

FINAL DRAFT

Upper Kennebec Region

Management Plan



View from US 201DOT rest stop toward Attean Pond (center) and No. 5 Bog (center left) with Attean Mountain in the middle background.

Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands



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Acknowledgements

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I. Introduction

About this Document

This document constitutes a fifteen-year Management Plan (the Plan) for more than 43,000 acres of Public Reserved land in the Upper Kennebec Region, managed by the Maine Bureau of Parks and Lands (the Bureau). This is the first regional management plan addressing this assemblage of Public Reserved Lands management units and lots. It will replace the 1989 Management Plan for the Holeb Public Reserved Lands and the 1978 Management Plans for two smaller units, the Dennistown Plantation and Caratunk Public Reserved Lands. It will also cover the Sandy Bay Public Reserved Land and several additional smaller Public Reserved land units.

The Plan includes background information about the planning process and the regional context of the Plan. The core of the Plan is a description of the character and resources of the units, a Vision for the future of each major unit, and management allocations and recommendations.

One objective of the regional plan is to provide a balanced spectrum of opportunities across the Region, and in keeping with the opportunities and resources available in the broader surrounding Upper Kennebec Region. In developing the management recommendations for the reserved lands and undeveloped park lands, the Bureau has been mindful of this broader perspective.

The Upper Kennebec Region Management Plan is a commitment to the public that the Public Reserved lands in the Region will be managed in accordance with the Bureau's mission and goals, and within prescribed mandates. Revisions to the Plan commitments will occur only after providing opportunities for public comment. The Management Plan will also serve as guidance to the Bureau staff. It will provide clear management objectives, while providing a degree of flexibility in achieving these objectives. It will not, however, be a plan of operations.

An important aspect of the management of public lands is monitoring commitments made in the plans, and evaluating the outcomes of management activities relative to overall objectives. This management plan describes monitoring and evaluation procedures for recreational use, wildlife management, and timber management.

Under current policy, the Bureau's management plans cover a period of 15 years after the date of adoption. A review of current issues and progress on implementing this Plan's recommendations will be undertaken in 2022, as part of the first mandated 5-year review and update of the regional plan.

What is the Upper Kennebec Region?

The Upper Kennebec Region encompasses 35 townships and plantations, four towns, and portions of three additional townships, a total area of over 800,000 acres, extending from the Boundary Mountains along the Canadian border south to Wyman Lake near Bingham. The entire Plan area, apart from five townships west of Holeb, is within Somerset County.

The Upper Kennebec Region is a largely natural landscape that in large part is also a working landscape, where commercial forestry is the predominant land use. A significant portion of the

commercial forestland in the region is managed under conservation easements held by the Bureau and other entities.

The region is crossed by the Moose River, which flows eastward into Moosehead Lake, and the upper Kennebec River, which flows southward from Moosehead Lake. The rugged landscape is highly dissected by small, steep sided streams. Because of the region's comparatively high elevation, it experiences some of the coldest weather and harshest winters in New England. The average daily high January temperature in Jackman is 22°F, and the average daily high temperature in July is 76°F. In an average year there are only 109 frost free days. Average annual precipitation is relatively low (41"), but average annual snowfall is 108", and some mountains receive as much as 200 inches of snow (McMahon 1990).

The region's complex bedrock features some of the oldest rocks in Maine in the Chain Lakes Massif, west of Jackman, where metamorphic rocks date to 1.5 billion years and sedimentary rocks date to 700 million years ago (Cheatham et al. 1989). The region also features a number of plutons (intrusions of harder bedrock) of Devonian origin (~375 million years ago), including the granite that forms Moxie Bald Mountain. The surficial geology of much of the landscape is characterized by glacial till from the last glaciation, roughly 11,000 years ago. Other areas are characterized by peat deposits, bedrock outcrops, and ribbed moraines.

The Lands of the Upper Kennebec Region

The Upper Kennebec Region lands comprise a total of about 43,000 acres designated as Public Reserved Lands. The region contains one of the most extensive public lands units in the State, the Holeb Unit, south and west of the town of Jackman. Other major units include the recently acquired Cold Stream Forest extending northward from The Forks area, where the Dead River joins the Kennebec, and Sandy Bay on US Route 201 and abutting the Canadian border. Together, these three units account for more than 80 percent of the Public Reserved Lands in the region.

Nineteen smaller public lots, most of which are on or near the US 201 corridor which forms the backbone of the region, complete the portfolio of Public Reserved Lands in the region. These lots range in size from about 130 to 1,800 acres, and together comprise about 8,500 acres. The Bureau's Parks division manages the Moxie Falls parcel (not addressed by this Plan), abutting two of the smaller public lots in The Forks area.

The table below summarizes the acreage contained in each property addressed in the Plan. A map of the Public Reserved Lands of the Upper Kennebec Region is provided on page 5.

The Public Reserved Lands of the Upper Kennebec Region

Name and Location	Fee Acres
Holeb Unit (<i>Holeb, Attean, T5 R7 BKP WKR and Bradstreet Townships</i>)	23,612
Cold Stream Forest Unit (<i>Parlin Pond & Johnson Mtn. Townships, West Forks Plantation</i>)	8,159
Sandy Bay Unit	2,712
Smaller Lots (<i>listed geographically, generally from north to south</i>)	
Dennistown Plantation Lot	1,000
Moose River North and South Lots	282
Bradstreet Township South Lot	210
Upper Enchanted Township (Coburn Mountain) Lot	320
Johnson Mountain Lot	525
West Forks Plantation Northeast, Northwest, Central and Southwest Lots	1,204
Moxie Gore Lot	480
The Forks Plantation North and South Lots	1,011
Bald Mountain Lot	1,771
Caratunk North, South and East Lots	1,330
Highland Plantation East Lot	200
Pleasant Ridge Plantation Lot	207
Total	43,023

Note: Figures listed are derived from deeded acres or estimated acres for unsurveyed original public lots; acreage as determined by surveys or GIS may differ.

In addition, the Bureau also has responsibility for monitoring compliance within two conservation easements that fall entirely or in part within the Upper Kennebec Region. In total, these easements cover nearly 1,400 acres, over 830 acres of which are within the region. The Moose River easement is adjacent to the No. 5 Bog portion of the Holeb Unit. Both are described in more detail in the Planning Context section (Section III).

Conservation Easements in the Upper Kennebec Region

Easement Name	Townships	Acres	Notes
Indian Pond	Big Moose Twp. Sapling Twp.	721*	Pond shoreline zone, owned by Brookfield Renewables, LLC
Moose River	T5 R7 BKP WKR	111	South shore of Moose River, owned by Riverview Foundation

* 555 additional acres covered by this easement are in Sapling and Big Moose Townships on upper Indian Pond (within the BPL Moosehead Region)

Acquisition History

The majority of the approximately 23,600-acre **Holeb Unit** was acquired from Great Northern Nekoosa Corporation in 1975 and from Coburn Lands Trust in 1982 and 1985. Approximately 1,200 acres on the east shore of Attean Pond and an adjacent portion of Bradstreet Twp. are original public lots. An additional 700 acres of shorelands on the north and south sides of Attean Pond and a buffer strip along 1.5 miles of the Moose River were acquired from Lowell and Company in 1994. Two small outlots on Attean Pond and a lot on Little Big Wood Pond were acquired in 2006-07. The 4,576-acre No. 5 Bog acquisition (including 85 acres along the Moose

River near Holeb Falls) was completed in 2009. Most recently, a one-acre inholding on the Moose River at the margin of the No. 5 Bog parcel was acquired in 2012.

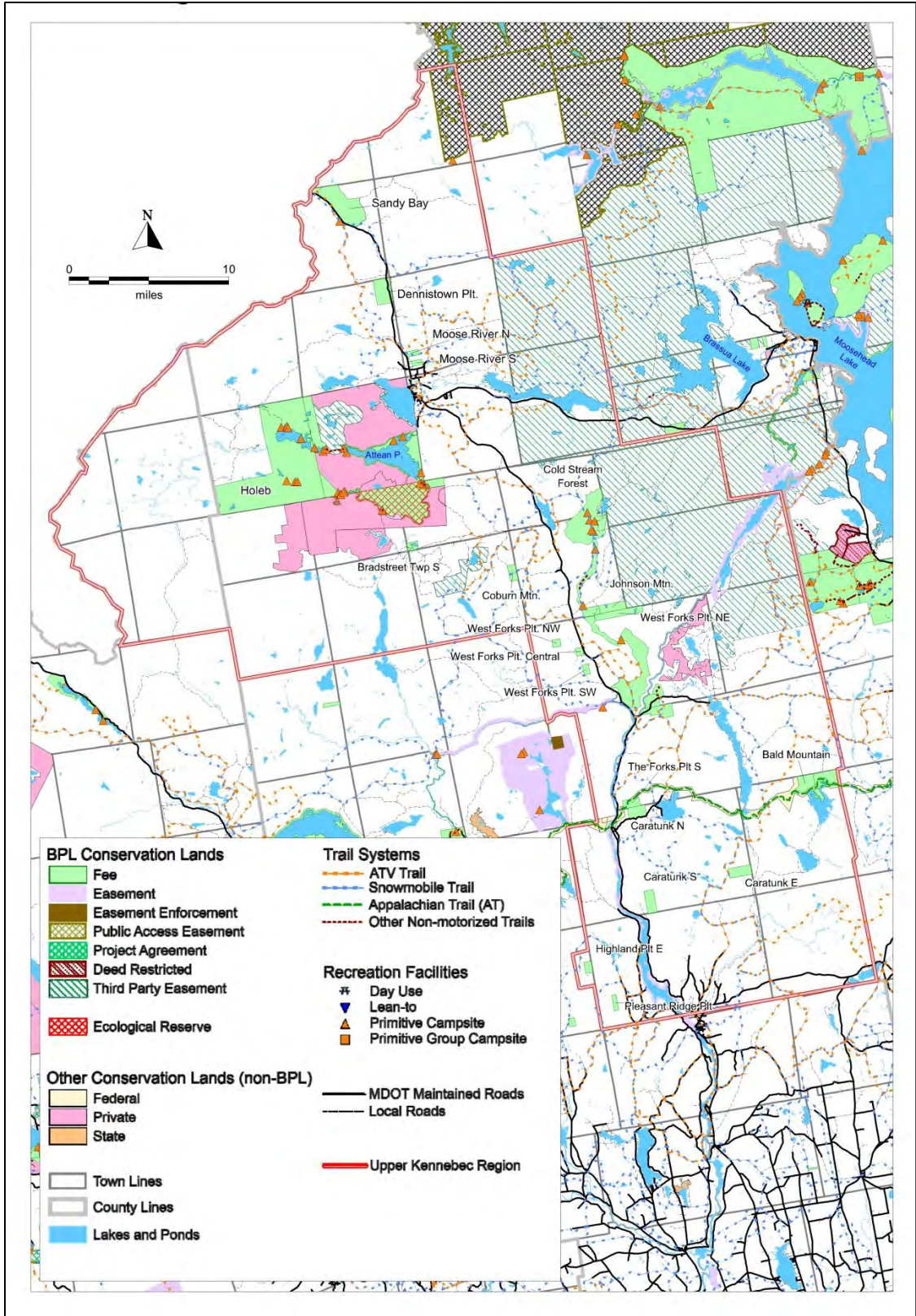
The 8,152 acre **Cold Stream Forest Unit** was acquired in March 2016 from the Weyerhaeuser Company. This acquisition was funded in part through the federal Forest Legacy and state Land for Maine's Future programs, through a partnership with the Trust for Public Land, Trout Unlimited, and Maine Department of Inland Fisheries and Wildlife (MDIF&W).

The 2,721 acres comprising the **Sandy Bay Unit** was acquired in 1985 from Louis O. Hilton in trade for an original public lot and timber and grass rights.

The 1,650 acre **Bald Mountain Lot** is composed of an original Public Lot and two parcels totaling about 780 acres acquired in trade from S.D. Warren in 1990.

The 312 acre **Moose River Lots** were acquired from Irving Pulp and Paper in 1990 as part of a land trade.

The remaining smaller lots, all situated on or near US 201 – **the Dennistown, Bradstreet Twp., Coburn Mountain, Johnson Mountain, West Forks Plantation, Moxie Gore, The Forks Plantation, Caratunk, Highland Plantation, and Pleasant Ridge Plantation lots** – are Original Public Lots or portions of such lots remaining in State ownership after various land sales and trades.



MAP FIGURE 1: Upper Kennebec Region Public Reserved lands and other conservation lands.

II. The Planning Process and Resource Allocation System

This section describes the Bureau's planning process for development of its management plans and the statutes and policies that guide its management decisions. The planning process includes a robust public participation effort, intended to provide input to the Bureau's management. In addition, the Bureau is guided by statutes requiring and directing the Bureau to develop management plans. Overall, management of Bureau lands is guided by the *Integrated Resource Policy* (IRP), which itself was developed with a significant public process. Finally, the Bureau's forest management, where allowed under the multiple purpose management system defined by the IRP, is conducted sustainably, and is third party certified under the Sustainable Forestry Initiative (SFI) and the Forestry Stewardship Council (FSC) programs. The following describes these important influences guiding the development of this Plan in further detail.

Statutory and Policy Guidance

Multiple use management plans are statutorily required for Public Reserved Lands pursuant to Title 12 MRSA § 1847 (2) (see Appendix B), and must be prepared in accordance with the guidelines set forth in the IRP revised and adopted in December 2000 by the Bureau. The IRP provides further policy guidance for development of resource management plans, and applies to Parks as well as Public Reserved Lands. These laws and policies direct the Bureau to identify and protect important natural, ecological, and historic attributes; enhance important fisheries and wildlife habitat; provide opportunities for a variety of quality outdoor recreation experiences; and provide a sustained yield of forest products by utilizing forest management techniques and silvicultural practices that enhance the forest environment. Revenues received from timber harvesting are retained by the Bureau to manage Public Reserved Lands.

The portion of the IRP addressing management of fisheries and wildlife resources makes reference to the Bureau's *Wildlife Guidelines*. The guidelines provide specific management objectives and strategies for wetland, riparian and upland ecosystems on the public reserved lands, including areas designated for timber harvesting. Additional guidance is provided for management of special habitat features such as mast trees, snags, and forest openings/old fields, and for species of special concern, such as bald eagle, osprey and great blue heron. The overall fisheries and wildlife resources policy of the Bureau is to strive to maintain a landscape characterized by a rich variety of native species and the functioning ecosystems on which they depend.

