparian areas. Shorelands of minor streams will be designated as 75 foot wide riparian areas. Riparian areas managed by the Bureau are comprised of a margin of shoreland, the primary purpose of which is wildlife habitat management. LURC standards (P-SL2) also call for a 75 foot wide zone along both sides of smaller streams. These areas are subject to specialized timber harvesting (selection removals) designed to enhance habitat diversity in terms of vegetative age-class and species. All riparian area management activities will be coordinated with the staff wildlife biologist and the DIF&W.

c. Waterfowl The Bureau maintains twelve waterfowl boxes around Holeb Pond. The management objective is to provide suitable nesting sites where they are not naturally available in adequate amounts. It is expected that riparian area management will eventually provide these sites naturally -- particularly by the retention of large, old trees. Use of all waterfowl boxes is monitored annually to determine use levels, need for additional boxes, and to clean any accumulated debris from the boxes.

Loons are ground-nesters and commonly use the same nest site year after year. If any loon nest sites are located, the sites will be protected from disturbance. Public information and habitat protection will be the primary management tools for this species.

d. Fisheries All of the open water on the Unit is allocated for wildlife, with those waters where fishing is allowed managed primarily for a high-quality fishery. The DIF&W regulates fishing and boating in Maine's inland waters. Management will require coordination between the Bureau and the DIF&W, and will include periodic monitoring of the fisheries resource to help ensure that it remains productive.

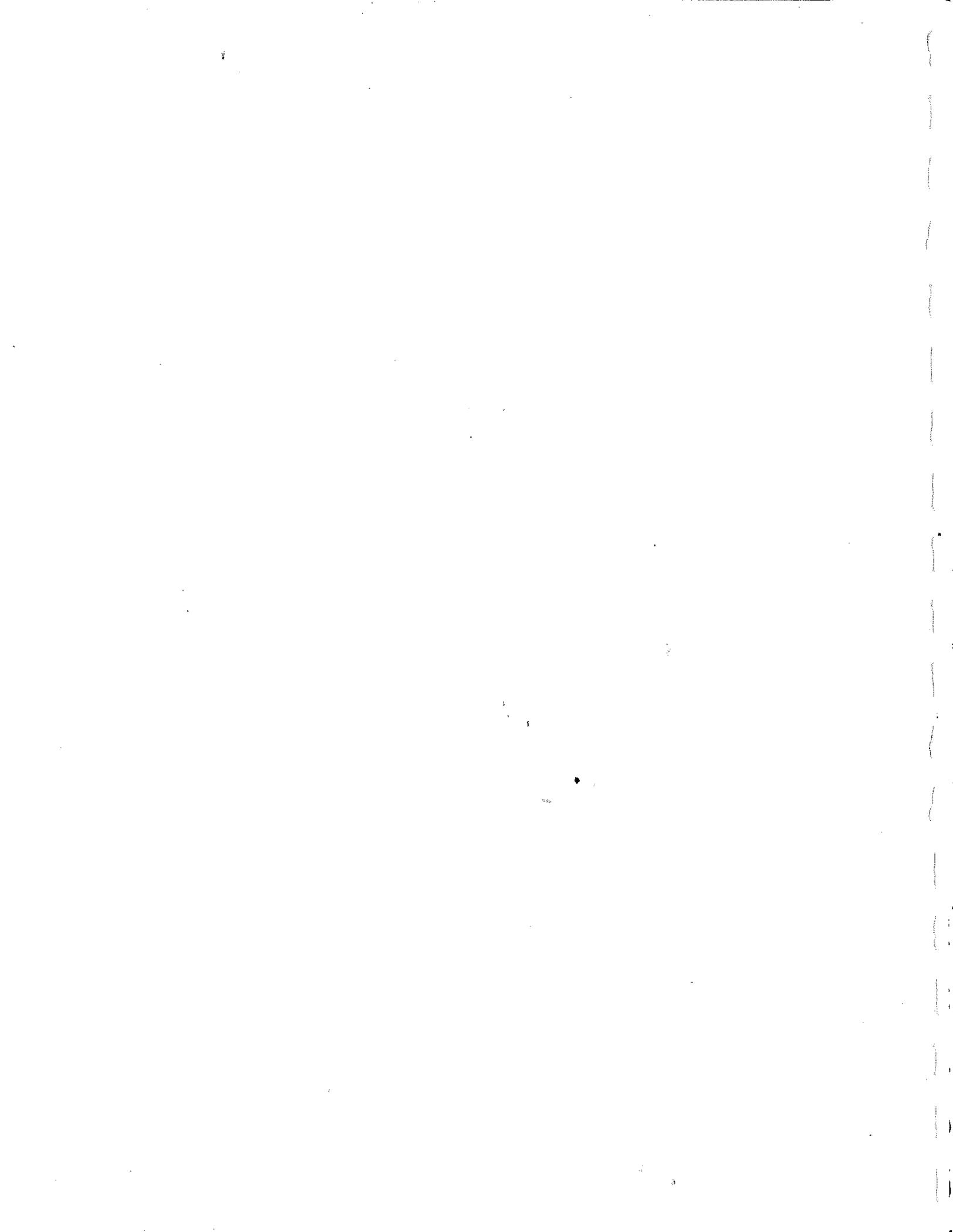
The remote fishing opportunities available at Loon Pond and Cedar Pond will be maintained. LURC has zoned these ponds as remote, which prohibits recreational use of vehicles (excepting snowmobiles) within one-half mile of the ponds. The Bureau will evaluate this area for development of backcountry-type facilities. While not classified as backcountry, the Ponds are surrounded by a riparian area and a visual consideration area, thereby reinforcing the maintenance of the remote, natural character here.

3. Secondary Use Recreation and timber management are important secondary uses in most wildlife dominant areas. A diversity of wildlife species, balanced population levels, and healthy individuals are among the benefits of sound wildlife management. Timber harvesting is one of the key management tools for upland habitat enhancement and maintenance. While harvesting in these areas will be incorporated within the Bureau's timber program, it will primarily be designed for specific wildlife benefits.

Recreational use of wildlife dominant areas will typically be hunting, trapping, fishing, and sight-seeing. Campsites along the Bow Trip are located within riparian areas, and two within a DWA. Normal DIF&W regulations will apply for all wildlife areas on the Unit.

B1. Wildlife Management of all Other Areas

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 requirements to create and maintain diversity of vegetation, to preserve den trees and snags for wildlife, and for the staff wildlife biologist to make specific recommendations for wildlife



Western Section

Public Reserved Lands Holeb Management Plan

Map #3A

Recreational Use and Visual Consideration Areas

-  General Recreation
-  Remote Recreation
-  Backcountry
-  Visual Consideration

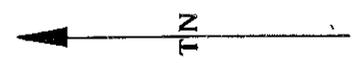
Holeb Twp.

Attean Twp.

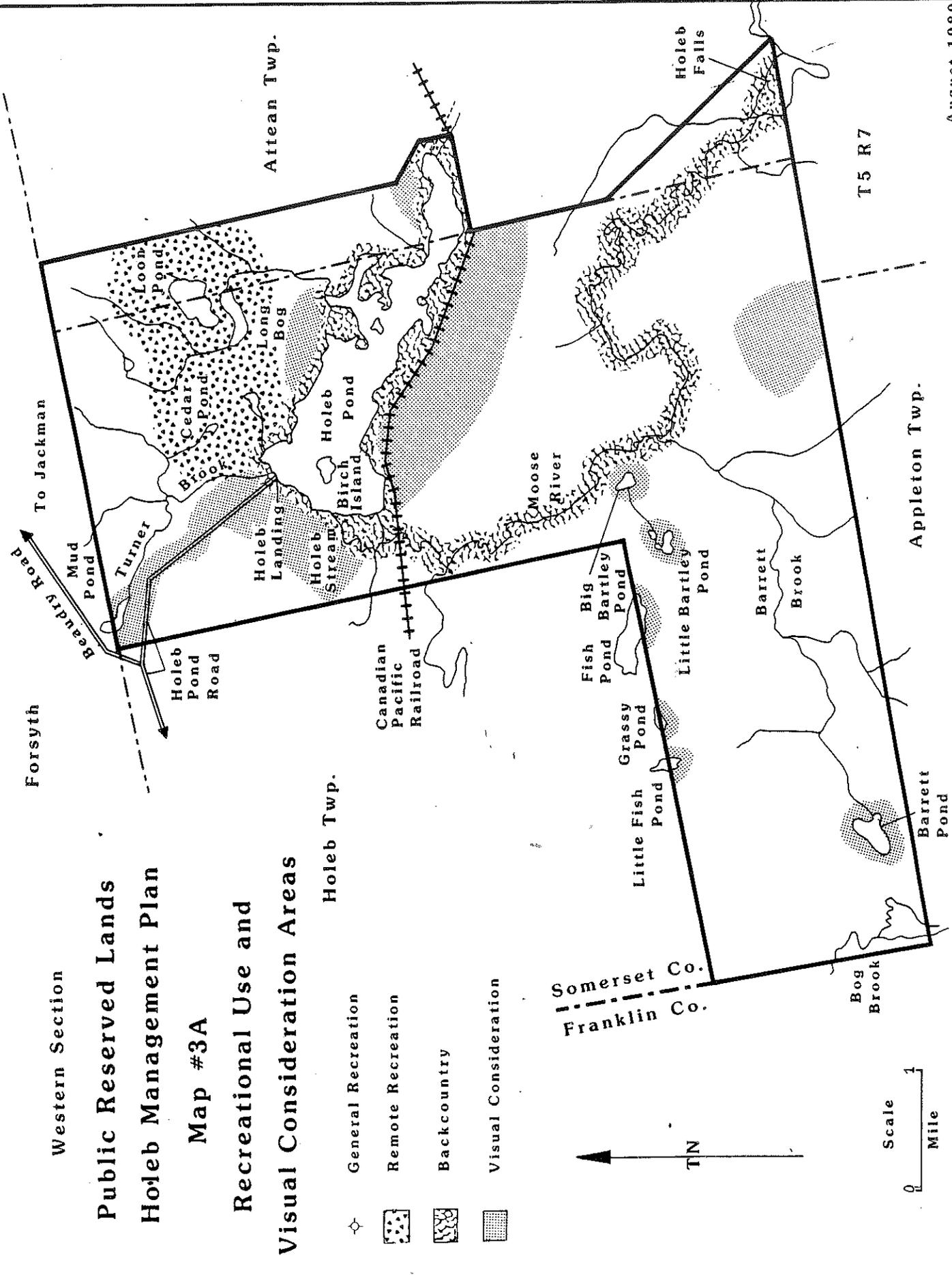
Appleton Twp.

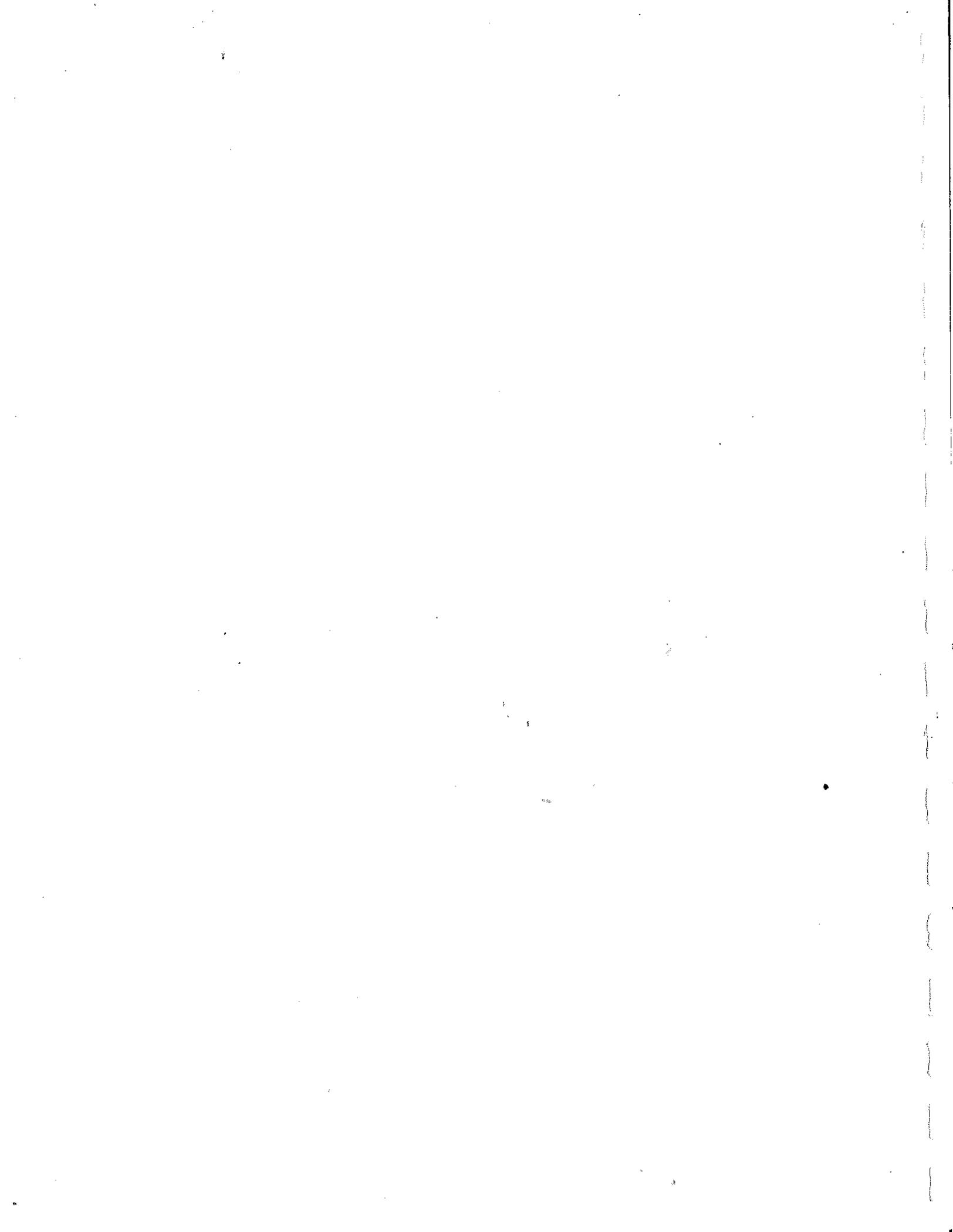
T5 R7

Somerset Co.
Franklin Co.



Scale
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Mile





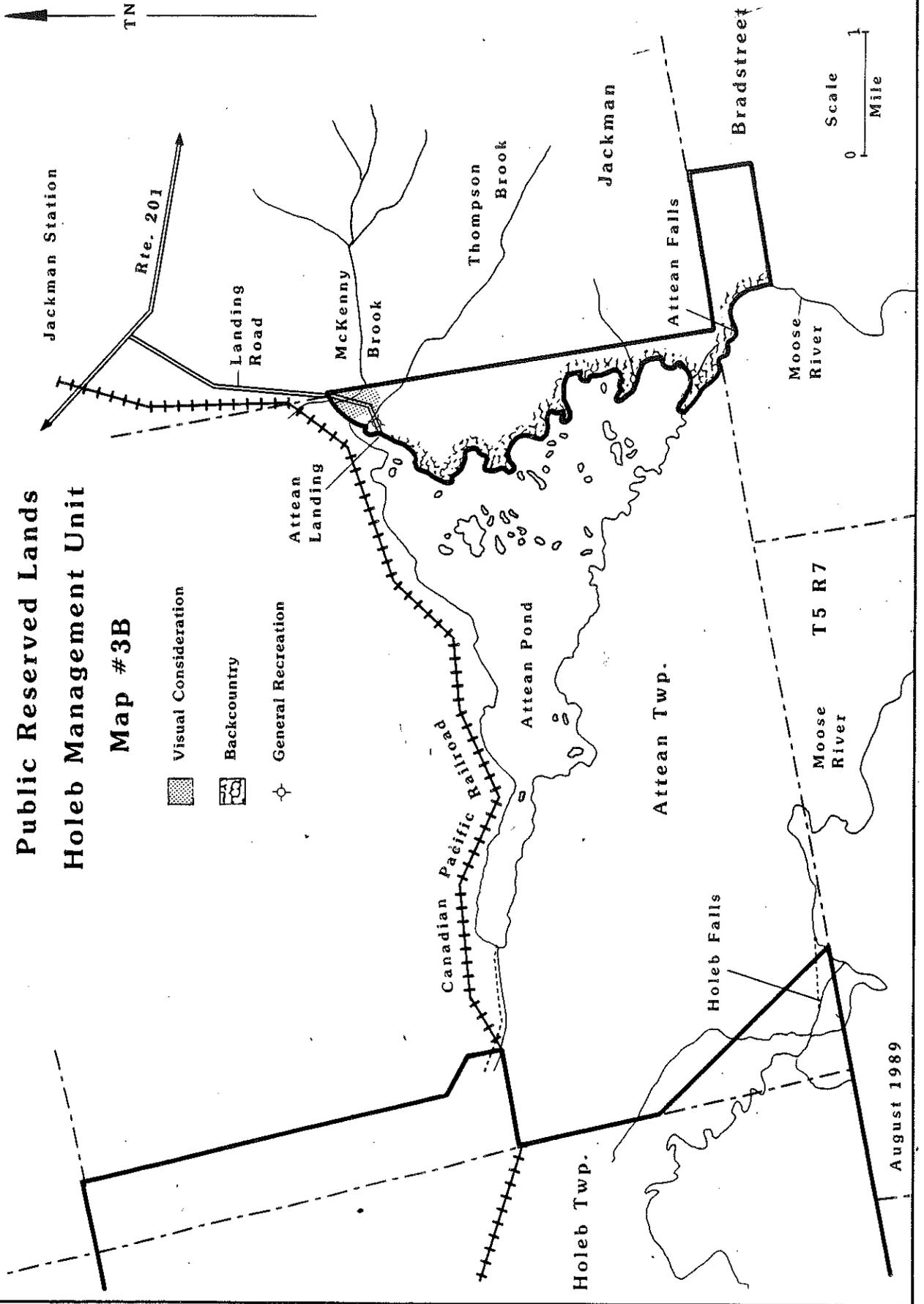
Recreational Use and Visual Consideration Areas

Eastern Section

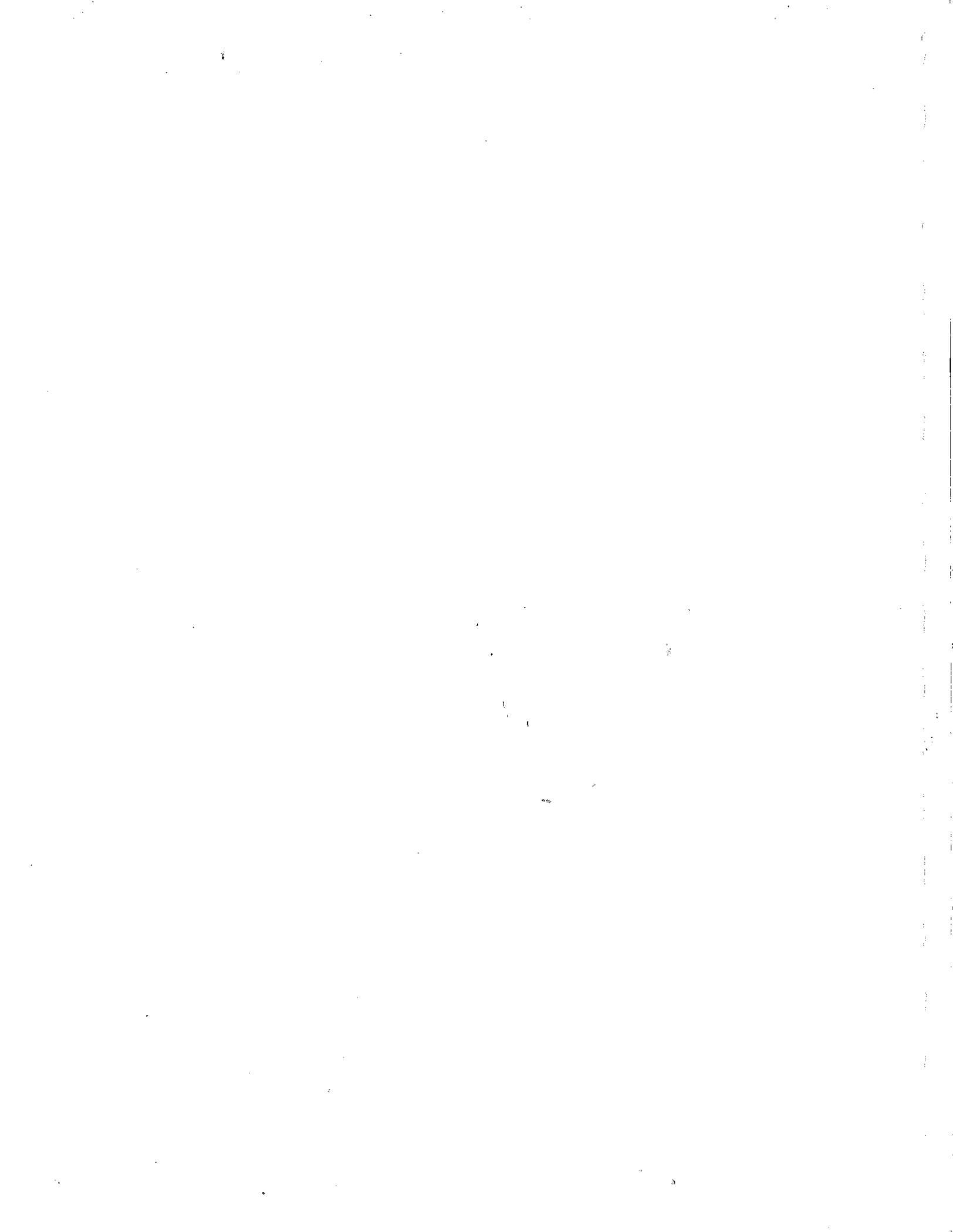
Public Reserved Lands Holeb Management Unit