This plan meets the requirements for multiple use management plans for the Public Reserved Land properties set forth in Title 12 M.R.S.A. § 1847 (2), and is consistent with the Integrated Resource Policy.

Public Participation and the Planning Process

Overall, the development of Management Plans includes a series of steps, each involving interdisciplinary review, as well as extensive efforts to solicit and consider public comment, in order to achieve a Plan that integrates the various perspectives and needs while protecting and conserving the resources of the Public Reserved Lands. In total three public meetings were held in the development of this Final Draft Plan, as described below.

Resource Assessments: The first phase of the planning process includes a thorough study of the resources and opportunities available on the Public Reserved Lands. Beginning in the summer of 2016, Bureau staff undertook a review of the natural and geological, historic and cultural, fisheries and wildlife, recreation, and timber and renewable resources. In anticipation of this Plan, natural resource surveys were conducted between 2014 and 2016 by the Maine Natural Areas Program (MNAP) and MDIF&W staff, which focused on updating the data on higher elevation lands, wetlands and other areas that have been managed under the past plans as special resources. The Holeb Unit and Coburn Mountain, Bald Mountain, and Moxie Gore lots were included in these new surveys. Additional surveys were conducted at the newly acquired Cold Stream Forest Unit in 2017. Resource professionals from within the agency provided information on wildlife, recreation, and timber resources. Mapping and GIS-related information was also obtained as part of this phase.

Staff also participated in reconnaissance field trips to the major units and some of the smaller lots to view first-hand and characterize the land-based resources and recreational features. In October 2016, the Plan Coordinator and several Bureau staff participated in a planned tour of the Cold Stream Forest Unit focused on examining existing recreational development, road access and condition, and forest conditions. Other staff visits in the fall and winter of 2016-17 included visits to the Sandy Bay and Holeb Units and several of the smaller lots.

Advisory Committee: An Upper Kennebec Region Advisory Committee was convened in August 2016 of the start of the Plan process and invited to a public scoping meeting that would formally kick off the Plan's development.

Issue Identification/Public Scoping Session: The first step in the planning process is a public scoping meeting. The purpose of the scoping meeting is to help ensure broad-based public input regarding management direction and other issues needing to be addressed by the Plan. A public scoping meeting was held in Bingham on October 19, 2016. Attendees were invited to submit written comments during the one month period following the meeting.

First Advisory Committee Meeting: The initial Advisory Committee meeting was held on November 17, 2016 in Bingham. The purpose of the meeting was to gain a fuller understanding of the issues and opportunities to be addressed in the Plan, including guidance on developing an overall Vision for each of the major properties covered by the Plan. In addition, the group explored concerns of user groups and management challenges that may be associated with certain issues and opportunities. The meeting was guided by the list of Upper Kennebec Region Issues, Needs and Opportunities developed during scoping and subsequent BPL staff discussions, and which was distributed to the AC in advance. Subsequent to the meeting, several AC members and members of the public submitted written comments on management issues and their vision for the region and specific management units.

Second Advisory Committee Meeting: Through 2017 the Bureau compiled the resources and management issues identified as described above, and drafted vision statements, proposed resource allocations and management recommendations into a Draft Plan. An Advisory Committee meeting to review the Draft Plan was held June 20, 2018. Comments on the Draft

Plan from the Advisory Committee and the public are included in Appendix A of this document and were reflected in the Final Draft Plan.

Public Meeting on the Final Draft Plan: The Final Draft Plan was presented and discussed at a public meeting on [REDACTED], 2018.

Commissioner's Review of the Final Proposed Plan, and Plan Adoption: Comments received on the Final Draft Plan were considered in preparing the Final Management Plan. Upon recommendation from the Bureau of Parks and Lands, the Plan was then reviewed and approved of the Commissioner of the Department of Agriculture, Conservation and Forestry.

Five-Year Plan Review and Updates: The Bureau's management plans are normally adopted for a 15-year period. The Bureau is required to report to the Upper Kennebec Region Advisory Committee at five-year intervals on accomplishments and changing conditions that may warrant amendments to the plan. The first mandated Five-Year Review of the regional plan is scheduled for 2022. Advisory Committee members will review the Bureau's report on actions taken to implement management recommendations in the Plan and will be asked to identify any new issues or circumstances they feel warrant Committee input or action. If neither the Bureau nor the Advisory Committee identifies any new issues or circumstances that warrant Committee input or action, the review process is completed.

If any of the Advisory Committee members identifies new issues or circumstances that, in their opinion, may require an amendment to the plan, or that should be discussed with the Committee prior to the Bureau taking action without amending the plan, then the Bureau will seek Committee comment through correspondence or a meeting. Depending on Committee input, a decision will be made to formally amend the plan or to take action without amending the plan. If a decision is made to formally amend the plan, the Bureau will hold a public meeting to gather public input on the proposed amendment(s), document public comments and Bureau responses, and adopt the plan amendment. If a decision is made to take action without amending the plan, the Bureau will document the Committee discussion and the specific actions that can be taken without a plan amendment.

Summary of the Resource Allocation System

The Bureau's Resource Allocation System is a land management-planning tool first developed in the 1980's, and formalized in the IRP. The current version of the IRP was adopted December 18, 2000, following a public review and refinement process. The Resource Allocation System, which assigns appropriate management based on resource characteristics and values, is based on a *hierarchy* of natural and cultural resource attributes found on the land base. The hierarchy ranks resources along a scale from those that are scarce and/or most sensitive to management activities and where dispersed recreation facilities or activities are most appropriate, to those that are less sensitive and where more intensive recreation facilities or activities may be appropriate. The resource attributes are aggregated into seven categories or "allocations".

The hierarchy of the allocation system defines the type of management that will be applied depending on the particular resource attributes present, with *dominant* and *secondary* use or management designations as appropriate to achieve an integrated, multi-use management. Allocations, from most sensitive to least, include:

- **Special Protection Areas** (including Ecological Reserves and Significant Natural Areas)
- **Backcountry Recreation Areas** (Motorized and Non-mechanized)
- **Wildlife Areas** (essential wildlife habitat, significant habitats, and specialized habitat areas and features including rare natural communities)
- **Remote Recreation Areas**
- **Visual Protection Areas**
- **Developed Recreation Areas**
- **Timber Management Areas**

Appendix C includes a more detailed description of the Resource Allocation System categories and the management direction defined for each category.

Forest Certification

In 1999 the Bureau made the decision to demonstrate exemplary forest management through participation in two nationally recognized sustainable forestry certification programs. The Bureau was awarded certification of its forestlands under the Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC) programs in 2002. These third-party audits were conducted to determine if these lands were being managed on a sustainable basis. Successful completion of the FSC/SFI systems also qualified the Bureau to enter into the “chain of custody” program to market its “green-certified” wood. The process for enrollment in this program was completed in 2003, with certified wood now being marketed from Bureau managed lands.

The process for conducting the SFI and FSC audits was rigorous and unique in that the Bureau underwent the two audit programs simultaneously. The audit was comprised of a field analysis of forest management practices at selected sites around the state, and an analysis of the Bureau's financial, personnel, policy development, and record-keeping systems. A Bureau-wide certification team was implemented to address “conditions” and “minor non-conformances” stipulated in the audit reports, including: significant enhancements to forest inventory data, development of a computerized forest-modeling program, a timeline for updating management plans for the entire land base, improvements in the use of Best Management Practices to protect water quality, and new commitments to public outreach and education programs. The Bureau is required to meet these conditions within certain timeframes in order to keep its certification status in good standing over the five-year certification period.

In 2006, the Bureau hosted its first full recertification by FSC, concurrently undergoing its first surveillance audit by SFI, the latter now required under SFI's updated standards. Although the field portion took place during and immediately after a heavy November rainstorm, Best Management Practices implemented on Bureau lands were working well, and certifiers for both systems were very pleased with Bureau silviculture at all sites visited. The Bureau's second full recertification audit for FSC took place in December 2011, again in challenging weather conditions, and the third took place in December 2016. Annual surveillance audits under the SFI program have occurred each year, and have concurrent FSC audits in the years between full audits. In each case, the BPL forests were again certified as being well managed, with only a small number of corrective action requests (now known as minor non-conformances), which the Bureau needed to satisfy as it continues to improve its forest management which has already been certified as being exemplary.

III. Planning Context

The purpose of this Plan is to identify management allocations and recommendations for the Public Reserved Lands in the region. The Plan has been developed taking into account the context of the region's other conservation lands and recreation resources. The following narrative provides examples of the major conservation and recreation resources, but this is not comprehensive—the full spectrum of resources in this region is rich and diverse and will not be fully described here.

Conservation Lands and Public Recreation Resources in the Upper Kennebec Region

The south end of the region at Bingham, just downstream of the Wyman Lake impoundment on the Kennebec River, is about a 1.25 hour drive from Augusta, 1.5 hour drive from Bangor, and 2 hour drive from Portland, placing it within a reasonable day-trip or weekend travel distance to a majority of the state's population. Destinations in the vicinity of Jackman, in the northern part of the region, add about 1 hour of travel from these urban areas as compared to the south end of the region. The northern end of the region is easily reached by those coming into the state from Quebec. The broader region includes a substantial amount of conservation lands within a matrix of commercial forest lands, with a number of camps, lodges and resorts.

Recreation Resources

Access

US Route 201, known as the Old Canada Road within the Plan area, is the backbone of the Upper Kennebec region, extending the length of the region from north to south and passing through several small towns. Most of the commercial activity in the region is on or near this road. Communities along US 201 such as Bingham, Moscow, West Forks, The Forks Plt., Jackman and Moose River provide lodging, campgrounds, restaurants, groceries, outfitters, gift shops, and other outlets to supply visitors' needs. State Route 6/15, also known as Long Pond Road, links the Jackman area to Moosehead Lake. Other DOT, county and town-maintained routes connected to US 201 and providing access to recreation include Moxie Lake Road and Pleasant Pond Road. Most other vehicle access to the region's lakes and ponds is over private roads originally constructed for timber management.

Hiking

Hiking opportunities in this region is not as extensive as compared to adjacent areas, such as the western mountains and the Moosehead Lake areas. However, some hiking opportunities stand out. The trail to Moxie Falls, one of the highest waterfalls in the state, is among the most popular in the region. The one-mile out-and-back walk is on a wide and generally flat trail, with an extensive system of boardwalks providing safe viewing of the falls at the end. The trail primarily crosses State Park property with a trailhead on a public reserved lands parcel.

The extensive system of non-motorized trails constructed by the Maine Huts and Trails organization in the past decade currently has its northern terminus at a trailhead on US 201 in West Forks. A 14.2-mile section of trail winds along the Dead River from that trailhead to the Grand Falls Hut, within a Bureau-held easement. This challenging trail is groomed for Nordic skiing in the winter.

The Appalachian Trail (A.T.) crosses the southern end of the Upper Kennebec Region, crossing the Kennebec River (where a shuttle is available to hikers in-season) and US 201 at Caratunk. From a trailhead at Caratunk, the A.T. continues east about 15 miles to Bald Mountain Lake and then onward out of the region toward Monson. Most of this section is on federally-owned trail corridor lands; however, just east of Caratunk and at Bald Mountain Lake about three miles of the trail crosses BPL parcels. A popular day-hike to 2,470-foot Pleasant Pond Mountain, with extensive views from the summit, is a highlight of this section of the A.T.

A trail within The Nature Conservancy (TNC)-owned Leuthold Forest Preserve leads to the summit of 3,156-foot No. 5 Mountain, providing panoramic views of No. 5 Bog and Attean Pond. The owner of the Attean Township lands north of Attean Pond provides a network of hiking trails. One trail extends from the BPL-owned shoreline of Attean Pond to the summit of Sally Mountain, about one mile to the north.

Camping

As will be described in more detail later, a number of drive-to campsites are available within the Bureau's Cold Stream Forest Unit, while the Holeb Unit features more than 20 primarily boat-in campsites. Drive-to campsites are scattered on private forest lands in the region, particularly in Dennistown, Chase Stream and Misery Townships. Three lean-tos and a hike-in campsite are available along the portion of the A.T. that crosses the region. All are primitive campsites, with no potable water and vault or pit toilets.

A number of commercial campgrounds are available in Moose River, Jackman, West Forks and The Forks Plt. Brookfield Renewables, LLC operates a public campground on Indian Pond, under the conditions of its hydropower project license.

Fishing

The many ponds and rivers in the Upper Kennebec region provide diverse destinations for cold-water fishing. The larger waters such as Attean Pond, Big Wood Pond, Long Pond, Parlin Pond, Moxie Pond (aka Lake Moxie), Indian Pond and Wyman Lake (the latter two are impoundments on the Kennebec River) are generally accessible by vehicle, with developed boat launch facilities. A number of smaller ponds require some hiking, increasing the opportunity to fish in relative solitude. Among the popular species are smallmouth bass, white perch, brook trout, landlocked salmon, and togue (lake trout). MDIF&W highlights landlocked salmon fishing on Attean Pond and Big Wood Pond, high quality smallmouth bass fishing on Indian Pond, as well as a number of walk-in and drive-to ponds offering wild and stocked brook trout fishing.

A number of ponds in the region, several of which are on the Public Reserved Lands, are classified by MDIF&W as State Heritage Fish Waters (SHFW; waters that have never been stocked or that have not been stocked in at least 25 years and now have self-sustaining brook trout or arctic charr populations). By statute, a person may not use live fish as bait or possess live fish to be used as bait on a SHFW. Special regulations to protect the self-sustaining populations of brook trout and charr have been enacted for these waters. A few ponds in the region are managed for trophy brook trout, with a more restrictive bag limits, minimum size and/or catch and release restriction. Many other ponds and streams in the region are stocked by MDIF&W.

The Dead River and Kennebec River are destinations for anglers seeking brook trout and salmon and the less numerous brown trout and rainbow trout, particularly during the spring and fall. However, limited road access (other than along US 201) and high flows due to upstream dam releases are constraints. The fishing season is extended through October on the Kennebec and through November on the Dead River. Both rivers are artificial lure only waters, with a two fish total daily bag limit and 12 inch minimum length for trout and salmon. The Dead River is catch-and-release only during the fall season. Local guides offer drift boat outings on these rivers.

Boating

Canoeing and kayaking are common activities on many of the regions lakes, ponds and rivers. Most prominent among paddling opportunities in this region is the “Moose River Bow Trip.” This historic and popular multi-day outing is considered one of the most outstanding canoe trips in Maine. Local outfitters offer rental equipment and some offer shuttle services. Additional details on the Bow Trip are provided in the Holeb Unit section of this Plan.