Map #3B

-  Visual Consideration
-  Backcountry
-  General Recreation



August 1989



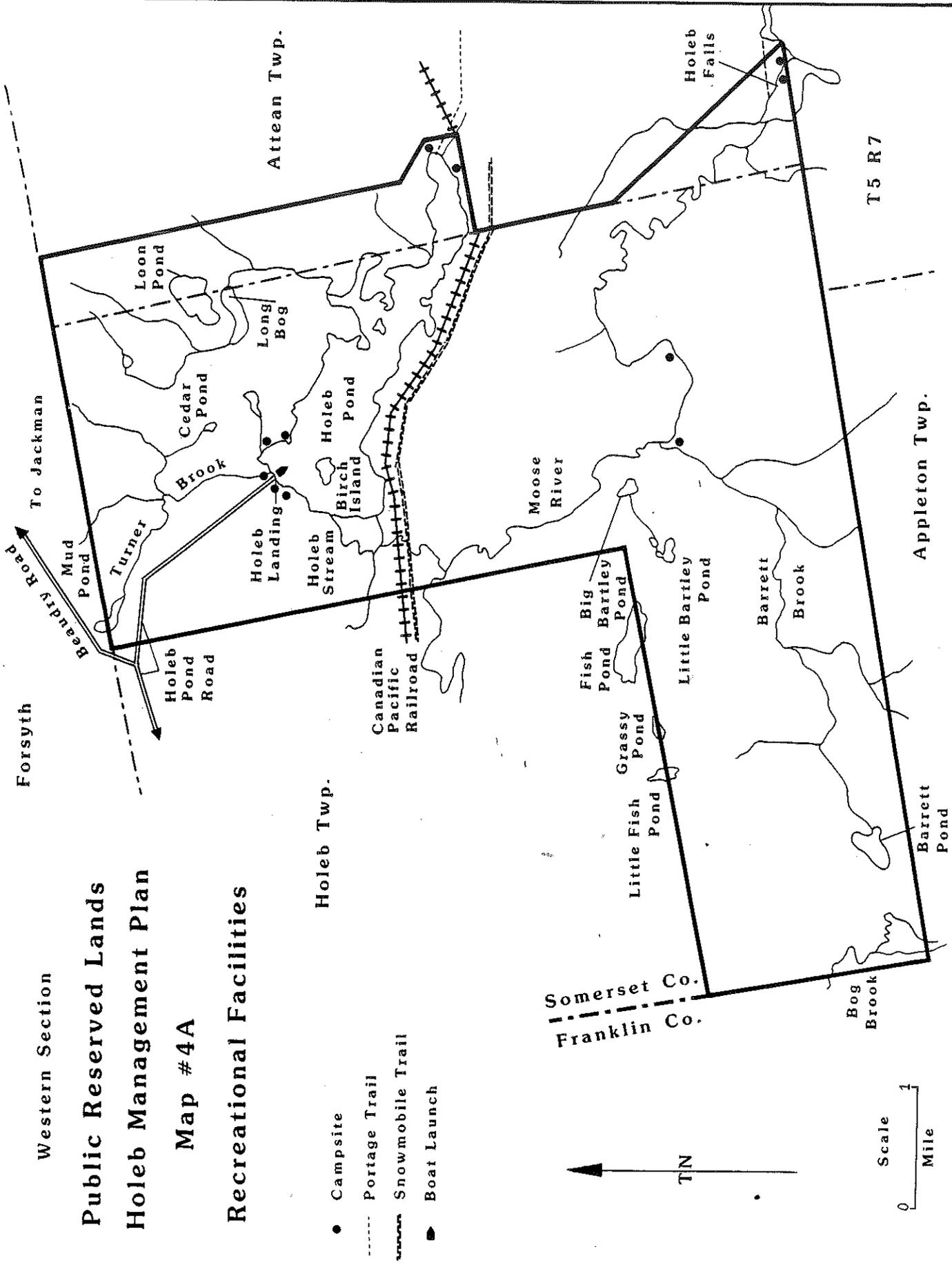
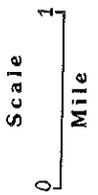
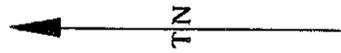
Western Section

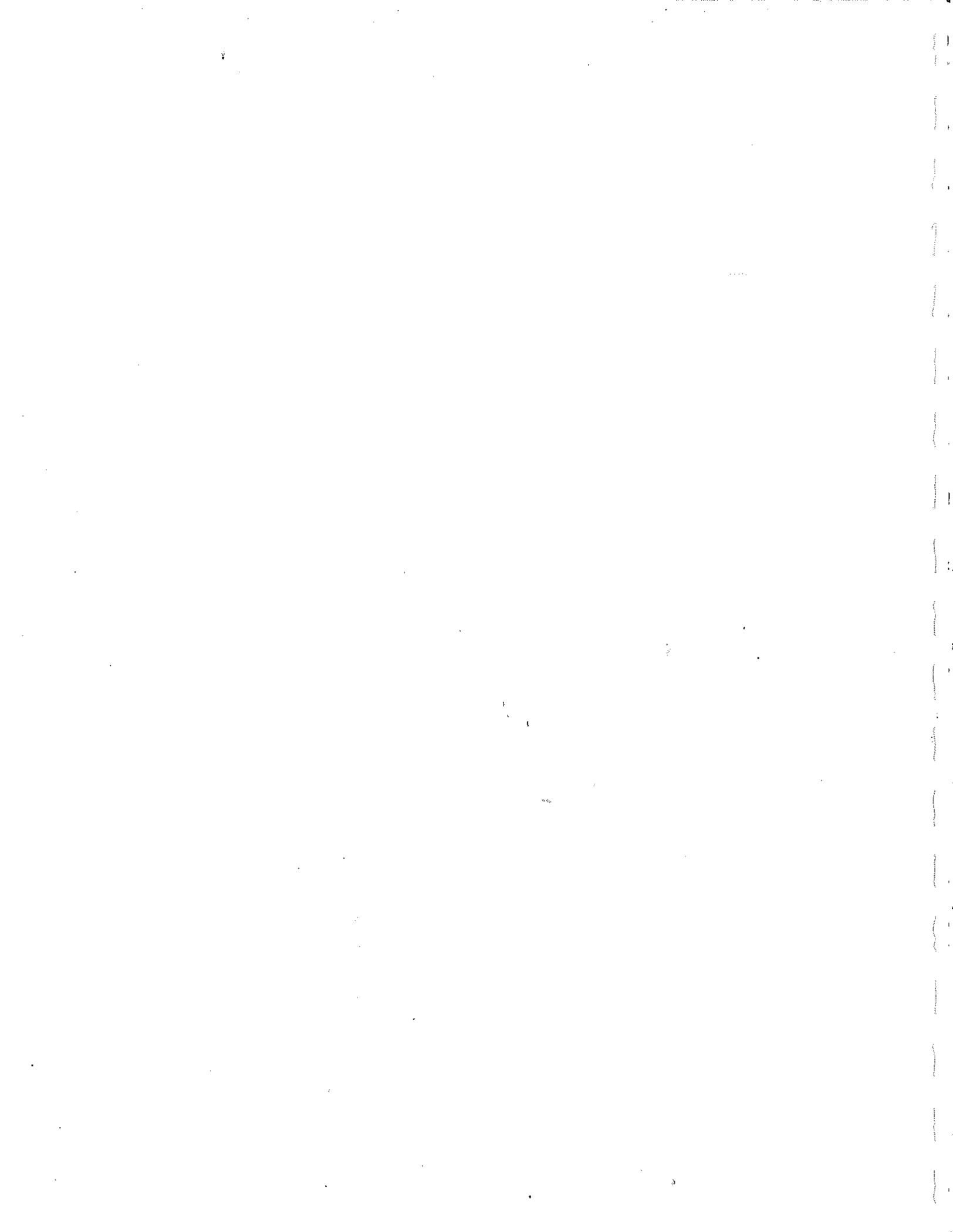
Public Reserved Lands Holeb Management Plan

Map #4A

Recreational Facilities

- Campsite
- Portage Trail
- ~~~~~ Snowmobile Trail
- ◆ Boat Launch





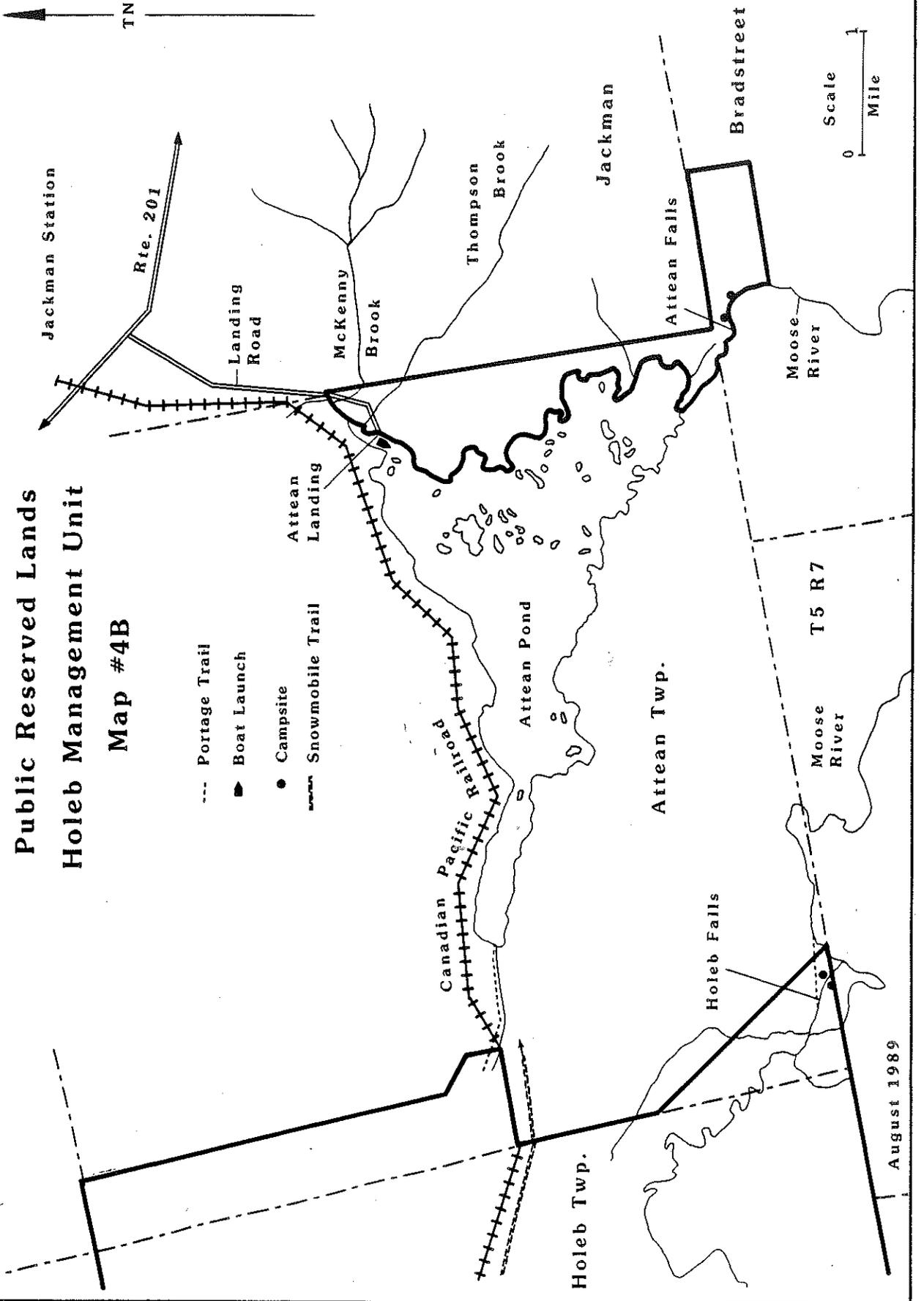
Recreational Facilities

Eastern Section

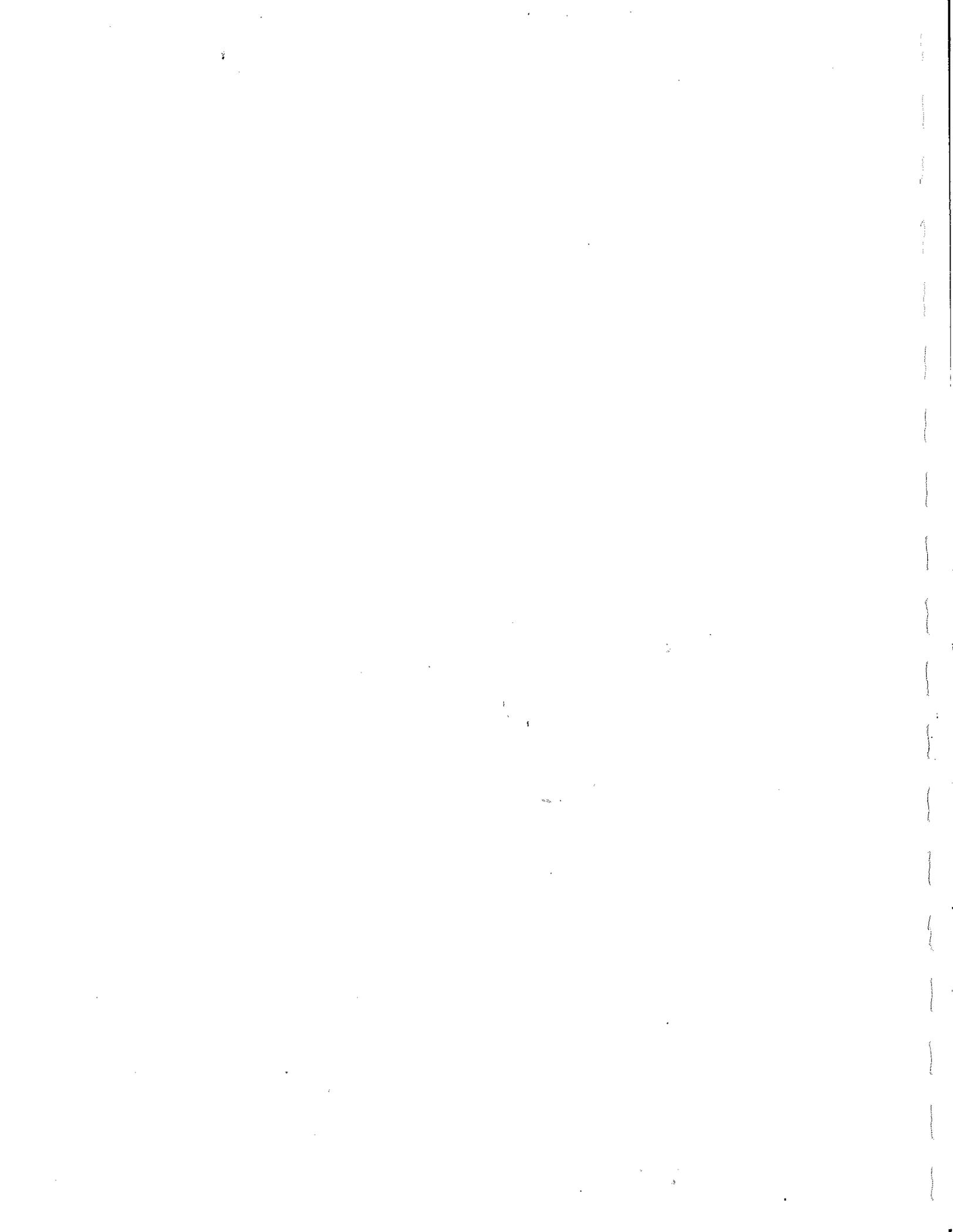
Public Reserved Lands Holeb Management Unit

Map #4B

- Portage Trail
- ▶ Boat Launch
- Campsite
- Snowmobile Trail



August 1989



habitat improvements as he identifies opportunities. Coordination with DIF&W will be continued regarding all wildlife management activities.

Potential stands of old-growth trees -- particularly those containing white pine -- will be retained, pending final determination by the staff wildlife biologist. Part of the value of these stands is that they are preferred by eagles, ospreys, and other avian species for nesting and perching. DIF&W will be conducting an eagle nest survey of the Attean Pond region during the summer of 1989. Any results or recommendations provided from the survey will be added to this Plan.

C. Recreation (Refer to Maps #3A, #3B, #4A, and #4B)

Recreation management on the Public Reserved Lands falls into three broad categories: 1) backcountry, 2) remote recreation, and 3) general recreation (see Section III, Resource Allocation).

C1. Backcountry

1. Description of Resource

Backcountry areas are defined in Bureau policy as being extraordinary in terms of scenic quality, remoteness, and natural characteristics. These areas are managed for backcountry recreation as the dominant use, characterized by no public vehicular access and low density -- dispersed use which retains the natural character of the area.

The most popular recreational use of the Holeb Unit is the Moose River Bow Trip. An important aspect of the Bow Trip is the relative remoteness and scenic character of the area. The Trip forms a 34 mile long loop that encompasses 24 miles of the Moose River, Attean and Holeb Ponds, and a one mile portage between the Ponds. The loop allows canoeists to put in and take out at one point, with campsites, waterfalls, and other interesting features

found along the way. Public ownership along the Trip includes approximately 9.5 miles of the Moose River and Holeb Stream in the western section of the Unit, 1.5 miles along the eastern shore of the River in the eastern section of the Unit, the eastern shore of Attean Pond, and all of Holeb Pond -- excepting Birch Island.

The two primary access points to the Bow Trip from the Unit are at Attean Landing on the northeastern shore of Attean Pond, and at a boatlaunch site on the northwestern shore of Holeb Pond at Turner Beach -- Holeb Landing. The presence of two access points helps to disperse use along the Trip. With several landowners along the Bow Trip, and the Canadian and Pacific Railroad right-of-way along the shores of Holeb and Attean Ponds, controlling access to the Bow Trip may be difficult. Existing access points are limited in number, however. Major landowners along the Trip are: The State, Scott Paper Company, Lowell and Company (managed by Land Vest), and the Forest Society of Maine. The Coburn Lands Trust owns twelve islands on Attean Pond, with the Forest Society owning the remainder of the Attean islands and an island on the Moose River in western Attean Township. Fifteen private individuals own the twenty-four acre Birch Island on Holeb Pond.

The LURC regulates land use in all of the unorganized townships in Maine for resource protection purposes. LURC has zoned the land within 250 feet inland of the normal high water mark of all ponds greater than ten acres in size as "Protection-Great Ponds (P-GP)". Land within 250 feet inland of the normal high water mark along the Moose River and Holeb Stream and Holeb Stream is similarly protected under LURC zoning defined as "Protection-Recreation (P-RR)".

The Bureau resource allocation process goes further by designating a 330 foot wide riparian area along these same resources. The riparian areas around

the Bow Trip will be overlapped with the more restrictive backcountry area designation. Exceptions to these backcountry areas are: the Holeb Landing campsite/boatlaunch area and Attean Landing which will be general recreation areas; the Holeb Falls Critical Area which will be Special Protection; and the 100 foot wide Canadian Pacific Railroad right-of-way.

2. Dominant Use

The dominant use in a backcountry area is recreation which requires minimal development -- suited to activities for which remoteness, a natural environment, and self-reliance are the highest values. Recreation facilities within this Units' backcountry include several boat-accessed, rustic campsites on Holeb Pond and the Moose River, and three portage trails -- from Holeb to Attean Ponds, around Holeb Falls, and around Attean Falls.

All of the campsites require permits from the Maine Forest Service for use of open campfires (permit sites). Fire permits are required to build an outdoor fire in Maine except at authorized sites. Authorized and permit sites are posted for identification. Camping on Public Reserved Lands is not limited to authorized or permit campsites, but use of fire at other sites must be restricted to self-contained stoves. The developed campsites include a firering, rustic cedar picnic table, and backcountry toilet.

Bow Trip The primary use of the backcountry on Holeb Unit will be associated with the Moose River Bow Trip. Coordinated management of the Trip is desirable, although difficult, because land ownership and lines of jurisdiction create varying needs and requirements on different portions of the resource. The Bureau is coordinating development of a recreation management plan for the Bow Trip with other agencies within the Department of Conservation, other landowners along the Bow, the State Planning Office, local government agencies, and other appropriate interest groups.

Goals for management of the Bow Trip will be to: 1) protect the associated resource values, 2) provide adequate signs, campsites, trails, and informational materials to meet the backcountry recreational needs, and 3) ensure that recreational use is done within the management framework of the private landowners. The recreation plan will outline specific objectives, projects, and responsibilities. This Management Plan and the "Moose River Bow Trip: Resource Assessment" will be two documents used in developing the recreation plan.

Lowell and Company own most of the Attean Pond shoreline -- including a number of popular campsites, and most of the portage trail between the Ponds. The Forest Society is responsible for ensuring that certain conservation deed restrictions are complied with on Lowell and Company's land. The company that manages these lands -- Land Vest -- will be a particularly important member of the management agreement development team. During the summers of 1988 and 1989, Land Vest, Lowell and Company, Attean Resort, and the Bureau cooperated in a Bow Trip management experiment. An attendant was employed and stationed at Attean Landing. Responsibilities included managing vehicle parking and boat launching, surveying users, distributing information, and maintaining campsites on Attean Pond and at Attean Falls.