Both anglers and pleasure boaters have trailer-launching access to many of the larger lakes and ponds in the region, including about a dozen public boat ramps, most state owned or funded by the Bureau’s boating facility program and operated by local entities. Other privately-operated access points can be found at lodges, sporting camps and campgrounds around those and other waters.

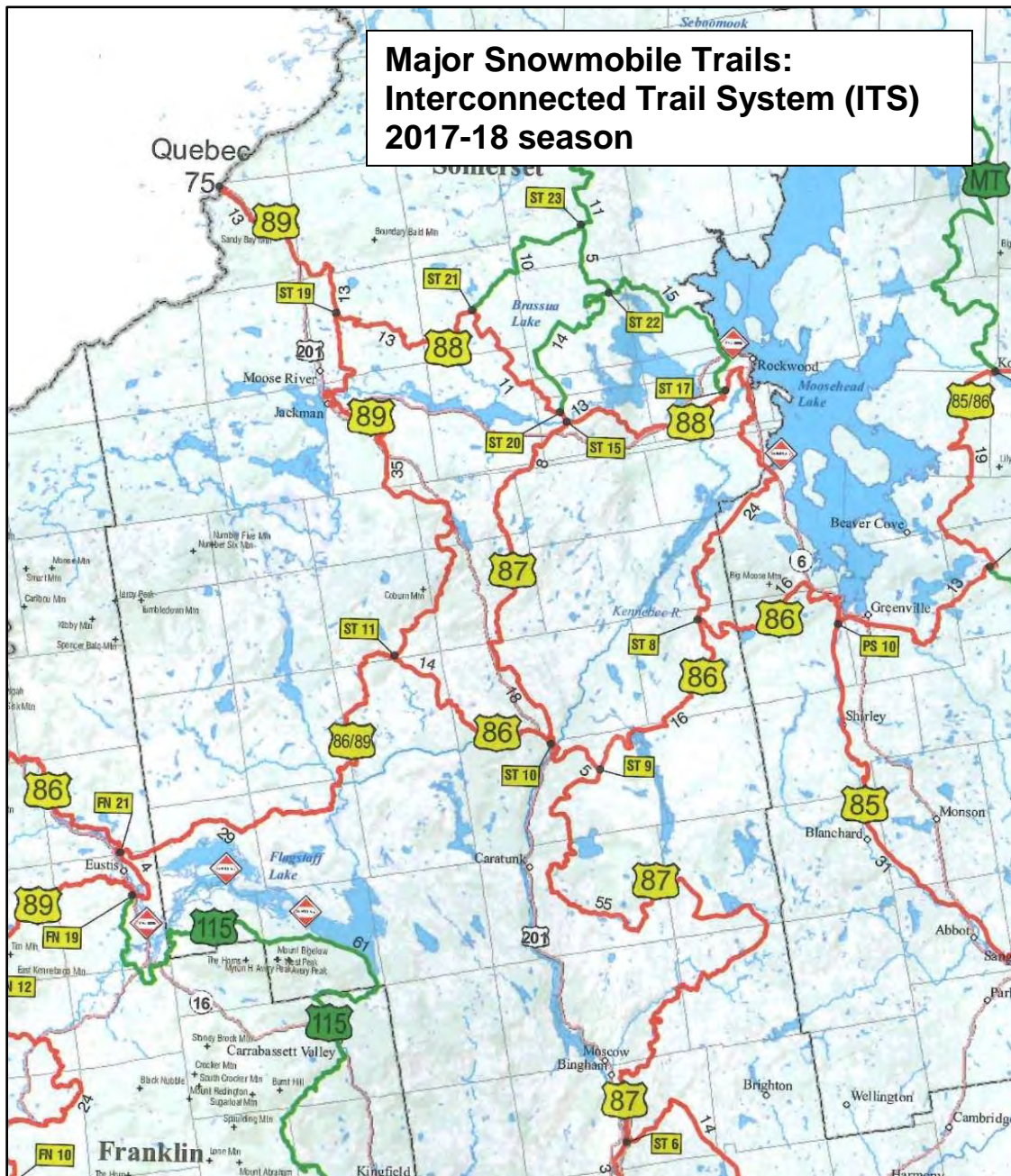
A segment of the Northern Forest Canoe Trail (NFCT), which stretches from the Adirondacks of New York to the Canadian border at Fort Kent, Maine, crosses the northern part of the Upper Kennebec Region. This section includes the Spencer Stream watershed and the Moose River through its outlet in Moosehead Lake, including a segment of the Moose River along the margin of the No. 5 Bog Ecological Reserve and Attean Pond. BPL campsites on the Moose River and Attean Pond are on the NFCT.

The Forks area is a center of whitewater rafting in the state. A number of outfitters provide professionally led trips on the Dead River and the Kennebec River gorge area upstream of the Kennebec’s confluence with the Dead River. Rafting on the Dead River takes advantage of scheduled releases from Flagstaff Lake (weekends, May through September), while more frequent hydropower releases from Indian Pond support this activity on the Kennebec. Some outfitters provide lodging, camping and other ancillary services.

Snowmobiling

In winter, snowmobiling provides access into remote areas of the region, with a variety of loop rides possible. As shown on the map below, several Interconnected Trail System (ITS) corridor trails come together at The Forks. ITS 86 and 87 link to Greenville and Bingham to the south and east, with ITS 87 continuing north through the region to the Moose River. ITS 86 continues west to a junction with ITS 89, which extends north to Jackman and on to the Canadian border, and south toward Flagstaff Lake and Eustis. ITS 88 runs east/west, connecting ITS 89 north of Jackman with Rockwood on Moosehead Lake. A number of club-maintained trails provide connections between these main routes.

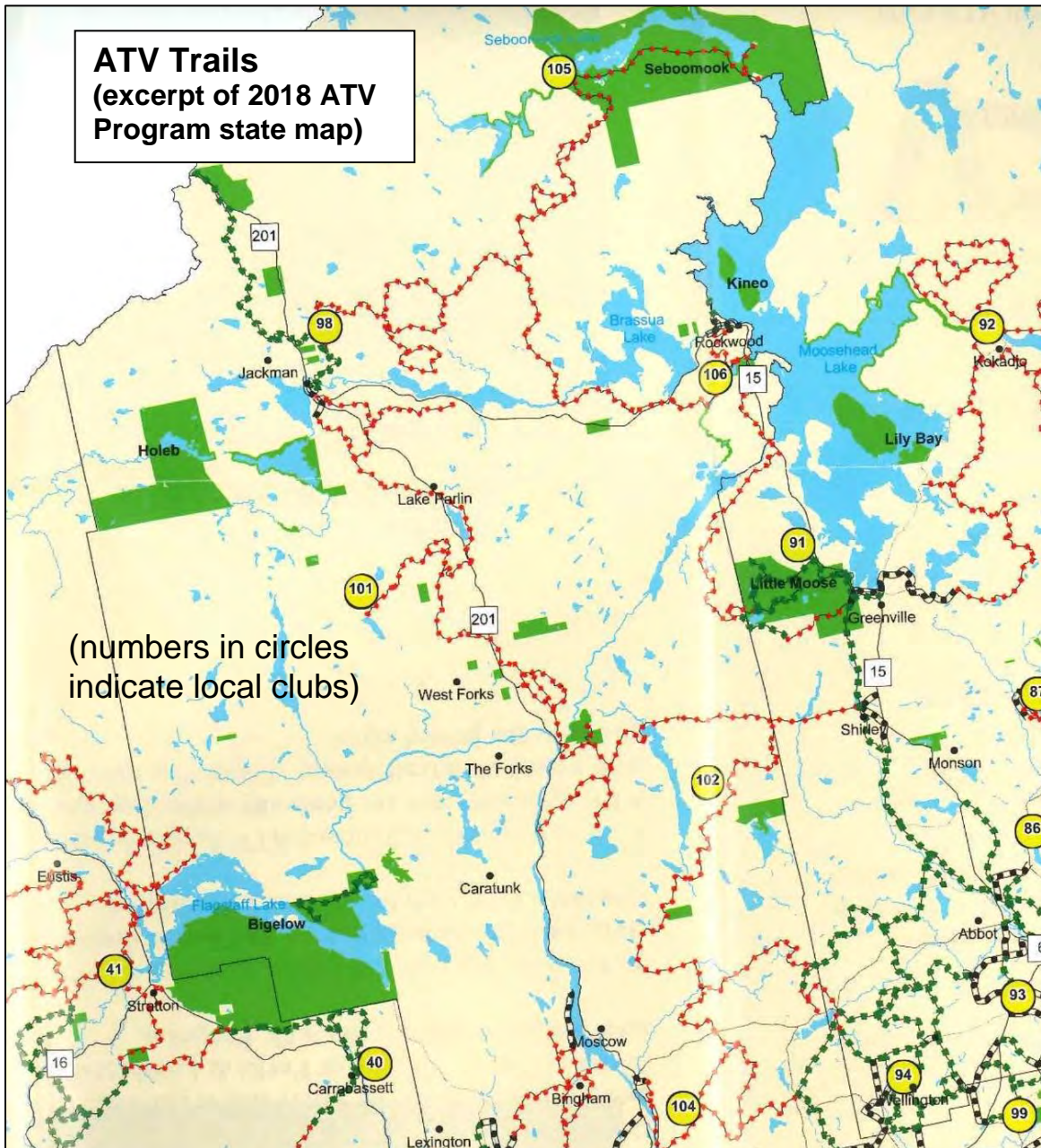
A particular highlight among snowmobile destinations in the region is the summit of Coburn Mountain. The groomed snowmobile route to the summit follows an old road to the former site of a fire tower, now occupied by an observation platform on a 20-foot steel tower.



ATV Riding

A network of club-maintained trails is also available in the Upper Kennebec region, similar to and in places co-located with the snowmobile trail network. Trails extending north and south meet at The Forks, with trails linking to Jackman and on to the Canadian border, to Greenville, and to Rockwood. The Town of Jackman has designated ATV routes on downtown roadways to

permit riders to safely pass through and to access the town's services. The map below depicts the major ATV routes in the region.



Hunting

Ample hunting opportunities exist in the Upper Kennebec region for deer, black bear, moose, ruffed grouse, snowshoe hare and coyote. In addition to the State lands addressed in this plan, much of the commercial forestland in the region is open to hunting. A number of guides offer deer, moose, bear and upland game bird hunts.

Other Recreation Opportunities in the Upper Kennebec Region

As is true throughout the state, the region provides many wildlife viewing opportunities due to the rich and varied wildlife habitats available, including extensive forests of varying ages and types, numerous ponds and wetlands, with varied topography. Moose watching is especially popular, and some guide services based in the region offer moose watching tours as well as outings focused on birding and other wildlife watching. A variety of non-game birds are commonly seen on the lakes, ponds and wetlands in the region.

The Old Canada Road National Scenic Byway/Maine Scenic Byway extends 78 miles along US Route 201 from Solon to the Canadian border. DOT and Kennebec Valley Tourism Council sponsored webpages communicate to travelers the history and highlights of the byway and well as suggestions for a number of side-trips.

The Jackman Region Chamber of Commerce and other community entities sponsor a number of special events, many centered around outdoor recreation, each year. Some examples include a cross country snowmobile race and a benefit snowmobile trail ride.

Moosehead Lake Region Concept Plan and Conservation Easement Lands

In 2009, the Maine Land Use Regulation Commission (LURC) approved Plum Creek Timber Company's Concept Plan for the Moosehead Lake Region.¹ The Concept Plan addresses conservation, ecological resources, contiguous working forests, recreation, economic development and regional planning. The Plan includes a 363,000-acre conservation easement, which covers a majority of the private forest lands to the west of Moosehead Lake, including all of several townships along the eastern side of the Upper Kennebec region. The easement is held by the Forest Society of Maine with BPL as a third-party holder with rights of enforcement. (These easement lands are depicted on Map Figure 1 as BPL Conservation Lands - Third Party Easement.) The Cold Stream Forest Unit and two of the smaller lots addressed in this plan abut the easement lands. The easement will ensure that sustainable forestry continues to be practiced on the subject lands, protect wildlife habitat, prohibit residential development, and forever guarantee the right for the public to access the lands for traditional recreational pursuits.

The Concept Plan also incorporates noteworthy recreational amenities which include, among other things, guaranteed access to 400,000 acres of land with more than 170 miles of road and trail easements that will expand and diversify outdoor opportunities for residents and visitors. The Bureau has worked closely with Weyerhaeuser, with the guidance of a Trails Advisory Committee, to identify routes for new non-motorized trails protected by trail easements. The Bureau is closing in on completion of construction on these trails with funds provided by Weyerhaeuser. Nearly 30 miles of new trails will be established through this process. The nine trail projects in eight townships will increase the diversity of non-motorized trails available to the public. The Bureau is also working to accept acreage donated by Weyerhaeuser for new trailheads, boat access, and campsites, not to exceed 50 acres in total. Of particular note to the Upper Kennebec Region are completed trails projects at Williams Mtn. (Misery Twp. – trailhead parking area pending), portage trail improvements associated with the NFCT along the Moose

¹ In February 2016, Plum Creek Company merged with Weyerhaeuser Company; the Weyerhaeuser name will be used in the remainder of this document apart from references to pre-merger ownership, plans, and actions.

River (Sandwich Academy Grant Twp. west of Brassua Lake), and pond access sites located in townships east of Cold Stream Forest (planned as part of the 50 acre donation process).

Close to four percent of the Concept Plan area will be zoned for planned development (house lots and resorts) which can occur over the next 30 years under the terms of the Plan. One of the residential development zones is on Long Pond, along Route 6, within the Upper Kennebec Region.

Other Major Conservation Lands in the Region

The TNC Leuthold Forest Preserve encompasses 16,934 acres of forestland southwest of Jackman, and just south of the Moose River, abutting the Holeb Unit on the south. Number 5 Mountain (3,156 feet) and Number 6 Mountain (3,315 feet), dominate the west end of the preserve. The preserve features a unique Fir-Heart Leaved Birch Alpine Forest and the fourth largest contiguous Spruce-Fir/Northern Hardwood Forest in Maine. The complete shorelines of seven ponds are also protected within the preserve.

The Forest Society of Maine (FSM) holds conservation easements on most of Attean Township, totaling over 19,000 acres and including important ecological areas, the north and south shorefront of Attean Pond (now in BPL ownership), numerous islands in Attean Pond, Benjamin Pond and Big Wood Pond, prominently visible mountain slopes, and productive forest land. The State of Maine holds a third-party right of enforcement on a substantial portion of the FSM easements, including the Benjamin Valley Ecological Preserve and Benjamin Valley Conservation Area.

FSM also owns about 900 acres in fee within Attean Twp., encompassing the north half of No. 5 Bog and a nearby Jack Pine stand. Both parcels abut the Bureau's No. 5 Bog Ecological Reserve, established to protect these special resources on the BPL fee land in the adjacent townships.

Maine Residents' Participation in Outdoor Recreation Activities and Visitation to Public Reserved Lands and State Parks

Recent survey data collected for the Maine State Comprehensive Outdoor Recreation Plan (SCORP) and somewhat older data collected for the National Survey on Recreation and the Environment (NSRE) shed light on the outdoor recreation activity participation and preferences of Mainers (particularly as regards trail activities) and their use of the state's public lands. The 2002-2009 NSRE data indicates the day hiking is second only to walking in participation among Maine residents. The 2015 SCORP survey data also support the popularity of hiking among Mainers with nearly 70 percent of Maine resident recreationist participating and nearly two-third among residents overall. Also of interest are the nearly 48 percent of recreationists who snowshoe, 34 percent who ride an ATV and 32 percent who snowmobile. The SCORP data indicate that nearly 80 percent of Maine resident recreationists visited Maine State Parks within the past two years, and nearly half had visited the Public Reserved Lands. Regarding opinions on the most needed non-motorized trail resources contained in the SCORP survey, the Maine general population, recreationists, and non-resident recreationists who visited Maine were in agreement that easy and moderate day-hike trails in natural settings and educational/natural history trails were the most needed. All three of these types of trails were considered by a majority of Maine residents to be "most needed."

Overall, these data indicate the types of activities offered on the public lands in the Moosehead Region remain popular with Mainers and the Public Reserved Lands and State Parks are among the most commonly used venues to enjoy those activities. Given these facts, the Bureau can expect continue high interest and demand for outdoor recreation access and amenities on the properties addressed by the Plan.

Summary of Planning Implications

1. The Upper Kennebec Region Public Reserved Lands lie in an area highly valued for its natural resources. The culture and economy of the area are historically linked to the forest resources and outdoor recreation.
2. The recreation opportunities on the Public Reserved Lands are part of a much larger landscape-level system connecting the numerous lakes and ponds with surrounding mountain ranges and historic travel routes – including the nationally significant Appalachian Trail and Old Canada Road Scenic Byway; the Northern Forest Canoe Trail; an interstate system of snowmobile trails, and a regional network of ATV trails.
3. New public and private initiatives to further develop the recreation-based economy, and to conserve the special natural areas in the Region are strong. The tens of thousands of acres of conservation easement lands in the region, primarily on Weyerhaeuser’s commercial forestland surrounding Moosehead Lake and the major portion of Attean Township, are central to both objectives.
4. The overriding attraction of the area for recreationists is the region’s many lakes, ponds and streams – particularly those associated with the Moose River Bow Trip -- and the mix of undeveloped backcountry and commercial forest land open to traditional recreation uses. Careful stewardship is needed to protect these values while making the public lands available to enjoy.
5. There are many opportunities for development of public-private partnerships to further both conservation, and development and stewardship of recreational opportunities on the Bureau managed Public Reserved Lands - including partnerships or cooperative agreements with local towns; the Jackman-Moose River and Forks Area Chambers of Commerce; Maine Appalachian Trail Club (MATC); Brookfield Renewable, LLC; local snowmobile and ATV clubs; and others. These collaborative relationships are essential to good stewardship of the public lands.

IV. Resources and Management Issues for Lands in the Upper Kennebec Region

General Management Focus

The Bureau’s overall management focus for the Upper Kennebec Region is built upon the following management principles and objectives:

- 1) practice sound multiple use planning;
- 2) utilize exemplary, state of the art resource management practices that protect resources from over-use, avoid conflicting use, control exotic species, and continually add value to the resource base and visitor’s “back woods” experiences;
- 3) offer new recreation and educational opportunities where appropriate and compatible with the emphasis on more remote, dispersed, less developed activities, with or without vehicle access;
- 4) honor traditional uses wherever appropriate, and avoid restrictions on free and reasonable public access;
- 5) remain adaptable to changing environmental and cultural conditions through far-sighted planning, and cooperation and connectivity with adjoining landowners, and
- 6) conduct timber harvesting where appropriate in a manner that maintains or improves forest health and diversity, protects special natural features and visitor safety, enhances wildlife habitat, preserves the visual integrity of the landscape and produces a sustainable stream of high quality (over the long term) timber products; all within the Bureau’s legislative and regulatory mandates and budgetary and staffing constraints.

Over 91 percent of the Public Reserved Lands addressed by this Plan (excepting the Holeb Unit’s No. 5 Bog Ecological Reserve and Attean Pond north and south shore lands) are forested. Of those forested lands over 90 percent are regulated acres — those areas which the Bureau manages to yield a sustained flow of forest products and to improve the quality of the forest resource. The table below summarizes the forested and regulated acres for the larger management Units in the Upper Kennebec Region and for the smaller lots combined into groups.

Summary of Forested and Regulated Acres in the Upper Kennebec Region							
Management Unit(s)	Total Acres	Forest Acres	Regulated Acres				Unreg. Acres
			Total	HW	MW	SW	
Holeb ¹	17,851	16,265	14,396	4,666	5,668	4,062	1,869
Cold Stream Forest	8,159	7,548	5,920	unk	unk	unk	1,630
Bald Mountain	1,793	1,477	1,343	496	418	429	134
Northern Smaller Lots ²	5,638	5,051	4,826	1,878	1,924	1,024	225
Southern Smaller Lots ³	5,362	5,143	4,605	2,456	1,488	661	538
Totals	38,803	35,484	31,090	9,496	9,498	6,176	4,396
Percent		91.5	87.6	37.7*	37.7*	24.5*	12.4

1. Excludes the Number 5 Bog ecological reserve (all acres are unregulated) and all lands on Attean Pond.

2. Includes Sandy Bay, Dennistown, Moose River and Bradstreet lots and the East Attean portion of Holeb Unit.

3. Includes Coburn Mtn., Johnson Mtn., Moxie Gore, West Forks, The Forks, Caratunk, Pleasant Ridge and Highland Pt. lots

* percent of regulated acres, excluding Cold Stream Forest, for which regulated acres by type have not been determined.

Key: HW = hardwood, MW = mixedwood, SW = softwood

Timber harvests on the Public Reserved Lands in the region will supply forest products to local mills and be a source of employment for loggers, truckers, road construction, and others in related businesses. Timber harvests will also be an important source of timber revenue to support the Bureau's management program. The Bureau manages timber resources where allocated to provide a diverse forested environment and generate high quality-high value products to support Bureau operations and the local economy. Exemplary management that contributes to public values, including recreation and wildlife habitat, is the standard.

Additional details on forest stocking and sustainable harvest levels in the overall Plan area are provided in Appendix D.

Holeb Unit

The following provides background information on the Holeb property, including the general character of the land base; geologic and ecological resources and natural communities; wildlife resources; historic and cultural resources; recreation and visual resources; and timber resources. This is followed by a summary of the key management issues and opportunities that the Plan will seek to address through the Vision, resource allocations and management recommendations for the unit, which conclude the section.

Character of the Land Base

The Holeb Unit is in Holeb, Attean, T5 R7 BKP WKR, and Bradstreet Townships in Somerset County, west of Jackman (see Map Figure 1). The Unit is approximately 23,600 acres in size.

The majority of the Unit's acreage is contained in the western section, a large contiguous block of forestland comprising a majority of Holeb Twp. and additional acreage in the adjoining west side of Attean Twp. The terrain in this part of the Unit is generally hilly, outside of wetland areas, with hills rising 300-400 feet above the surrounding terrain. A higher prominence along the south boundary of the unit rises to about 2,300 feet, about 1,000 feet higher than the Moose River flowing to the north. Several ponds are scattered across the Holeb Twp. portion of the Unit. Although the land is predominantly forested, there are extensive wetlands south and west of Holeb Pond surrounding Holeb Stream and Moose River, and smaller wetlands scattered elsewhere. These lands were managed as commercial timberland for a number of decades before state ownership began in the 1970s and 80s. Most of the forests have been harvested by the Bureau during the past 30 years.

The Unit also includes the original public lot on the east shore of Attean Pond and a smaller adjoining original public lot in Bradstreet Twp., totaling about 1,160 acres. The pond frontage and much of the Attean lot is rocky, interspersed with brooks and wetland areas.

In 1994, the Bureau acquired most of the lands on the north and south shores of Attean Pond, totaling over 700 acres, along with a strip along both sides of the Moose River in Attean Twp., comprising about 100 acres. These are mainly narrow buffer strips, 300 feet wide on the south side of Attean Pond, 250 feet along the Moose River, and up to about 1/3 of a mile wide on the north side of Attean Pond. A Canadian Pacific Railroad track traverses the north shore buffer strip within a 100-foot wide right of way owned by the railroad, and continues across the Holeb Twp. portion of the Unit, passing close to the Holeb Pond shoreline.

The last major addition to the Unit was the 4,511-acre No. 5 Bog acquisition in 2009, which also included 85 acres on the Moose River near Holeb Falls in T5 R7. Much of the No. 5 Bog property is classified as wetland; about one-third is forest.

Adjacent landowners are Carrier Timberlands to the north and west, the Passamaquoddy Tribe to the west, The Nature Conservancy to the south, and Weyerhaeuser to the east and southeast. A few small private landowners are abutters in the town of Jackman, to the east.

Natural Resources

Natural Communities

The Holeb Unit supports mature forest characteristic of the region with hardwoods dominating on gentle slopes and softwoods occupying lowland forest and thin-soiled slopes and ridges. Forest stand types include a balanced mix of softwoods, mixedwood, and tolerant hardwoods, with smaller amounts of intolerant hardwoods, cedar, and aspen. Multiple uncommon and notable upland and wetland habitats have been documented in the Unit, as described below.

Holeb Stream flows south out of Holeb Pond (although flow may be reversed at time of high flow), joining the Moose River after a few miles. The Moose River then follows a meandering loop southward and eastward across the Holeb Twp. portion of the unit, winds south of the No. 5 Bog complex, before turning north and flowing into Attean Pond. A number of small streams flow into Holeb Pond and the Moose River. The Moose River is classified by the Department of Environmental Protection (DEP) as a “Class A” river based on the high quality of the water and associated natural habitat, with regional natural and recreational resource significance.

Uncommon and Exemplary Natural Communities and Rare Plant Species

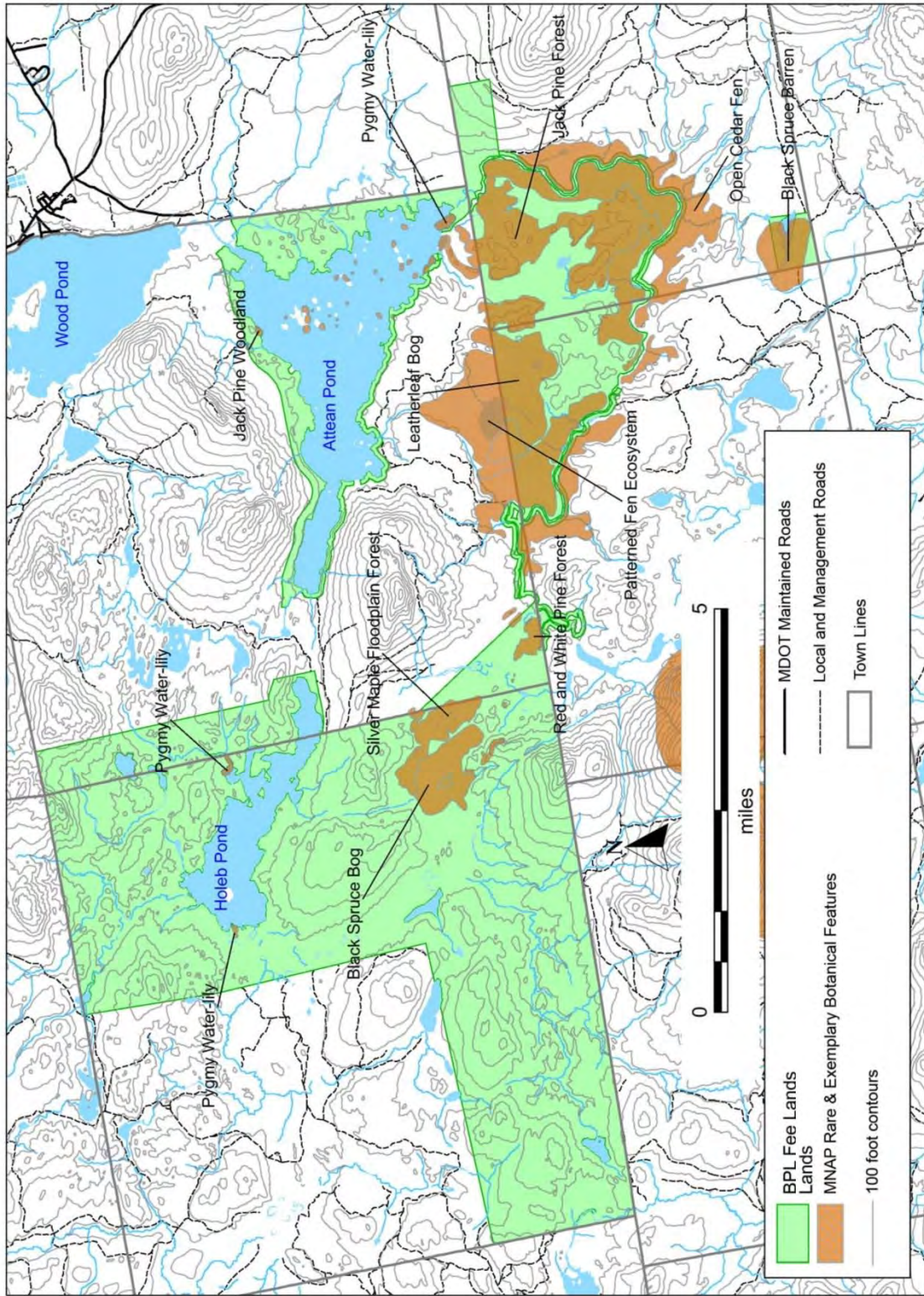
Maine Natural Areas Program (MNAP) completed ecological surveys on the Holeb Unit between 2010 and 2016, which identified nearly a dozen rare or notable natural communities and three rare plant species. (A full Natural Resource Inventory Report addressing the BPL lands in the Upper Kennebec Region, excerpted here, is available from MNAP.)