Seasonal recreation staff hired by the Bureau in 1988 maintained campsites and monitored use on Holeb Pond and the stretch of Moose River located on the western Unit section. These projects were conducted by a SERVE Maine volunteer during the 1989 season. The Bureau is generally satisfied with the results of these projects and will propose to expand and improve on them with the management agreement team. Results of the Attean Landing survey and of the Holeb Pond/Moose River monitoring will be further sources of information for Bow Trip management purposes.

Other Uses Snowmobiling is a popular recreational use of the Unit, particularly on Holeb Pond and on old roads in the Pond area. This use is allowed in the backcountry, although it is informal on the Holeb Unit, in that no specific management activities for snowmobiling take place. Any proposals for formal management of snowmobiling within the backcountry from a local organized club will be considered by the Bureau.

3. Secondary Use

Since backcountry areas, by definition, highlight natural characteristics and are remote, secondary uses which require active management will be carefully designed to maintain these qualities. Special protection of fragile resources is, of course, compatible. Certain wildlife management activities will occur here such as duck box maintenance and population monitoring projects. Bureau policy allows timber harvesting in backcountry areas, subject to interdisciplinary review and according to backcountry standards. (Uneven-aged management, designed to retain the natural, remote characteristics of the area.)

C2. Remote Recreation

1. Description of the Resource

Remote recreation areas may be somewhat smaller in size than backcountry areas, and contain significant natural resource values. These areas do not contain public use roads and offer excellent low density, dispersed-use recreation opportunities. Integrating secondary uses in a remote recreation area is less restrictive than doing so in a backcountry.

LURC has zoned the Cedar Pond -- Loon Pond area in the western Unit section as P-RR. These zones surround remote ponds for a radius distance of one-half mile, where public vehicular traffic is prohibited. This requirement provides for an interesting, remote fishing opportunity -- currently the most

popular use of the area. PRR zoning combines with riparian areas and visual consideration areas to provide remote recreation status for the Cedar Pond -- Loon Pond area. No recreational facilities are located in the area at this time.

2. Dominant Use

The dominant use in a remote recreation area is rustic recreation in a natural setting. Motorized recreational vehicles are not allowed within a remote recreation area, although vehicular influence may be greater here than within a more remote backcountry area.

Within the ten-year planning period, the Cedar Pond -- Loon Pond area will be evaluated for development of recreational objectives for the area. The area around Loon and Cedar Ponds will be assessed for any needed protection measures, campsite or hiking trail development, or similar remote recreation management potentials. Any management roads leading into the area will be blocked to public vehicular use.

3. Secondary Use

As in backcountry, timber and wildlife management are both secondary uses in a remote recreation area. While secondary uses will be modified to retain remote recreation values, the modifications will not be as restrictive as in a backcountry. This integration of uses will allow for more precise management of the secondary uses, while maintaining relatively natural conditions for a high-quality semi-remote recreational experience.

C3. General Recreation

1. Description of the Resource

General recreation areas are defined in Bureau policy as having somewhat more highly developed facilities than backcountry areas, allowing for more

intensive use -- such as vehicle-accessed campsites, picnic areas, and boatlaunches. Two ten acre areas are allocated for general recreation on the Holeb Unit.

The most heavily used of the two areas is Attean Landing -- the most popular access point for the Bow Trip. A boatlaunch site and vehicle parking area are the facilities offered at the Landing. Canoeists, fishermen, and snowmobilers are the primary users here. Problems arise at Attean landing during the spring and periods of heavy rain when high water levels and low-lying nature of the area create muddy and flooded conditions, making boat launching a difficult task. This situation combines with high use levels -- spring being the most popular fishing season -- to make parking another problem. Approximately one mile of the road leading to the Landing is privately owned.

The other general recreation area is the Holeb Landing campsite/boatlaunch site. The Bureau upgraded the area during 1987 in an effort to establish three distinct campsites, each with a picnic table and firering. A pit privy was also installed to serve the area. People have used the Holeb Landing area for launching small motorboats and canoes for years. The roads which lead to this site are in rough condition, with the first eleven miles on privately-owned land.

2. Dominant Use

The typical uses in a general recreation area are those associated with vehicular access. Although still somewhat rustic, facilities here are more developed than in the backcountry, more users are expected, and vehicle access is normally allowed. General recreation areas on the Holeb Unit are limited in abundance, as the remote, backcountry recreational uses are the traditional ones.

In response to the parking and boatlaunching problems at Attean Landing, the Bureau plans to expand the parking area by approximately 25% as soon as possible. The road, parking area, and boatlaunch site will be regraded, and drainage will be improved. Restrictions will be put in place to prevent vehicles from being parked too close to the water, thus aiding boatlaunching and resource protection. An informational bulletin board will also be installed at the Landing.

Vehicle parking and unauthorized camping on Turner beach at the Holeb Landing campsite area are occurrences which the Bureau wants to discourage. To complete the upgrading of this general recreation area, the Bureau will reconstruct the physical layout so as to protect the beach area and better define the boatlaunch site. The Bureau will monitor use of the launch site to determine whether further steps should be taken to protect the area's backcountry values. If overuse or use of larger-sized motor boats occurs, the Bureau will block the water access to trailers. Adequate parking area will be provided for, taking the visual considerations and campsite locations into account. The Holeb Pond Road which leads to Holeb Landing will be maintained only to the point of preventing environmental degradation and avoiding loss of the road base.

The private owners of Birch Island on Holeb Pond use this area for parking and boatlaunching. The Bureau will work with a representative of these fifteen owners to take the landowners' needs into account for any further development of the area. The Bureau will try to balance use of the area by the Birch Island interests and by the general public. Development affects on the Bow Trip experience, backcountry character of the area, resource protection, and financial obligations will also be considered.

3. Secondary Use

Timber and wildlife management are compatible secondary uses within the general recreation area. Of course, the Holeb Unit general recreation areas are within riparian and visual consideration areas. To the extent that timber harvesting is designed primarily to enhance wildlife habitat, it will also enrich the recreational experience of viewing wildlife. Public safety considerations will also direct harvesting in this area. Trees posing a hazard will be removed, as possible. Any proposed timber management operations will be reviewed by an interdisciplinary team, as provided in Bureau policy.

D. Visual Consideration (Refer to Maps #3A and #3B)

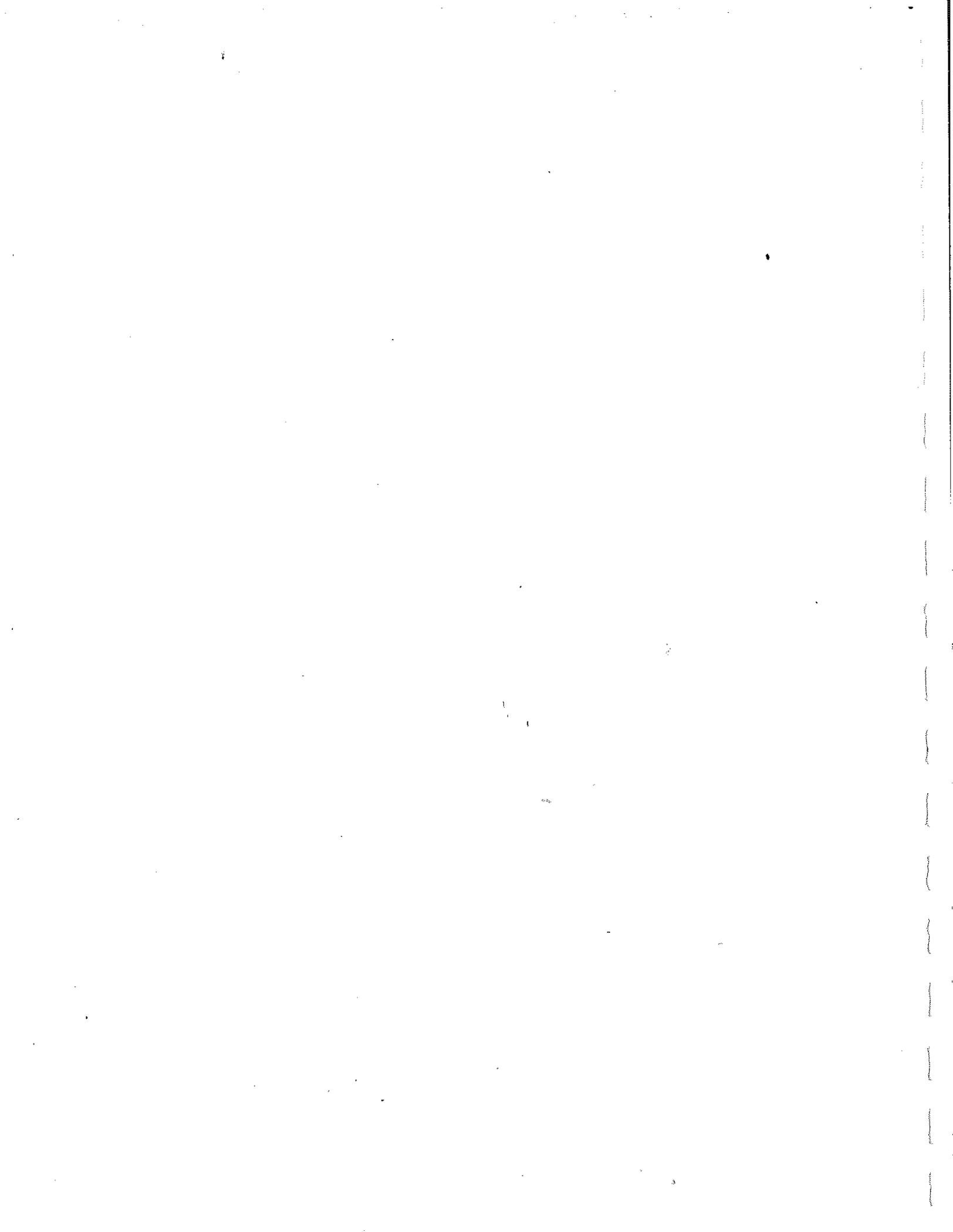
1. Description of Resource

The scenic quality of this Unit is especially important for the purposes of public use and enjoyment. Areas allocated for visual consideration are those where any management activities will be planned with maintenance of scenic quality being a major objective.

Visual consideration areas on the Holeb Unit are those as seen from the Bow Trip, all of the ponds, and along the public access roads. It is noted that the areas along the Bow Trip are also allocated for wildlife (riparian area) and backcountry, with one special protection and two general recreation areas also included. These overlapping use areas combine to ensure that the natural, scenic character of the Bow Trip will be maintained. Management of the remote recreation area will also consider visual affects as an important concern.

2. Dominant Use

Intangible values of scenic quality such as natural beauty, diversity, and contrast, constitute the dominant use of visual consideration areas. Areas

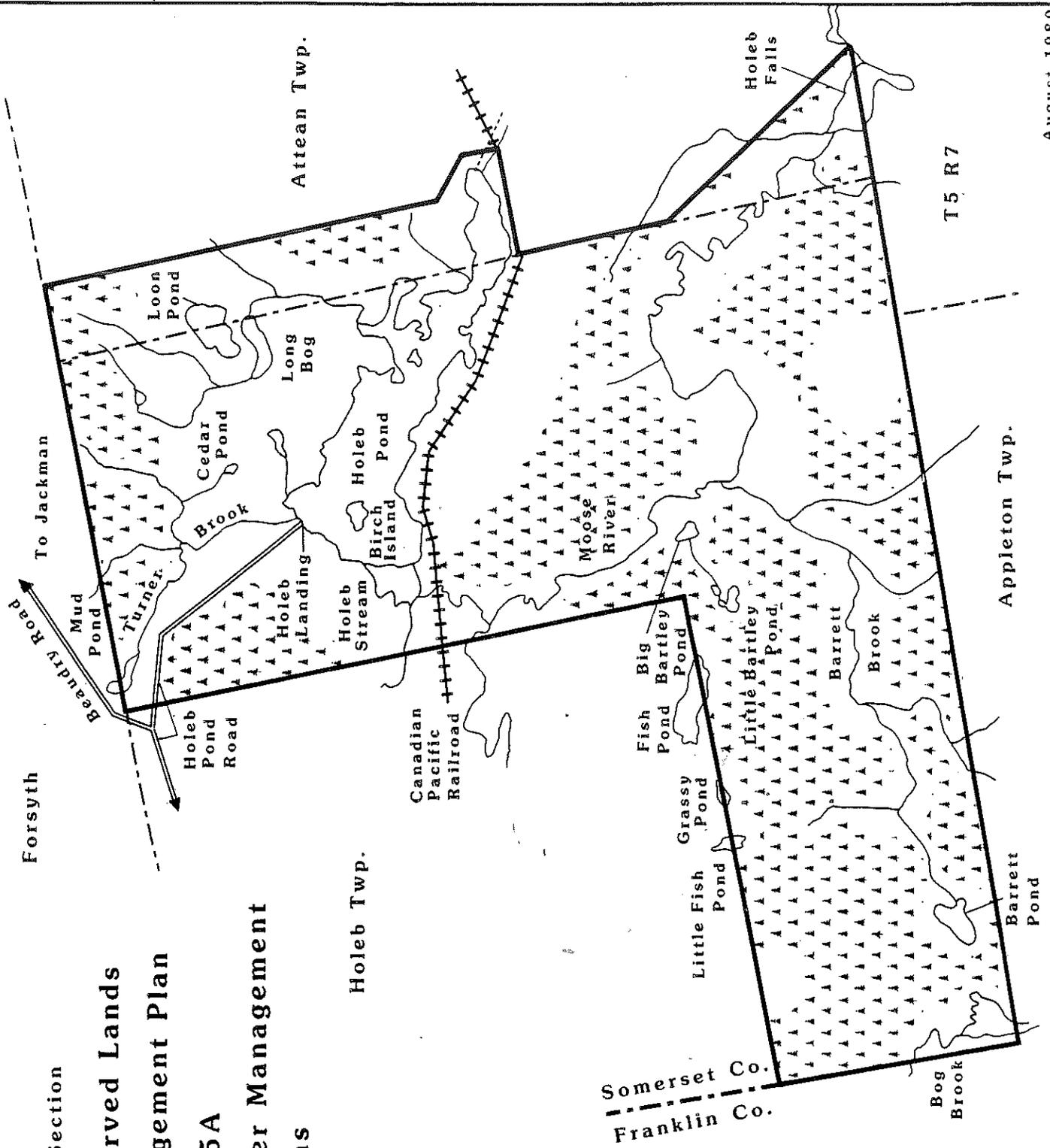


Western Section

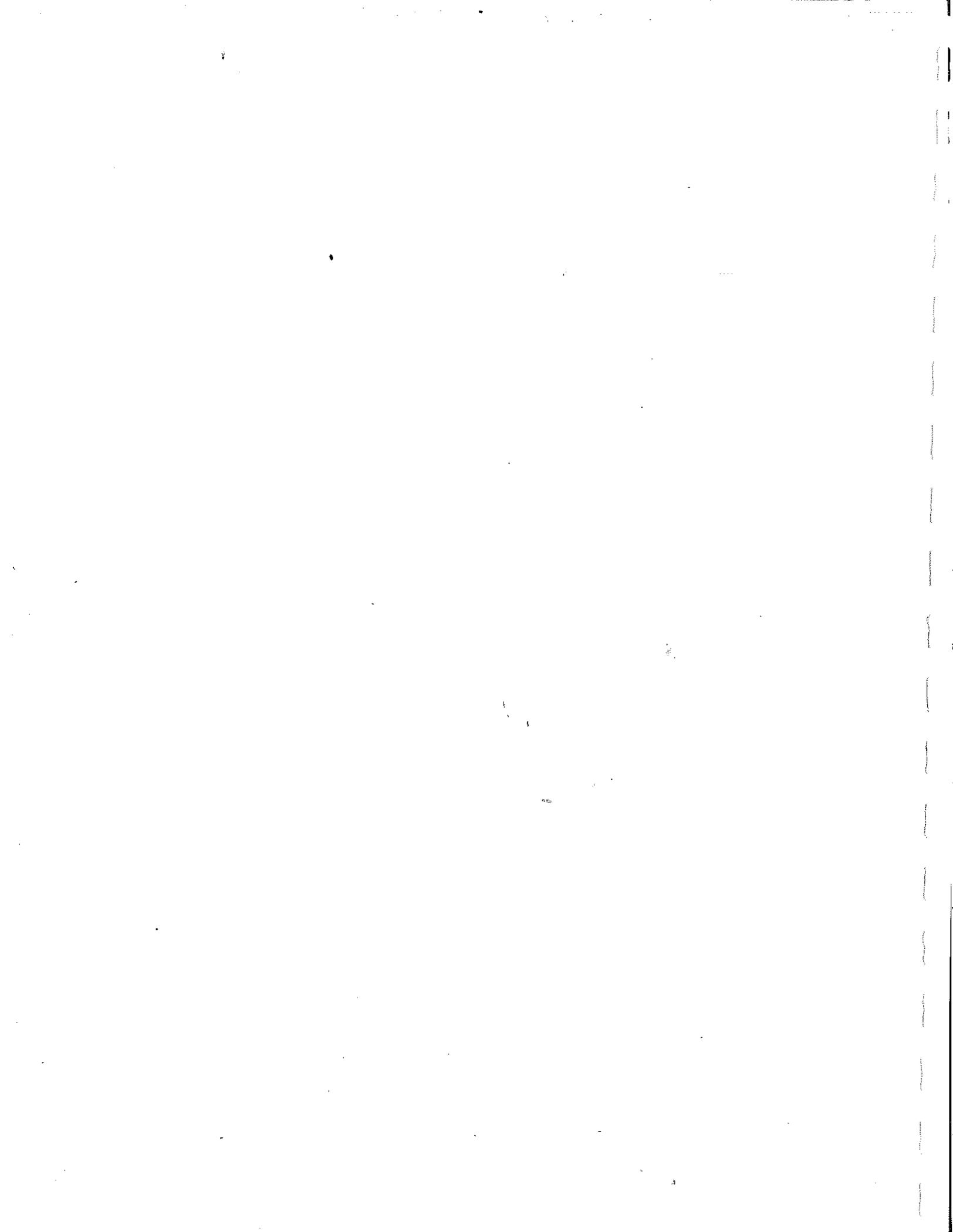
Public Reserved Lands Holeb Management Plan

Map #5A

Primary Timber Management Areas



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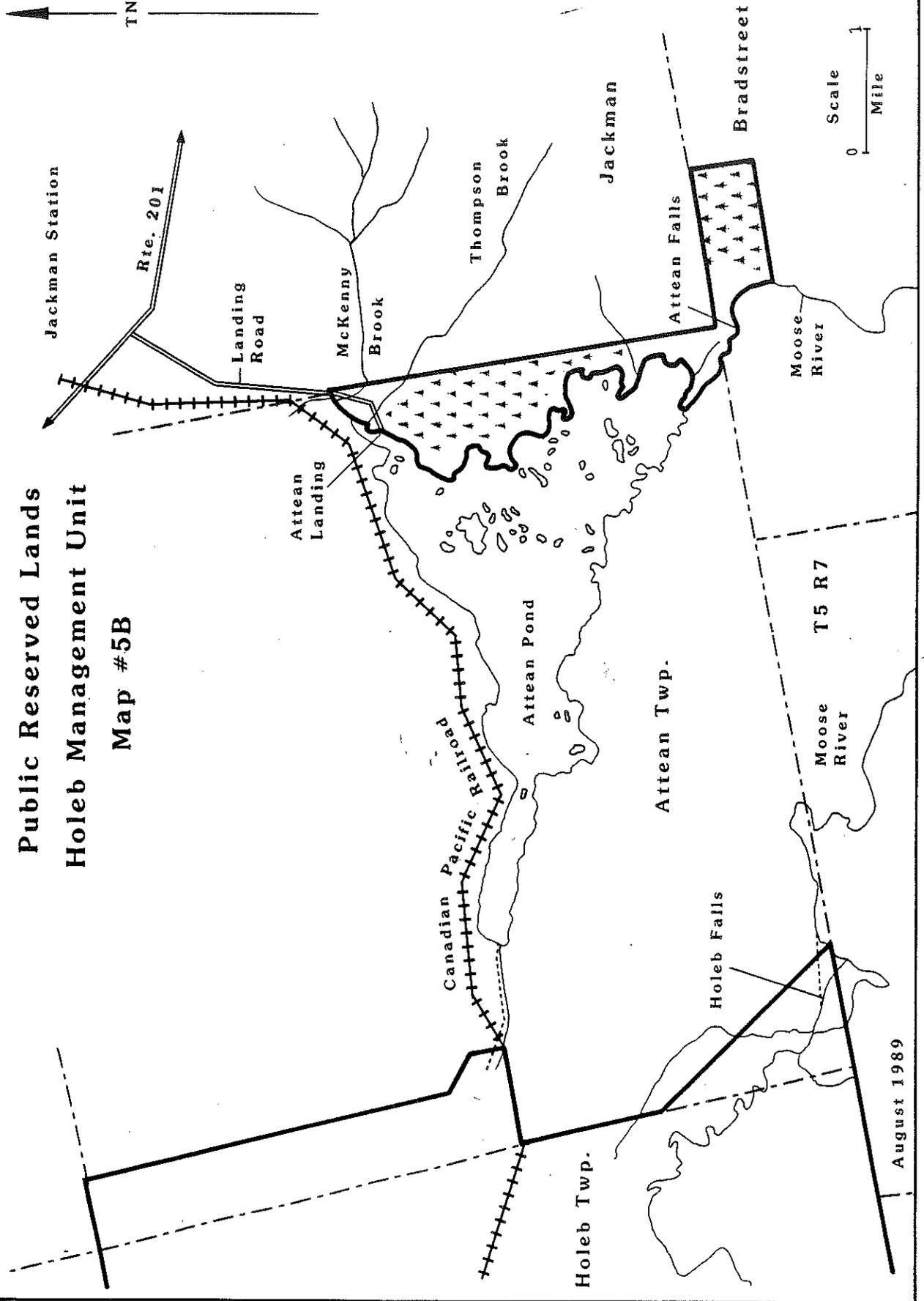
Primary Timber Management Areas

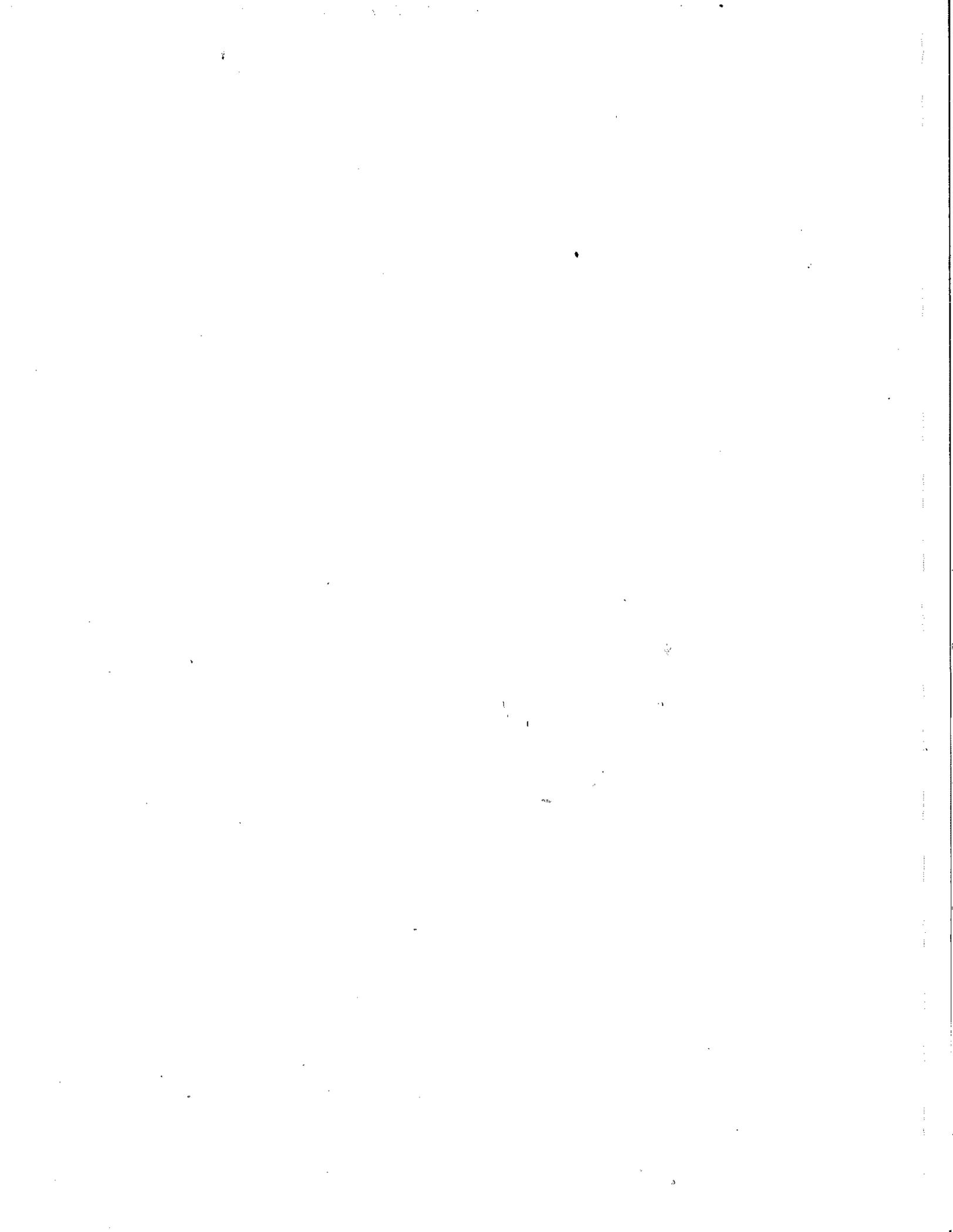
Eastern Section

Public Reserved Lands

Holeb Management Unit

Map #5B





allocated for dominant uses other than timber -- such as special protection or backcountry -- do not need visual consideration designation on maps, as this value is largely accounted for in the more restrictive management guidelines.

The Bureau has a carry-in, carry-out policy for trash on all Public Lands. Recreationists are encouraged to help pick-up trash, particularly at campsites. Seasonal personnel and volunteers also assist in this effort.

Visual management is the responsibility of the staff recreation specialist who may target certain areas for different types of treatment to enhance natural beauty. The specialist will integrate visual considerations where timber harvesting, road development, or related activities fall within visual areas.

3. Secondary Use

In those visual consideration areas where other, more restrictive provisions do not apply, all standard uses are permissible. These include recreation, road construction, and timber harvesting under appropriate constraint. Development of recreation facilities in a visual area will result in a change of designation to a recreation use area. As already mentioned, roads and timber harvesting will be as unobtrusive as possible, while still enhancing forest growth, regeneration, and wildlife habitat.

E. Timber (Refer to Maps #5A and #5B)

1. Description of Resource

The timber resource found on different areas of the Unit today varies widely because of past management practices, topography, road access, insect conditions, fire, and other factors. Subsections of forest within the Unit will therefore be discussed separately. It is noted that all of the Bureau's on the ground timber data for this Unit has been gathered only on Holeb Township.

Holeb Township has a good mixture of timber types with approximately:

25% softwood
35% hardwood
<u>40% mixedwood</u>
100% total

The terrain here is relatively steep to gently sloping, and abrupt low ledges are common. Soils are apparently fair to good for tree growth, although no specific soils information is available.

The amount of trees per acre (stocking) on Holeb Township is generally good, although the spruce budworm epidemic has killed large amounts of fir trees. The approximate percentages of timber by volume on the Township are as follows: (1987 figures)

<u>Softwoods</u>		<u>Hardwood</u>	
Spruce	32%	Sugar Maple	15%
Fir	5%*	Red Maple	12%
Cedar	3%	Yellow Birch	12%
Pine	3%	White Birch	7%
Hemlock	<.5%	Beech	5%
		Popple	4%
TOTALS		56%	
	44%		

*(Compared to 1978 figure of 18%)

The section of Holeb Township which is north of Holeb Pond (24% of Township) is nearly one-half softwood forest, and has suffered heavy spruce budworm damage. All timber harvesting conducted by the Bureau on the Holeb Unit has taken place in this section -- primarily salvaging budworm-damaged fir. These softwood stands are now dominated by spruce trees, with scattered cedar and pine stands. Mixedwood and hardwood stands are of average quality, and the average timber volume (stocking) is fifteen to seventeen cords per acre. Forest regeneration growth is excellent, with some timber stand improvement work (spacing saw) having been conducted in 1985. There is a zoned DWA around Long Bog.

The section of Holeb Township between Holeb Pond and the Moose River contains the west end of the Attean Mountain Range. The forest types are approximately one-half mixedwood, one-third hardwood, and 18% softwood. The softwood stands occur mostly along the Moose River. Growth rates are average and stocking is good (27-28 cords per acre). Light harvesting has taken place in this area within the past fifteen to twenty years, and most of the land is operable.

The section of the Township south of the Moose River contains Barrett Brook and the highest elevation on the Unit at 2330 feet -- on the Township/Unit southern boundary. Forest types are: 21% softwood, 43% mixedwood, and 36% hardwood. Softwood stands are composed primarily of spruce, with pine and fir scattered throughout. Old woods roads are common in this area, although past harvesting has been fairly light. Tree stocking is very good (over thirty cords per acre) and quality is fair to good. Much of the softwood is found along Barrett Brook and its tributaries, and appears adequate for winter deer cover. Most of the Moose River DWA located within the Unit is found on this section.