No. 5 Bog is one of the largest, most diverse, and least disturbed peatlands in the Eastern U.S., with exemplary examples of several wetland types including a patterned fen ecosystem and open cedar fen community. It is a designated National Natural Landmark and was designated by BPL as an Ecological Reserve to protect these exemplary natural communities within the bog and an adjacent Jack Pine stand (the largest such inland stand in the state).

Several small Red Pine Woodlands (an uncommon natural community type) have been identified on knolls within the western section of the Unit. Along the Moose River and above Holeb falls, several important wetland communities were identified. These include Hardwood River Terrace Forest, an uncommon wetland type, and an exemplary Spruce-Larch Wooded Bog. Two rare plants associated with cedar swamps were found within the unit: swamp-fly honeysuckle (*Lonicera oblongifolia*) and sparse-flowered sedge (*Carex tenuiflora*).

Map Figure 2 depicts exemplary natural communities identified by MNAP. (Fact sheets on Maine’s natural community types are available at <http://www.maine.gov/dacf/mnap/features/commsheets.htm>.)

Holeb Unit - MNAP "Rare and Exemplary" Features



MAP FIGURE 2

Wildlife and Fisheries Resources

Most of the Holeb Unit is within the Moose River Focus Area of the Maine Wildlife Action Plan, one of 140 such areas of statewide ecological significance identified by state biologists. These areas support rare plants, animals, and natural communities; high quality common natural communities; significant wildlife habitats; and their intersections with large blocks of undeveloped habitat.

No species on the federal or state threatened or endangered lists are known to be present on the Holeb Unit. However, several species of rare or protected wildlife have been recorded. Bald eagle (delisted under the Endangered Species Act, but still federally protected under several statutes) nest near the shore of both Holeb and Attean Pond. Three species designated Special Concern in Maine have been found at Holeb: wood turtle, whose primary habitat is freshwater rivers and streams, have been recorded from several locations along Moose River; a great blue heron nesting colony has been recorded near Barrett Pond (although the colony was not active when surveyed in 2011); lastly, the Quebec emerald, a rare dragonfly whose primary habitat is bogs and fens, occurs at No. 5 Bog. Northern long-eared bat, federally listed as threatened, may be present, based on Maine Wildlife Action Plan habitat maps for the species.

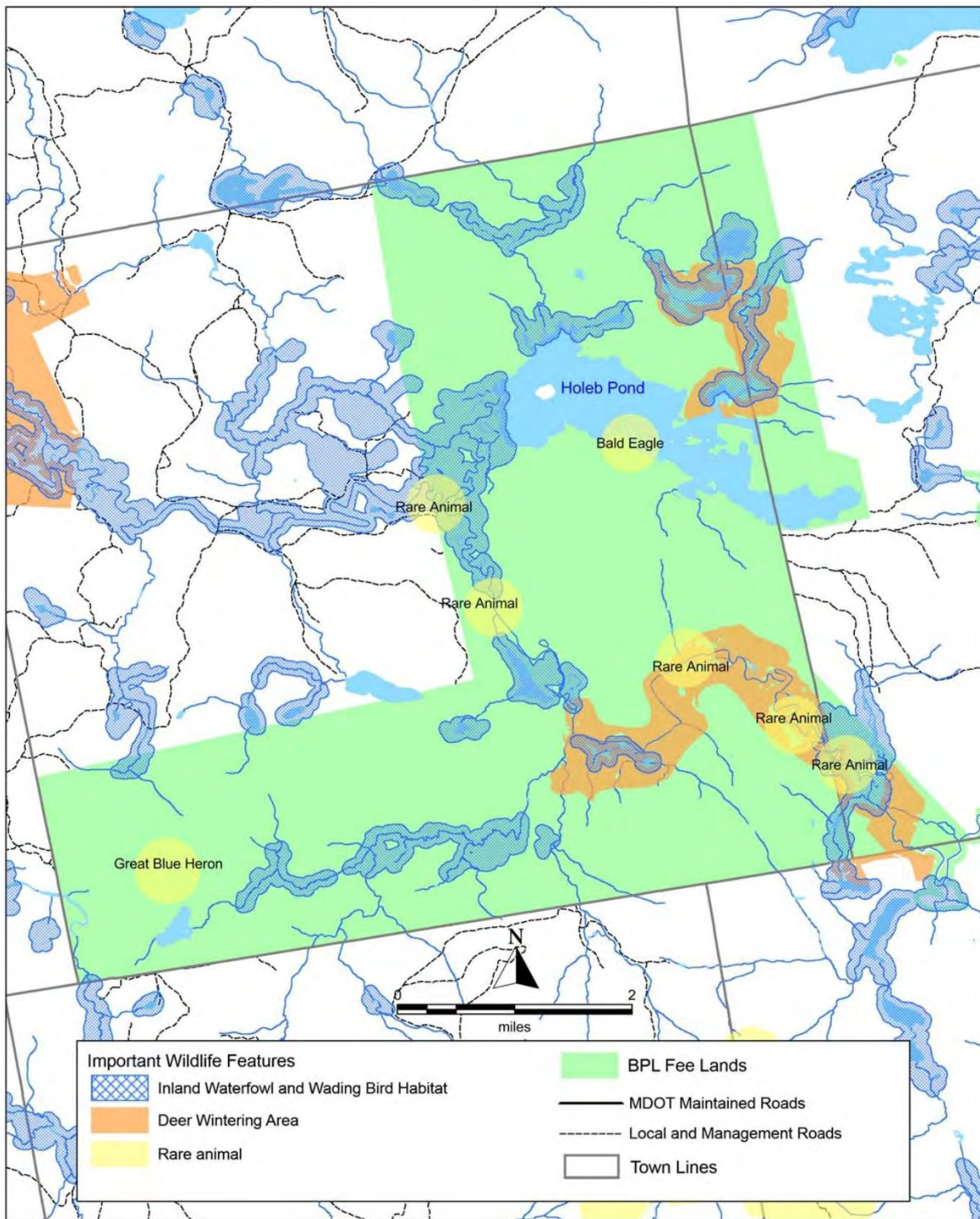
The bog as well as other wetlands on the Unit are considered important inland waterfowl and wading bird habitat. There are several mapped deer wintering areas located on the Unit, in the Loon Pond area, along the Moose River, as well as on the Attean east shore and Bradstreet Twp. parcels. Portions of the Barrett Brook drainage, south and west of the Moose River, have had considerable historic use as deer wintering areas, though recent surveys have found only modest use and that all near where the brook joins the river. Map Figures 3 and 4 depict the Important Wildlife Features of the west and east sections of the Holeb Unit, respectively.

The lower-elevation softwood forest (mainly spruce and pine) may be utilized by a number of coniferous forest specialist bird species such as black-throated green warbler. The mixedwood forests, most on lower ground, and hardwood forests, generally on somewhat higher ground, are home to a wide variety of passerine bird species (e.g., black-capped chickadee, black-throated blue warbler, white-throated sparrow, cedar waxwing), and other common wildlife such as porcupine, snowshoe hare, moose, white-tailed deer, black bear, ruffed grouse, and red squirrel.

In addition to Attean and Holeb Ponds, the Unit includes several smaller ponds up to 37 acres in area. LURC (now replaced by LUPC), in the 1987 Wildland Lake Assessment, gave Attean Pond an “outstanding” fisheries rating and Holeb and two smaller ponds were rated “significant.” In addition, Attean and Holeb Ponds were classified as having “statewide significance” in recognition of the fishery and other natural values present. The table below summarizes the available fisheries-related and LURC assessment data on the ponds within the unit.

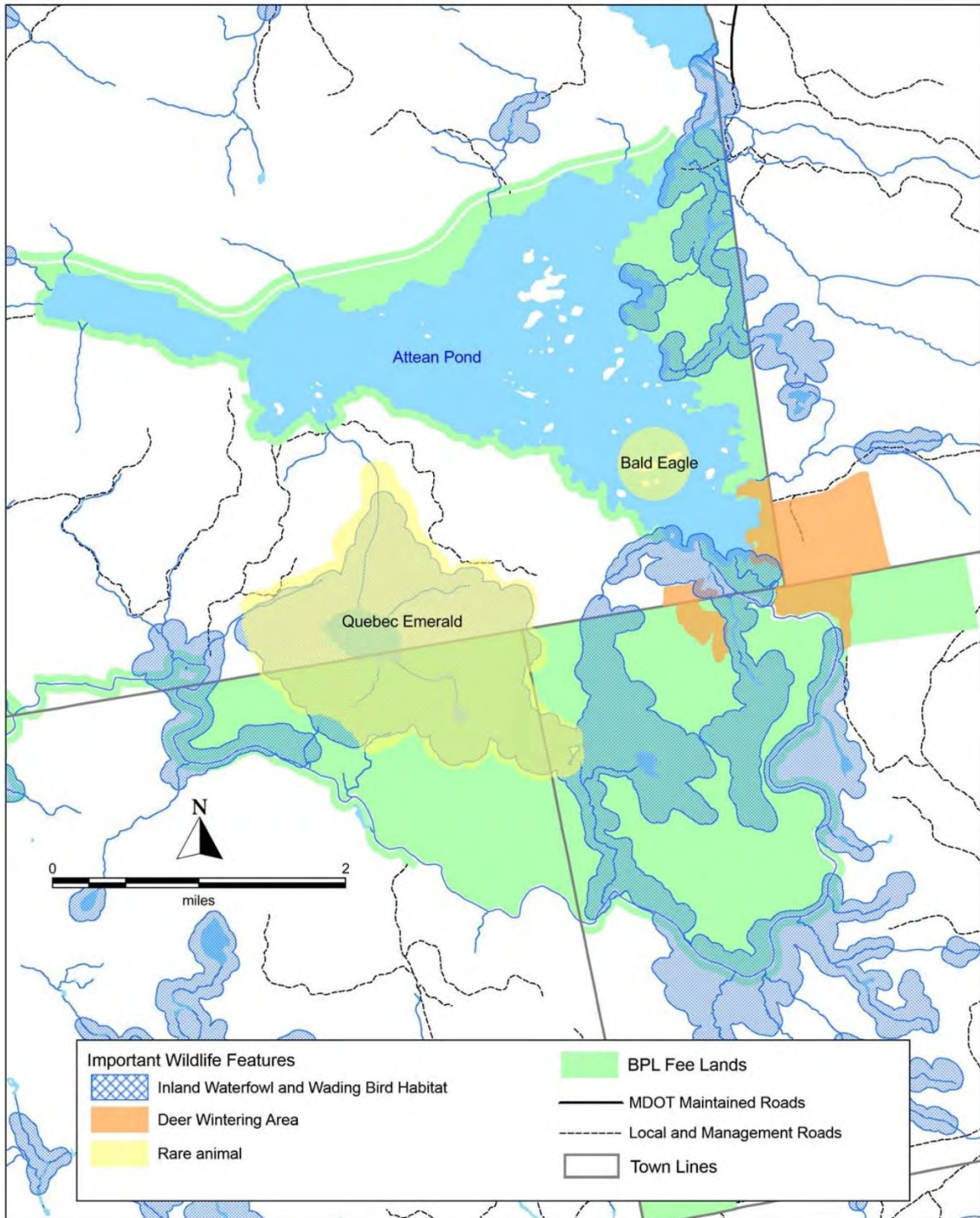
Both Holeb and Attean Ponds are noted for their cold-water fisheries as well as their scenic character and relatively undeveloped shorelines. Brook trout are present in most of the ponds on the unit as well as in the Moose River and its tributaries and possibly other streams. Attean, Cedar and Barrett Ponds and Long Bog are classified by MDIF&W as State Heritage Fish Waters. The principal fisheries at both Attean and Holeb Ponds also include landlocked salmon, and at Holeb, splake; Yellow perch are present in both ponds. Angling on

Holeb Unit - Western Section Important Wildlife Features



MAP FIGURE 3.

Holeb Unit - Eastern Section Important Wildlife Features



MAP FIGURE 4.

the Unit is regulated by MDIF&W; special rules are in affect for each of the ponds. Loon Pond, Cedar Pond and Long Bog are zoned as “remote” by LUPC; public vehicle access is permitted no closer than a half mile to a Remote Pond by LUPC regulations.

Physical and Fisheries Data on Lakes and Ponds within the Holeb Unit						
Water Body	Size (acres)	Max. Depth (feet)	Principal Fisheries (see key)	Stocked? (Y/N)	LURC Fisheries Rating (see key)	LURC Resource Class (see key)
Attean Pond	2,745	55	BT, LLS	Y	O	1A
Holeb Pond	1,055	52	BT, LLS, SP	Y	S	1A
Loon Pond	37	10	BT	Y	S+	2
Barrett Pond	34	6	BT*	N	S	2
Long Bog	19	No data	BT	N	NA	3
Cedar Pond	4	No data	BT	N	NA	NA

Sources: Maine Lakes: Geographic & Morphometric Information (MDEP/MDIFW, 2010), Maine Wildlands Lake Assessment (LURC, 1987); Lake Survey Maps (MDIF&W, various dates).

Key to Principal Fisheries

BT = brook trout (* = State Heritage Fish Water), LLS = landlocked salmon, SP = splake.

Key to LURC Maine Wildland Lakes Assessment resource ratings

Fisheries: O = Outstanding, S = Significant, NA = No rating given.

Resource Class: 1A = statewide significance with 2+ outstanding values (may include fisheries), 1B = statewide significance with 1 outstanding value (may be fisheries), 2 = regional significance with 1+ significant values (may include fisheries), 3 = local significance or unknown significance with no significant or outstanding resource value, or limited information, NA = no rating given/missing data.

Detailed mapping of rare, threatened or endangered wildlife and rare or exemplary plants and natural communities on the Holeb Unit and the surrounding region is available from the Beginning with Habitat program (on online map viewer is available at <http://www.beginningwithhabitat.org/>)

Historic and Cultural Resources

The Moose River and the large lakes in the plan area are part of historic Native American canoe routes, connecting other parts of the northeast to Moosehead Lake and Mount Kineo. Native Americans camped on the several sand beaches on Holeb Pond and Attean Lake while traveling through the area.

Before the 1989 plan was prepared, a small cemetery with headstones dating from the mid-1800s was located just to the east of the intersection of Holeb Stream and the Moose River. The site has been protected since that time. Due to its location, high on the riverbank, it is not easily seen and so is likely unnoticed by most paddlers. The site is not marked or maintained by the Bureau.