The section of the Unit in northwestern Attean Township is similar to the contiguous Holeb Township lands, although the terrain is rockier. The southern one-third of the forest here contains approximately 25% pine -- primarily white pine. Part of the Long Bog DWA is located in this section. The southwestern Attean section contains part of the DWA zoned along the Moose River. The forest appears to be mostly softwood stands, interwoven with wetlands. Holeb Falls is located near the southern boundary.

The southeastern Attean section contains mostly burn-origin forest, with poplar, white birch, and maple the predominant tree species. A few areas of softwood are found here, some containing jack pine. This section of the Unit lies along the eastern shore of Attean Pond.

Most of the Bradstreet section also contains burn-origin forest growth of poplar, white birch, maple, and fir, of poor to fair quality. The Moose River DWA has alternate areas of spruce and cedar, and includes part of a pine stand (red and white) which apparently escaped the fire. This section of the Unit lies on the lower, northwesterly slopes of Catheart Mountain.

2. Dominant Use

Public Reserved Lands Units are subdivided into compartments, using features such as roads and rivers for compartment boundaries. Each ten years, all compartments are examined for resource information gathering purposes. Most of the compartments on the Holeb Unit still need initial examinations, which will be completed within the ten-year planning period. Poor road access both to and within most areas of the Unit is the primary limiting factor for conducting compartment examinations and other management activities. Need and potential for timber management access will be evaluated during compartment examinations.

Regulated acres are those forested lands where timber harvesting will occur regularly, with removals almost equal to growth rates. Eighty percent (15,345 acres) of the Holeb Unit is designated as regulated forest, although timber will be a secondary use on much of this land, such as in visual areas. Timber management goals on this land are to improve timber quality, stocking, and productivity, while at the same time increasing the amount of softwood trees (where suited) and improving the balance of age-class distributions. Within the ten-year planning period, attention will be paid to evaluating existing regeneration -- particularly in the fir salvage areas, monitoring development of the younger age classes, and planning for removal of the low-quality hardwood overstory trees. Poor hardwood pulp markets in the region at present, make this last objective difficult to accomplish.

Regeneration monitoring will focus on securing high quality growth. Abundant regeneration may warrant further precommercial investment for improving some stands -- particularly north of Holeb Pond. An economic feasibility study at a future date will determine whether or not to make the investment.

3. Secondary Use

Wildlife habitat extends throughout the timber area, and is the principal secondary use. Some large, older trees will be retained throughout the forest to benefit the many species of wildlife which use them -- including raptors. Healthy beech trees will be retained, as this is the only mast-producing tree species on the Unit. Deer habitat is important on this Unit, and softwood growth is being encouraged to reflect this. All timber operations will be coordinated with the staff wildlife biologist -- particularly where potentials are highest for habitat improvements benefiting deer. Recreation is also a secondary use in the timber zone. Coordination with the staff recreation specialist will be geared towards consideration of the hunting, fishing, visual, and habitat protection interests.

F. Road System

1. Description of the Resource

The Bureau has two broad categories of roads: public use and management. Public use roads are developed and maintained to higher standards than management roads, and visual consideration areas are in place along all public use roads. Most roads leading to Maine's Public Reserved Lands are privately owned, requiring the Bureau to coordinate road system management efforts with the private landowners.

Road access to the Holeb Unit is all over privately-owned lands. Access to the western section is gained from two directions. The northern approach

from Route 201 via Dennistown to Holeb Landing (Beaudry Road to Holeb Pond Road) covers thirteen miles, and to Holeb Station covers seventeen miles. Southern access over the Gold Brook-Kibby Road from Route 27 in Chain of Ponds Township to the Barrett Pond Road now ends at the Moose River where Great Northern has removed an old bridge. Both roads cover some adverse terrain and require frequent maintenance. Neither road meets all management needs and should be supplemented with improvement of old roads and bridging on the Unit. The two roads are currently in fair to good condition.

Public road access to the eastern section of the Unit is from Route 201 just south of Jackman Station, to Attean Landing and covers two miles. The Town of Jackman maintains the first part of this road, the next mile is on private property, and the last stretch is on the Unit. Management road access to the southern part of this section is from Route 201 in Jackman Township, or from the West Capital Road in Bradstreet Township, each covering four miles.

The Unit is an essential part of the Moose River Bow Trip and has numerous remote and semi-remote ponds. These situations require careful road system planning and suggest that no further public access roads be developed.

2. Dominant Use

The Unit presents some serious road system problems, particularly in the western section. Public vehicular access is not allowed within backcountry areas, a use which is occurring to a limited extent in the Loon Pond backcountry area. Moose River and Holeb Stream require reconstruction of substantial bridges to attain adequate management access. These and related road system problems will be addressed within the ten-year plan period.

Road use agreements must be developed with the three abutting landowners involved. Land management activities conducted by these landowners will strongly influence public road access to the Unit. Maintaining public access

at minimum levels will maintain the remote character of the Bow Trip and other backcountry areas on the Unit, while at the same time help protect the rights of adjacent landowners.

SECTION V ADMINISTRATIVE CONCERNS

This section addresses two topics which are essentially administrative in nature, yet which have an affect on resource management programs.

A. Camplot Leases

Nine private camplot leases are located on Holeb Township and two on Attean Pond. These leasehold interests will be honored by the Bureau as long as all terms of the lease are met by the lessees. No new camplot leases will be allowed on any of the Public Reserved Lands, in keeping with Bureau policy.