Access

Vehicle access into the Holeb Twp. portion of the Unit is available via Holeb Road, which arcs westward from US 201 across Dennistown and Forsyth Townships. Holeb Pond Road branches off from Holeb Road at the northwest corner of the Unit, and terminates at Holeb Pond Landing (AKA, Turner Beach) at the west end of the pond (see Map Figure 5). Holeb Road is a private road maintained for timber harvesting needs and may require a high clearance or 4WD vehicle to use at times. Similarly, Holeb Pond Road is not maintained by the Bureau to public use road

standards and may not be suitable for use by standard vehicles. Several miles of management roads branching off that road remain open to vehicles. Camp owners on privately owned Birch Island within Holeb Pond use Holeb Landing to get to their camps.

Vehicle access to Attean Pond is via Attean Landing Road from US 201, which terminates at Attean Landing, an unimproved boat access site. It is a town-maintained public road to a point about 0.6 miles from the entrance of the Unit at the Jackman/Attean Twp. line and 0.9 miles from the landing. There is a gate and a parking area at the end of the town road. The gate is typically closed only during the spring mud season. The Bureau does not appear to hold a right of way for public access beyond the gate, with the exception of the 900 foot section immediately east of the town line, on which the state retained a right of way when the underlying parcel was sold in 1990. However, BPL has shared maintenance costs for the road over the years with the abutter.

Attean Landing is the site of intensive activity in the summer months. The limited parking space is shared by the public (including Bow Trip paddlers, other campers and day users) and Attean Lodge, which ferries clients to their facility on Attean's Birch Island from a seasonal dock they maintain at the landing. Competition for parking space is high during peak use periods, and is increased during periodic high water events (following heavy rains) that flood the lower part of the landing. Several years ago, the Bureau developed 8-10 additional roadside parking spaces a few hundred feet up the road from the landing. Even so, parked vehicles and trailers sometime overflow onto undesignated areas further from the landing and on the abutting properties.

Two private roads, Spencer Road and Spencer Rips Road, provide access to the Moose River and south margin of No. 5 Bog Ecological Reserve from US 201. Spencer Road continues west from US 201, and connects to other private roads that approach the boundary of the Unit from the south. Spencer Road is a major haul route and is generally maintained to a high standard. Spencer Rips Road primarily crosses TNC property and is maintained by TNC and other abutting landowners. The State has easements on these roads for management and public access purposes and the Bureau contributes funds and/or materials for the maintenance of Spencer Rips Road.

A number of closed management roads cross the Holeb Twp. portion of the unit, north and south of Holeb Pond; a few management roads are present on the east side of Attean Pond, but are not accessible to the general public due to gated private roads to the east.

Recreation and Visual Resources

Canoeing and fishing are the top recreational attractions to the Holeb Unit, with the focus of recreation centered on the well-known Moose River Bow Trip, nearly all of which is contained within the Unit. It is reputed to be one of the most popular multiple-day canoe trips in Maine. The 34-mile trip most commonly starts at the Attean Landing. The open water portion of the trip involves paddling the length of Attean Pond, using a 1-mile portage trail to reach Holeb Pond, and paddling the length of Holeb Pond. Boaters exit Holeb Pond at the west end via Holeb Stream, which soon flows into Moose River. They then follow the Moose River on its winding course southward and eastward, eventually returning to Attean Pond, and following the east shore back to Attean Landing. The portage trail is primarily on an easement held by FSM and is

maintained by BPL (the east and west ends are on BPL fee lands also covered by FSM easements). Much of the trail's extensive bog bridging was replaced about 5 years ago. Paddlers have access to more than 20 campsites along the pond shorelines and the Moose River. A number of the pond campsites are within easy reach of paddlers who are not on the Bow Trip but enjoy boat-in camping in a primarily undeveloped and scenic setting. All are primitive campsites with picnic tables, fire rings, and privies.

In 2016, BPL contracted with NFCT to assist BPL with maintenance of the campsites, with the expectation that frequency of maintenance will increase from past years. During the 2016 and 2017 seasons, along with general maintenance, NFCT crews completed extensive rehabilitation of the campsites, including repairing and replacing tables and privies, using materials provided by BPL. In addition, access to campsites was improved with installation of log ladders and stone steps, portage trails were improved with new bog bridging, stone steps, and clearing of vegetation, and new signage was installed at the portages and numerous campsites. NFCT provided a written report to BPL on the Bow Trip accomplishments (NFCT, 2017).



Bog bridging on the Holeb portage trail.

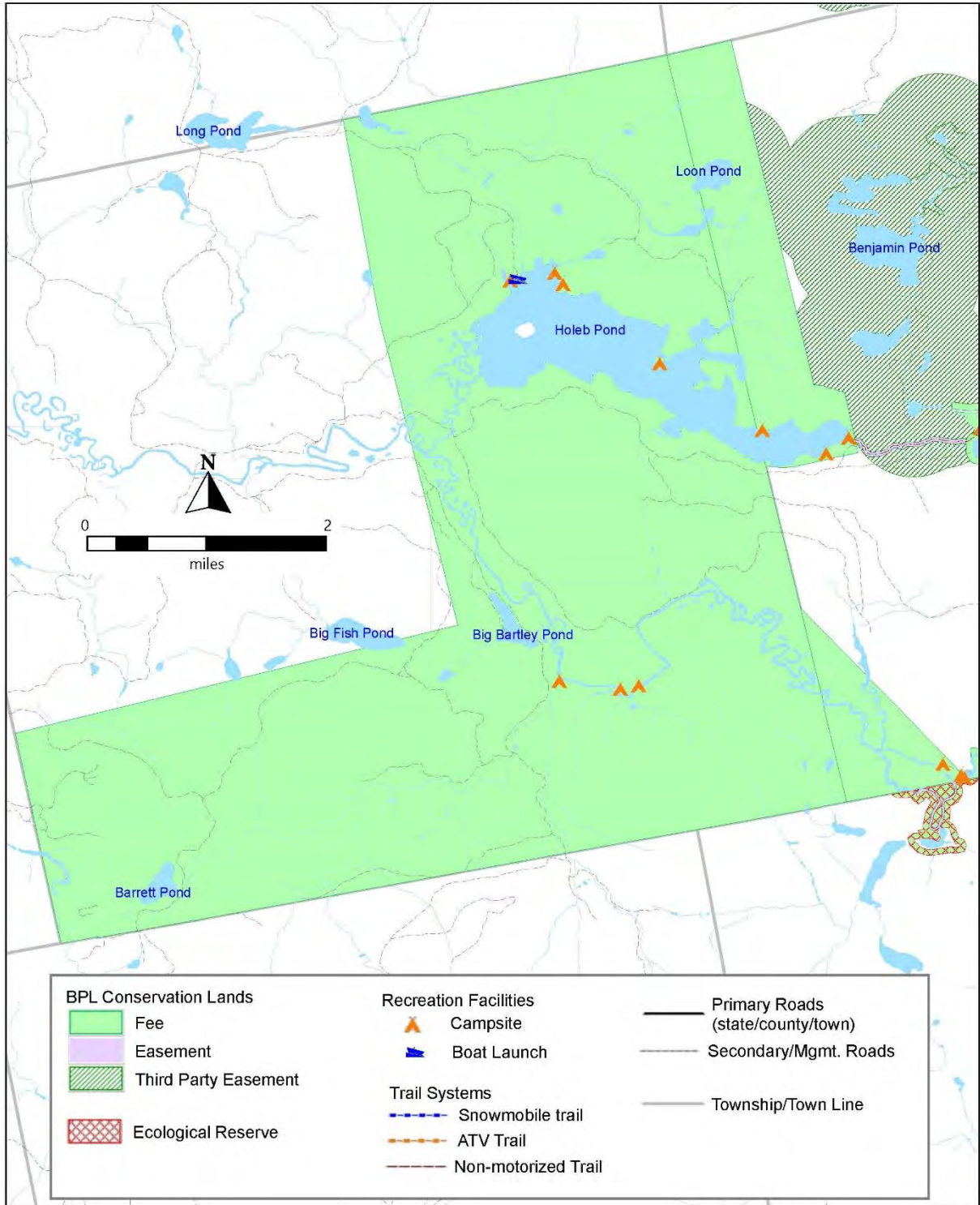


View across Holeb Pond from end of portage.

The only hiking trail on the Unit begins near a campsite on the north shore of Attean Pond and extends north three miles to the top of Sally Mountain, on adjacent private land with a conservation easement held by FSM. The portage and hiking trails, campsites and boat launch sites are depicted on Map Figures 5 and 6. As described above, the Unit's several ponds support native brook trout fisheries, and lake trout are present in one pond. Most of the small ponds have walk-in access only.

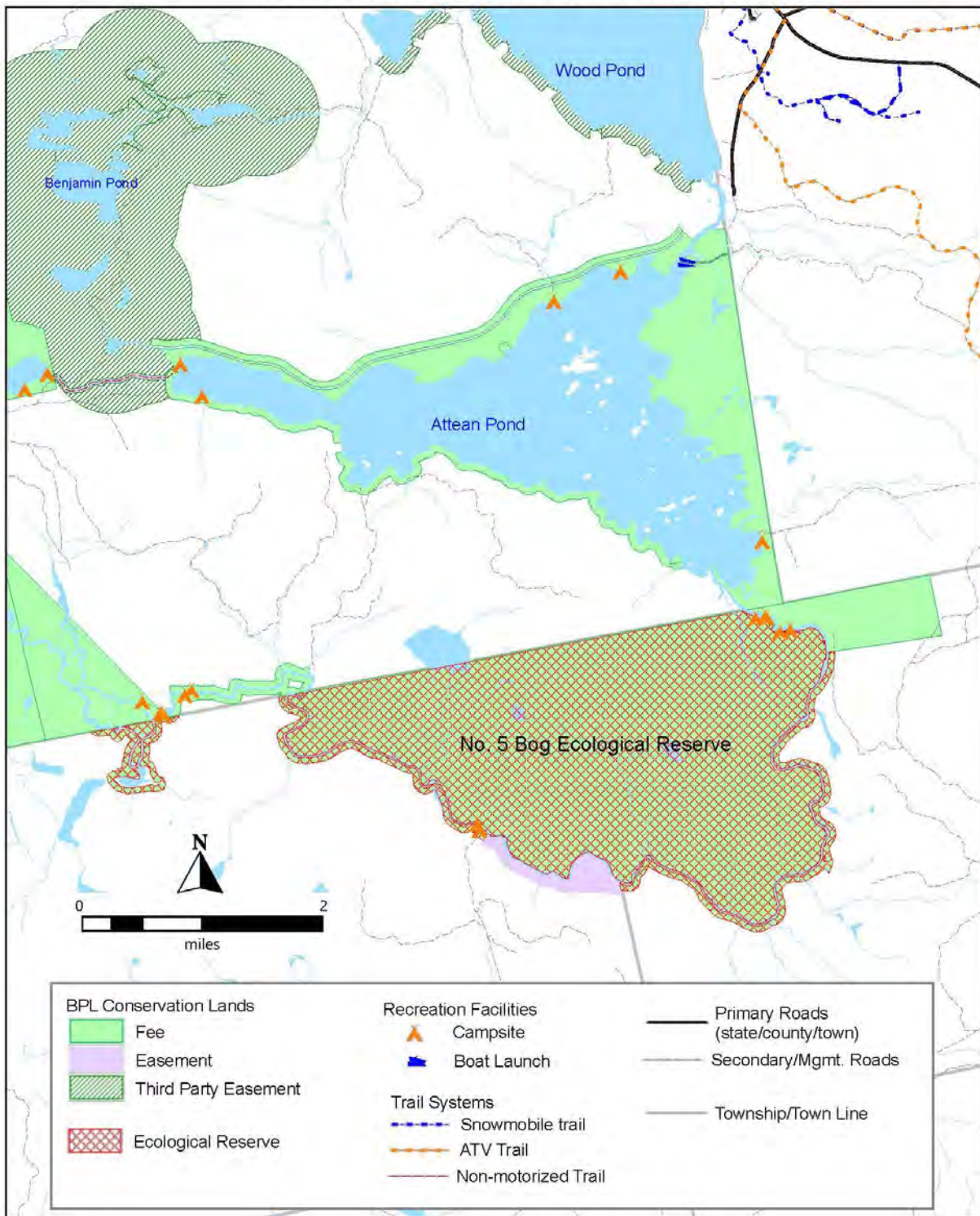
The good vehicular access to the Holeb Twp. portion of the Unit makes the area amenable to multiple forms of dispersed recreation such as hunting, sightseeing and wildlife viewing. Pedestrian access provided by logging roads and favorable habitat conditions resulting from timber harvesting practices have made the property popular for hunting game birds, deer, bear

Holeb Unit West - Holeb Pond and Moose River Roads and Recreation Facilities



MAP FIGURE 5.

Holeb Unit East - Attean Pond and No. 5 Bog Roads and Recreation Facilities



MAP FIGURE 6.

and moose. The Bureau has designated six bear baiting sites on the unit, which are leased to individual hunters and commercial guides.

There are no designated snowmobile or ATV trails on the Holeb Unit. Camp owners and others may occasionally access the area via snowmobile or ATV on closed and unplowed management roads and by riding snowmobiles across the larger ponds. Management roads open to vehicle traffic are open to ATV use as “shared use” roads.²

The primary visual resources on the Unit are the many miles of shorelands surrounding Attean and Holeb Ponds and the riparian zones along the Moose River. The primarily undisturbed forest on those lands is a prominent part of the scenic landscape for boater and anglers.

Timber Resources - West Section

The regulated acres on the western part of the Holeb Unit total about 14,236 acres, about 85 percent of the total area. The wetland areas associated with Holeb Stream and Moose River make up most of the unregulated acreage. The most common soils on regulated acres are moderately well to well drained loams, with only a moderate amount of wetter soil area, and generally deep except on steep slopes or the ledge portions on Holeb and Attean. Growth potential is good for quality timber products on most acres, and soils are limiting for roadwork only for summer operations in the wetter portions.

These lands do not have the high elevations of nearby areas, but include frequent abrupt 10 to 40-foot ledge drops that make access and management challenging. These ledges appear most abundant on the northerly Attean Twp. lot, especially its south third. The south Attean Twp. lot holds considerable rough and bouldery terrain, and any management is complicated by the Moose River, which isolates about 300 of this lot’s 500 acres from the remainder of State ownership.

Harvest History

The previous owner at Holeb had conducted extensive harvests up through the mid-1960s, probably much by diameter limits. The most recent harvests on the northerly Attean parcel probably occurred about the same time, though the south half of this lot seems not to have been treated then. The southerly Attean parcel may not have been harvested since extensive fires regenerated most acres in the early twentieth century.

Bureau timber harvesting at Holeb began early in 1983. Harvest volume through 2014 (the most recent harvest) was about 125,000 cords. Though the tract stocking is 55 percent softwoods, the harvest has been 40 percent softwoods and 60 percent hardwoods (with 90 percent of all hardwood cords being pulpwood/biomass), as the silvicultural objectives were often improvement harvests that favored retention of high quality/value trees, especially spruce and pine.

² Shared use is defined in the IRP as two or more activities using the same trail at the same time. Many gravel roads on the BPL lands will be open to passenger vehicles, ATVs, horses, and/or bicycles. Such roads are to be signed “shared use.”

Harvests occurred mainly in three separate operations, with 7,200 cords produced north of Holeb Pond in the 1980s (and another 5,000 cords in second BPL entries 2012-2013), 28,000 cords from the State-owned portion of Attean Mountain south of Holeb Pond, mostly in 1992-1996 but with 1,700 cords in 1999-2000 as the second series of aspen patch cuts were made. Beginning in 2007, harvests in the Barrett Brook drainage (south and west of the Moose River) have yielded over 78,000 cords while retaining high volumes in the most extensive mature softwood area in the Plan area. About three-fourths of the total volume had been harvested from the Barrett Brook area at the time of the 2011 inventory, and stocking remains high, at over 30 cords per acre.

Stand Type Characteristics (regulated acres only) and Current Stocking

Softwood types cover 6,100 acres, 43 percent of the regulated forest, considerably lower than before the harvesting of mature fir. Most are found on moderately well to well drained sites, with some on excessively drained thin/rocky soils and some on forested wetland soils. These acres are very well stocked, with over 30 cords per acre. Spruce (nearly all red spruce) makes up 54 percent of the volume, pines (about $\frac{3}{4}$ white, $\frac{1}{4}$ red) are next with 20 percent, then red maple (8 percent), cedar (6 percent) and fir (3 percent). Lesser amounts of paper and yellow birch, aspens, tamarack, and sugar maple also are found. The spruce is generally excellent quality as is the younger fir, but there is still some older fir that is fairly defective, along with some of the older white spruce. Pines are also of very good quality, with much of the red pine found in the extreme southeast corner of Holeb and on the Attean lots. Quality is limited in cedar and in hardwoods within this type.

Mixedwood types are found on about 4,900 acres, 34 percent of the regulated area. They are found on all sites but the wettest and driest and quality is fair to good. Though not stocked so heavily as the softwood acres, mixedwood type holds about 24 cords per acre. Red maple is the leading species at 30 percent of type volume followed by spruce with 22 percent of type volume, yellow birch is next at 13 percent, then fir at 9 percent, aspens at 8 percent, and both paper birch and sugar maple at 6 percent. Only white pine was tallied in this type, and is 3 percent of stand volume.

Hardwood types cover some 3,236 acres, 23 percent of the regulated forest. They are most often found on gentle to moderate side slopes and on low hilltops, in places with deep and at least moderately fertile soils. The vast majority of hardwood area is dominated by the Northern Hardwood mix — beech, yellow birch, and sugar maple — though here red maple is also a significant component. Spruce and fir and some hemlock also occur in this type. The other distinct association is the intolerant hardwood mix, aspen and paper birch, originating from either fire or past heavy harvests. Total volume in this type is about the same 24 cords per acre as in mixedwoods, with sugar maple, yellow birch, and aspens representing nearly 70 percent of volume, in near equal proportion. Red maple holds 12 percent, and both beech and spruce 5 percent. Overall quality in hardwoods is not as good as most other lots in the Plan area, though fine individual stems of sugar maple, yellow birch, and the occasional white ash may be found. This area has a comparatively rigorous northerly climate compared to those other Plan area lots, and somewhat less fertile soils.

Timber Resources – East Section

The regulated acres on the eastern part of the Holeb Unit total about 1,113 acres, about 92 percent of the total area. The 850-acre lot (710 regulated) on the east side of Attean Pond includes all of the easterly shoreline of the pond. The shoreline frontage is essentially all rocky, and this rocky character extends throughout most of the lot, interspersed with brooks and wetland areas. Soils are relatively infertile compared to surrounding areas, though capable of growing good quality softwoods and decent aspen and paper birch. The adjacent 360-acre Bradstreet Twp. lot includes over a mile of frontage on the Moose River, with the P-RR zoning along the watercourse holding the 17 acres of unregulated forest. The northwestern quarter is part of a much larger zoned deer wintering area.

(The No. 5 Bog tract in T5 R7 and Bradstreet Townships was gifted to the State as an Ecological Reserve. Though it holds several hundred upland forest acres and considerable forested wetland, these will not be managed for timber. Any potential cutting of trees would be done within the constraints of the reserve designation. Likewise, the north and south Attean Pond shorelands and the Moose River riparian parcel in Attean Twp. will not be managed for timber, given their character and recreation/aesthetic value.)

Harvest History

The Bureau conducted frozen ground timber harvesting on the East Attean lot in 2003 and 2004, with harvest volume almost 5,400 cords. Two-thirds was pulpwood and 81 percent of the pulpwood was aspen, as this short-lived species was strongly targeted. Spruce-fir products made up 15 percent of harvest volume. Of the hardwood sawlogs, 80 percent was aspen and 15 percent paper birch.

A 1991 Bureau harvest on the Bradstreet lot included a number of 5-10 acre full overstory removals on alternate blocks in the burn-origin area, plus selection harvesting in the mixedwood and softwood, producing 3,800 cords, nearly 80 percent hardwoods. An entry in 2003 made a second series of patch cuts in the fire type and yielded a bit over 2,000 cords, 92 percent hardwoods, and included no activity in the mixedwood and softwood.

Stand Type Characteristics and Stocking

Nearly all the forest on the East Attean lot originated from a fire during the first one-third of the twentieth century. About 85 percent of regulated acres are either aspen-paper birch or spruce/fir/pine mixed with aspen-birch, and the aspen-birch component is mature to overmature. The remaining 15 percent is softwood type, dominated by spruce with fir, pines, and some cedar included.

Sixty percent of the forest on the Bradstreet Twp. lot also originated from a fire (circa 1920) and prior to the 1991 Bureau harvest was mature aspen and paper birch plus red maple above long-suppressed fir and spruce. Twenty percent of the regulated forest is softwood type, much older than the fire-origin area, a heavily stocked cedar-spruce stand with scattered tall pines, all in the DWA. Sixteen percent is mixedwood, a well-stocked spruce-hemlock-hardwood stand that had also escaped the fire, on the southwest part of the lot. The current stocking is a mix of older mixedwood and softwood with high stocking, probably near 30 cords per acre, and the fire type

hardwood which is about two-thirds recently (1991 on) regenerated stands with light volume and one-third overmature aspen-birch with declining volumes due to mortality.

Management Issues, Concerns and Opportunities

The Bureau of Parks and Lands will manage the Holeb Unit for multiple uses including outdoor recreation, wildlife habitat, scenic and natural area protection, water quality protection, and production of forest products. The following discussion summarizes the key management issues and opportunities associated with each of these uses on the Holeb lands.

Timber Management

The majority of the Holeb lands will continue to be managed as a multiple use working forest. The approximately 15,350 acres of regulated forest (14,236 acres in the western section and 1,113 acres in the eastern section) may be allocated to timber management as a dominant or important secondary use. Timber management may be designated as a dominant land use but may also occur as a secondary activity on lands with other dominant resource allocations, such as Remote Recreation or Wildlife Management areas. For example, Wildlife will be the dominant use in riparian buffers and on wetlands and beaver flowages. Access is good throughout the Unit, with development of the forest management road system essentially complete.

Where timber is the dominant use or is included among secondary uses, its management should favor high value (both for timber and wildlife) and species such as spruce, pines, sugar maple, and yellow birch while taking advantage of the fast growing and abundant but shorter lived fir. The objectives will include growing high value timber products, chiefly sawlogs and veneer, while maintaining visual integrity and enhancing the diversity of wildlife habitat and stability of the forest.

West Section of Unit. Spruce and white pine are the key management species in softwood stands, and while fir is less common in the overstory than prior to the-budworm-caused mortality, it's a significant component of the abundant regeneration in this type. BPL practice is generally to manage fir as an intermediate species while culturing the spruce, but here the fir is likely to remain an important minority component at all times. Areas currently in softwoods should usually be managed to stay in the type. Though deer numbers are low even in the good winter cover on this tract, retention of cover integrity remains important should the deer population increase, and makes good silvicultural sense as well. However, a significant portion of the spruce is well within the mature stage, and subsequent entries into this type may include partial overstory removals as well as selection harvests.

Management in mixedwood stands should favor spruce and any pine, the birches, and sugar maple. Red maple varies greatly in quality, and the better trees should be retained when feasible while species proportion is lowered by targeting the lesser quality stems. Fir is a larger component here and is common in regeneration, and can be a valuable intermediate product as it is in softwood type. Some mixedwood acres are on sites better suited to growing spruce, pine, and fir; management should work toward restoring many of these acres to softwood type through preferential harvesting of hardwoods where the younger softwoods are sufficient to take over the site. This should be higher in priority where those softwoods have a strong spruce component, and in areas adjacent to good winter cover.

In the hardwood type, sugar maple and yellow birch are the preferred species along with any spruce, and fir can be managed here as an intermediate product. Any pines or white ash should be favored, along with the better-quality paper birch and red maple. Unlike nearly all other BPL Northern Hardwood areas, beech is a minor part of the stands and seldom of sufficient vigor to produce many beechnuts. Full crowned beech should be retained wherever possible.

East Section of Unit. Access to the East Attean lot is through several miles of abutters' roads, including TNC to the south (since 2009) and Weyerhaeuser to the north and east. These roads will need upgrading for any entry. This limited access plus the winter-only character of the terrain means that future entries will be relatively infrequent and intended to cover much of the regulated acres, for the sake of efficiency. The current even-aged condition of nearly all acres makes this strategy fit the desired silviculture. As the current stands of aspen and paper birch pass out of the picture, management should favor spruce and pine, along with the aspen regenerated by the most recent harvest.

Management decisions on the Bradstreet Twp. lot will include choosing whether to harvest the remainder of the older aspen-birch or retain some of it for structure. This will depend somewhat on how much is still alive and merchantable. The other stands will continue to be managed for multiple age classes.

Visual Concerns. Much of the northern portion of Holeb is visible from Holeb Pond, though the slopes facing the water aren't especially steep, thus maintaining visual objectives has had little impact on harvest practices. Due to the dense forest lining the Moose River, Bureau harvesting has had no effect on visual quality as perceived from the river. However, warm-season operations have been kept at some distance from the water, to lesson any effect of machinery noise on Bow Trip paddlers. Any work done near the East Attean shoreline should retain sufficient forest cover to maintain the visual character as seen from the pond. The lack of steep slopes or high ground mitigates the harvest impact outside of the riparian buffer.

In summary, specific timber management issues and objectives include:

- Management should work to retain/enhance the good quality spruce and pine components,
- Management of mixedwood acres should encourage reversion to softwoods where past harvesting had changed the type,
- Softwood cover should be maintained or enhanced in historic and current deer wintering areas, and
- Manner and timing of timber harvests should be planned to reduce potential adverse impact on recreational users, especially those on Holeb Pond and the Moose River.
- Appropriate management in the Bradstreet Twp. lot DWA, where the Bureau ownership is but a small percentage of the zoned area.
- Deciding whether to make a third set of patch cuts in the fire type of the Bradstreet Twp. lot or whether to allow these acres to collapse naturally.

Wildlife and Habitat Protection

As described above, no endangered or threatened wildlife is known to be present on the Holeb Unit. Northern long-eared bat, federally listed as threatened, may be present. The most

significant wildlife habitats on the unit are within the wetlands and riparian areas. Protection for these areas is typically provided by a Wildlife dominant allocation, based on the “specialized habitat” criteria described in the IRP. On this unit, a large portion of the wetland habitat is contained within the No. 5 Bog, which will be allocated to Special Protection – Natural Area due to the regionally significant ecological resources found there and its designation as an Ecological Reserve. These allocations will provide protection for the Special Concern species enumerated above. MDIF&W protocols for protection of bald eagle nest sites will be followed whenever timber harvesting or other activities are planned for the vicinity of a nest.

In the remaining wetland and riparian areas, the Wildlife allocation would be applied so as to demarcate a 330-foot buffer zone around the great ponds and on each side of the major streams, and a 75-foot buffer zone around wetlands, waterbodies less than 10 acres, and in minor riparian zones. (Minor riparian zones are generally designated around flowing water bodies upstream from the point where such water drains less than 50 square miles.) Any trail construction or other recreational development in these areas would need to be carefully planned to minimize potential impacts to these important habitats. Timber management is allowed in riparian zones to promote wildlife habitat.

Recreation Management

Bow Trip paddlers who arrive at Attean Landing late in the day at the start of their trip sometimes either camp at Sally Beach campsite (half mile paddle from the landing) or (illegally) at the boat launch or town park on Wood Pond in Jackman. Reportedly, some also attempt to camp at the landing, but are kept from doing so by the Attean Lodge employee stationed there during the summer. In order to meet the need for boaters to have a convenient place to camp before beginning the Bow Trip, there may be a need to explore providing a group campsite somewhere near the Attean Landing. The BPL policy to prohibit camping at the landing may also need to be reconsidered, with due consideration of potential impacts on resources and on other visitors, and challenges with managing this use (sanitation, litter, fires, campers extending their stay beyond one night, etc.).

Administrative Issues

Road Access and Maintenance

Providing for public use of the private Attean Landing Road has been an issue the Bureau has contended with for a number of years. In the spring, the road is sometimes gated at the end of the public way (0.6 miles from the Attean Twp. line and 0.9 miles from Attean Landing) when the public would like to gain access to the pond, after the pond has receded and the annual flooding of the landing and lower road has passed. The Bureau has occasionally shared road maintenance costs over the years with the abutter who owns the first half-mile of the road, and with Attean Lodge. Addressing road access concerns and maintenance needs is complicated by the lack of clarity regarding public access rights.

Attean Landing Commercial and Public Use

The Bureau has received complaints over the years about Attean Lodge’s commercial use of the Attean landing restricting use by the general public, both for parking and boat launching. There have also been reports that Lodge employees have charged the public to park at the landing. The

Attean Lodge had a five-year lease for use of the landing from 1987 to 1991, which was renewed for one year but has not been renewed since. (The lease specified allowed uses and forbade charging the public.)