B. Birch Island on Holeb Pond

This 24 acre island is privately owned by fifteen parties. Most or all of the owners have camps on the Island, and many use Holeb Landing to get to their camps. The Bureau will work with these owners to arrive at the best possible solutions for meeting their needs within the framework of this Plan and according to Bureau policy.

SECTION VI SUMMARY OF MAJOR ACTIONS AND DECISIONS

SPECIAL PROTECTION

1. Work with the Critical Areas Program and others to protect and further evaluate the Holeb Falls critical area. Coordinate efforts with LandVest -- land manager for the co-owner of the area. (See pages 12, 13 and 14.)

2. Identify resources in potential need of special protection during the compartment examination process. Particular attention will be paid to the

jack pine stands, potential old-growth pine stands, bogs, and the Holeb Falls area. (See page 13.)

WILDLIFE

3. Work with DIF&W to identify nesting sites of important bird species. Follow guidelines prepared by DIF&W's Endangered and Non-Game Species Program. (See pages 14 and 20.)

4. Monitor the two zoned deer wintering areas and potential area to assess conditions, use, and make recommendations. Coordinate with DIF&W. (See page 18.)

5. Conduct waterfowl management program, to include maintenance of duck boxes, use monitoring, development of natural nesting sites, and locating loon nesting sites. (See page 19.)

RECREATION

6. Evaluate the Cedar Pond — Loon Pond remote recreation area for development of recreational objectives. (See pages 29 and 30.)

7. Maintain the remote fishing opportunities available at Loon and Cedar Ponds, and evaluate the area for recreation development potentials. (See pages 17, 19, and 30.)

8. Coordinate management of the Bow Trip, developing a management agreement with those involved. (See pages 27 and 28.)

9. Upgrade Attean Landing to allow for improved parking, boatlaunching, resource protection, and public information. (See pages 31 and 32.)

10. Complete redesign of Holeb Landing by protecting beach, better defining boatlaunch, and providing adequate parking. (See pages 31 and 32.)

11. Monitor use of Holeb Landing to determine if backcountry values are being compromised, in particular, those associated with the Bow Trip. (See page 32.)

TIMBER

12. Evaluate existing forest regeneration -- particularly in the fir salvage areas, monitoring development and planning for overstory removals. (See page 39.)

13. Retain some larger, older trees throughout the Unit for use by raptors, and healthy beech trees for beech nut production. (See page 40.)

ROAD SYSTEM

14. Evaluate the Unit's existing road system, and develop new system within the framework of this Plan. (See pages 40 and 41.)

APPENDIX 1

GLOSSARY

1. Allowable Cut: The number of acres which can be harvested annually, for long-term, sustained yield timber production.
2. Backcountry: Remote areas with exceptional natural features and allocated for primitive recreation as the dominant use. These areas are typically large in size. Management is characterized by no public vehicular access, dispersed use, minimal recreational facilities, with harvesting (where permitted) by uneven-aged methods only, designed to retain the natural character of the area and minimize conflicts with recreation use.
3. Crown (or Canopy) Closure: Measure of the completeness of space reduction between the tops (foliage and branches) of adjacent trees.
4. Cutting Cycle: The interval between harvest operations in uneven-aged management.
5. Endangered Species: A Maine endangered species is a plant or animal species in immediate danger of extirpation from Maine due to critically low or declining numbers brought about by habitat loss or degradation, over-exploitation, pollution, disease, or other factors.
6. Edge: The place where plant communities meet or where successional stages or vegetative conditions within plant communities come together.
7. General Recreation: Areas typically accessible by vehicles and allocated for recreation as the dominant use. Management is characterized by moderate intensity use, including: picnic tables, firerings, pit privies, vehicle parking (on-site or relatively nearby), and a featured attraction(s) -- typically, a body of water. Harvesting will be directed towards aesthetic and safety considerations only.

8. Mast: Nuts and/or fruits which are utilized as food by wildlife. Apples are an example of soft mast, while beech nuts are a characteristic hard mast.
9. Old-Growth: For the purpose of this document, a stand of trees which is beyond the age of biological maturity.
10. Regeneration: Both the process of establishing new growth and the new growth itself -- occurring naturally through seeding or sprouting -- and artificially by planting seeds of seedlings.
11. Regulated Forest Acreage: That portion of the commercial forest landbase on which the annual allowable harvest is calculated.
12. Release Cutting: Any cutting operation designed to remove competing vegetation from or establish proper spacing intervals among desired trees.
13. Remote Recreation: Semi-remote areas containing significant natural resource features and allocated for primitive recreation as the dominant use. These areas vary in size. Management is characterized by no public vehicular access, dispersed use, and rustic recreational facilities. Integrating secondary uses is less restrictive than doing so in a backcountry.
14. Rotation: The age at which stands of timber are harvested for particular economic or silvicultural objectives.
15. Selection: Related to uneven-aged management, the cutting of individual or small groups of trees; generally limited in area to patches of one acre or less.
16. Silviculture: That branch of forestry which deals with the application of forest management principles to achieve specific objectives with respect to the production of forest products and services.

17. Site Quality: That combination of environmental factors and species requirements which serve to measure how well a particular tree species will become established and grow on a given area of the forest.
18. Stand: A group of trees, the characteristics of which are sufficiently alike to allow uniform classification.
19. Stocking: The amount of trees in a given area as compared to the amount desired for the desired system of management.
20. Sustained Yield: The amount of timber that a forest can produce continuously within a given system of management.
21. Threatened Species: A plant or animal species not as critically jeopardized by extirpation as an endangered species, but will probably become endangered if current population levels experience further declines.

APPENDIX 2

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APPENDIX 3

REFERENCES

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6. Land Use Regulation Commission. 1986. Land Use Districts and Standards. 137 pages.
7. QLF/Atlantic Center for the Environment. 1988. Moose River Bow Trip: Resource Assessment. 141 pages.