The ongoing commercial use of the landing without a lease needs to be addressed and unimpeded public use of the site, including boat access and overnight parking, provided for. The Bureau should consider developing additional parking near the landing, outside the LUPC protected zones, to ameliorate competition for parking space and minimize impacts from parking in unauthorized areas and on abutting property.

In August 2015, LUPC stated that the seasonal residency at the landing by an Attean Lodge employee (in a cabin mounted on a trailer, with no provision for sanitation) is not permitted in the lake protection and wetland protection zones and asked BPL to address this problem. LUPC suggested an alternative site for the trailer up the road, outside the protected zones. A solution to this issue needs to be developed, in concert with the preceding issues.

Agricultural Use of Field North of Attean Landing

The portion of the original Public Lot on the east side of Attean Pond, north of the landing road, includes a hayfield that has been actively cut in recent years. However, there is no agriculture lease on this property, most likely due to past confusion about the ownership of this portion of the lot. If the agricultural use is to continue, a lease is required.

Vision for the Holeb Unit

Situated within a matrix of other conservation lands of similar extent in the headwaters of the Kennebec River system, the Holeb lands are a special combination of extensive forestlands, nearly the entire shoreland of two large scenic and mainly undeveloped ponds, and a wild river corridor hosting one of the most iconic multiple-day wilderness canoe trips in Maine. In addition, the Unit contains one of the largest and ecologically diverse bog complexes in the region and a major portion of an uncommon large jack pine stand.

The Holeb lands will provide a flow of forest products with most of the property managed as a multiple-use working forest for quality timber, respecting wildlife habitat needs and visual quality as perceived from the two major ponds and the Moose River.

Protections will be provided with appropriate allocations for sensitive natural resources, such as exemplary natural communities, wetlands and riparian habitats. As required by deed, approximately 20 percent of the unit, encompassing all of the portions of No. 5 Bog and the adjacent jack pine stand in State ownership and portions of the Moose River corridor, will be managed as an ecological reserve.

The Moose River Bow Trip will continue to be managed for a primitive backcountry recreation experience, with well-maintained portage trails and campsites along the route. Traditional dispersed recreation activities such as hunting, trapping, and fishing will continue on the Unit.

Proposed Resource Allocations for the Holeb Unit

The following “allocations,” as shown on Map Figure 6 - Holeb Dominant Use Allocations, define general management objectives and direction for specific areas within the Unit. (Secondary allocations are not shown on the map.) See Appendix C for a description of designation criteria and management direction for the various allocation categories.

Special Protection Areas (Dominant Allocation)

- An area totaling approximately 4,597 acres comprising the No. 5 Bog Ecological Reserve (consisting of No. 5 bog, the adjacent Jack Pine stand, the adjacent buffer strip along the south shore of the Moose River, and the buffer area along the Moose River south of Holeb Falls, all within T5 R7 and Bradstreet Townships). Backcountry non-mechanized recreation will be a secondary allocation in this area. Motorized boating (typically small motors on canoes or other small craft) is allowed on the Moose River, and these boats are permitted to land on these areas; however, motorized boat launching and other land-based motorized activities are not allowed. Commercial timber harvesting is not allowed.
- A small area including and surrounding the historic cemetery just east of the intersection of Holeb Stream and the Moose River. Commercial timber harvesting that may occur in adjacent areas will avoid this site.

Backcountry Recreation - Non-Mechanized Areas (Dominant and Secondary Allocation)

- Approximately 1,000 acres along Holeb Stream and the Moose River, encompassing the portions of these waterways in Holeb and Attean Townships (and comprising the remaining flowing water portion of the Moose River Bow Trip not within the Special Protection dominant allocation described above). As on the portion of the Moose River passing through the ecological reserve, motorized boating is allowed and these boats are permitted to land on these areas; however, motorized boat launching and other land-based motorized activities are not allowed. Commercial timber harvesting is not allowed.
- Also as a secondary allocation in the No. 5 Bog Ecological Reserve, with a Special Protection dominant allocation as described above.

Wildlife Management Areas (Dominant Allocation)

- A total of about 4,730 acres as a dominant allocation in the following areas: (1) the major riparian zone (330 feet) along each side of Holeb Stream and the Moose River in Holeb Twp. not included in the Backcountry – Non-Mechanized allocation; (2) the major riparian zone (330 feet) around the great ponds and along each side of several streams, including Turner Brook and Barrett Brook and their tributaries; (3) the minor riparian zone (75 feet) along the remaining perennial streams and around ponds less than 10 acres; (4) the portions of Inland Waterfowl and Wading Bird Habitat (IWWBH) areas outside the above riparian zones; (5) the designated deer wintering areas (DWAs) in Holeb, Attean and Bradstreet Twps.

Timber Management is a secondary use in the riparian buffer areas, subject to wildlife, recreation, and visual resource concerns.

Remote Recreation Areas (Dominant and Secondary Allocation)

- Remote Recreation would apply as a dominant allocation to the portion of the lands on the north shore of Attean Pond outside the shoreline buffer zone, totaling about 280 acres, as well as to the one acre parcel at Spencer Rips.
- Remote Recreation would apply as a secondary allocation in the riparian areas and DWAs with a Wildlife dominant allocation. Remote Recreation would also apply as a secondary allocation to the remaining area surrounding Cedar Pond and Loon Pond zoned Protection – Remote Recreation (P-RR) by LUPC. (A substantial portion of this P-RR zone is riparian and IWWBH areas and DWAs, with a Wildlife dominant allocation and Remote Recreation secondary allocation, as described above.)

No public access roads and no new motorized trails would be allowed in the areas with a Remote Recreation dominant or secondary allocation. New forest management roads in the P-RR zoned area would be limited to the extent practicable, but may be constructed where access options are limited or where extending an existing road may help reduce impacts of harvesting activity.

Visual Consideration Areas (Secondary Allocation)

- Visual Class I areas (generally areas where foreground views of natural features that may directly affect the enjoyment of viewers) will be defined as a secondary allocation on the ground for areas adjacent to the primary access roads (Attean and Holeb Landing Roads) and areas around the landings and any portions of the great pond and Moose River Bow Trip stream shorelines that may not be adequately protected by Backcountry – Non-mechanized and Wildlife buffers described above.
- Visual Class II areas will be defined as a secondary allocation in areas beyond the immediate foreground, such as background views of forest canopies from ridgelines and background hillsides viewed from public use roads, or interior views beyond the Class I area likely to be seen from a road or the Bow Trip; due to the presence of the Bow Trip route, the slopes of those higher prominences in the south part of Holeb Twp. are included in this allocation.

Developed Recreation - Class I Areas (Dominant Allocation)

- All roads designated for public motor vehicle use (Attean and Holeb Landing Roads).
- The Attean Landing (about 3 acres) and the Holeb Landing (about 2 acres) areas.

Timber Management Areas (Dominant Allocation)

- All other areas not allocated above are designated Timber Management dominant (approximately 12,800 acres); includes a majority of the west section of the Unit and the portion of the east Attean Pond and Bradstreet Twp. lands not including in the Wildlife Allocation. Recreation will be recognized as an important secondary use within the timber dominant allocation.

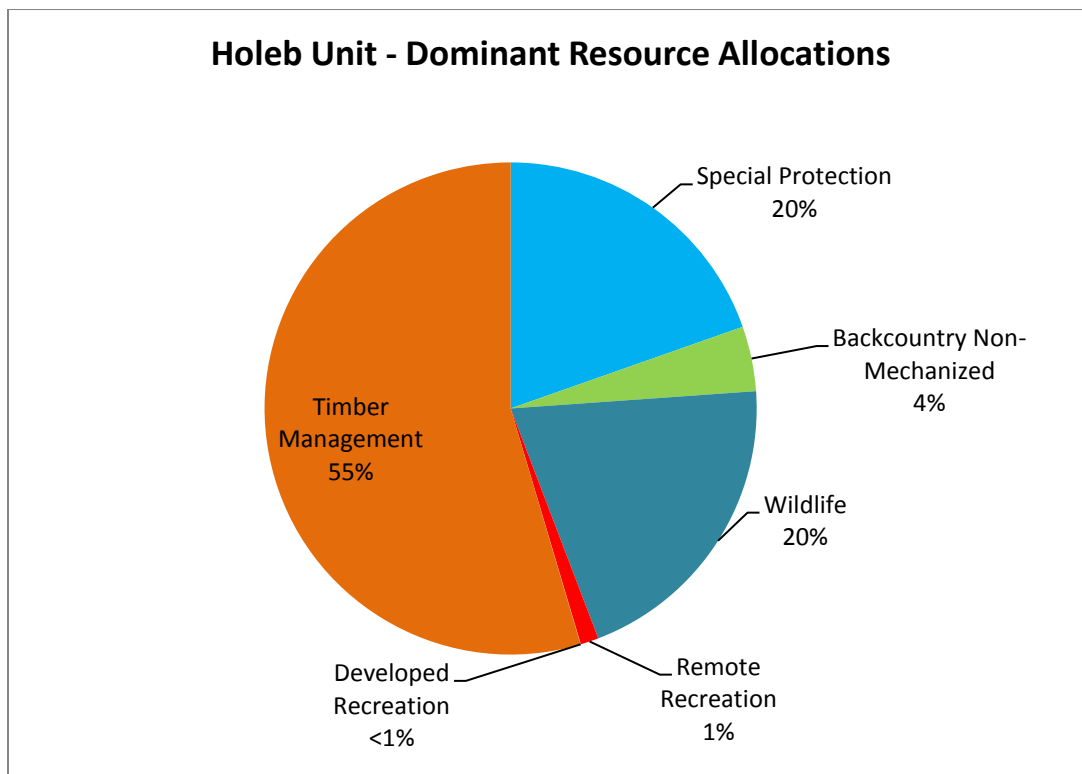
Summary of Proposed Holeb Unit Resource Allocations

Allocation	Number of Acres			%
	Dominant	Secondary*	Total	
Special Protection	4,600	Not applicable	4,600	19.6
Backcountry Non-mechanized	1,000	4,600	5,600	23.9
Wildlife Management	4,730	Not applicable	4,730	20.2
Remote Recreation	280	3,875	4,155	17.7
Visual Consideration – Class I	0	2,225**	2,225	9.5
Visual Consideration – Class II	0	200**	200	<1.0
Developed Recreation – Class I	20	Not applicable	20	<1.0
Timber Management	12,800	2,730	15,530	66.3

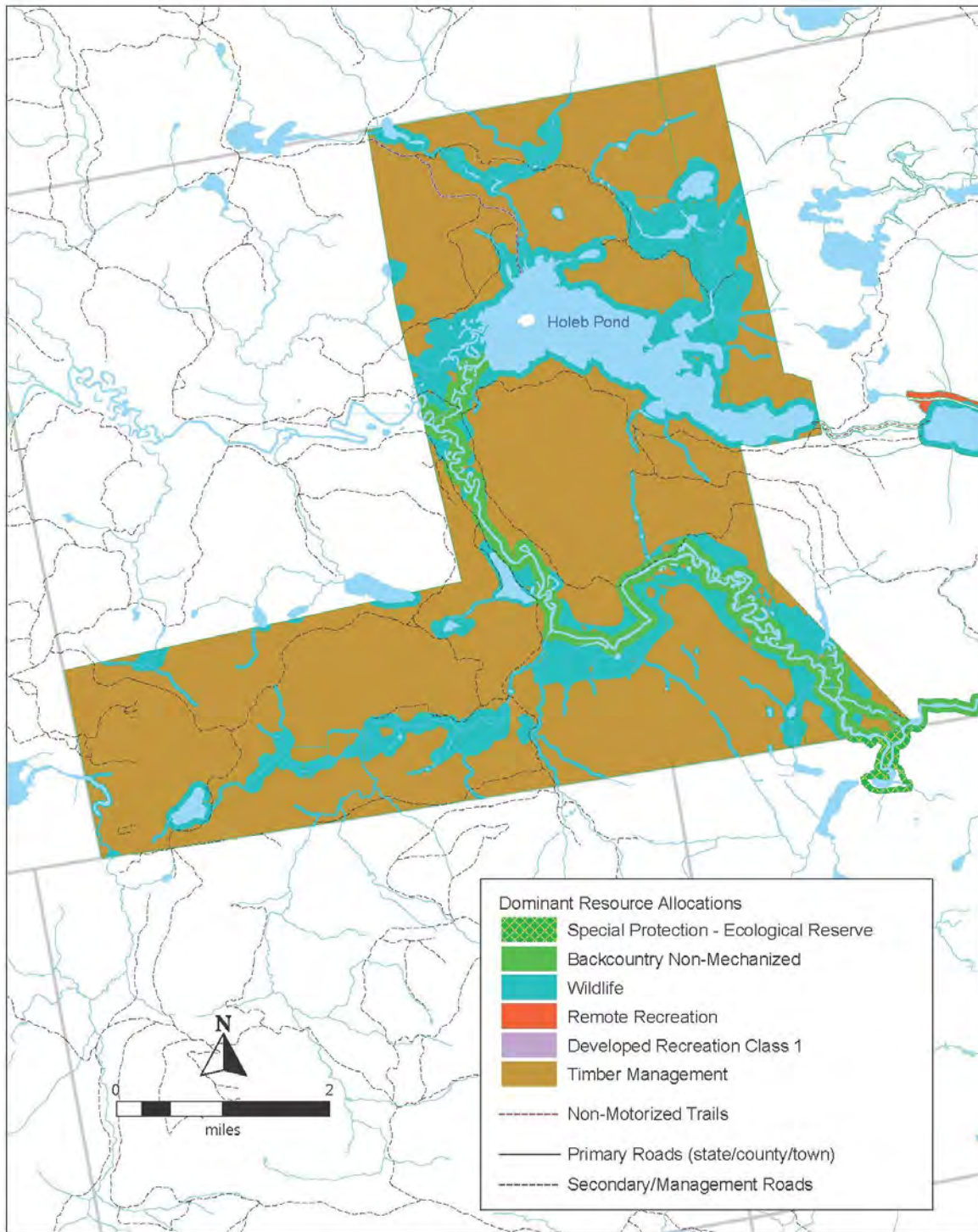
Note: Acreages are representations based on GIS metrics rounded to the nearest 5 acres, and do not sum to the total Unit acreage due to measuring error and limits of GIS precision (above acres are overall low by approx. 1%).

* Includes both secondary *allocations*, as defined in the IRP and which may restrict certain activities, and secondary *uses*, which specify allowed uses but do not impose restrictions.

**Preliminary estimate, to be refined in the field as part of the forest prescription process.

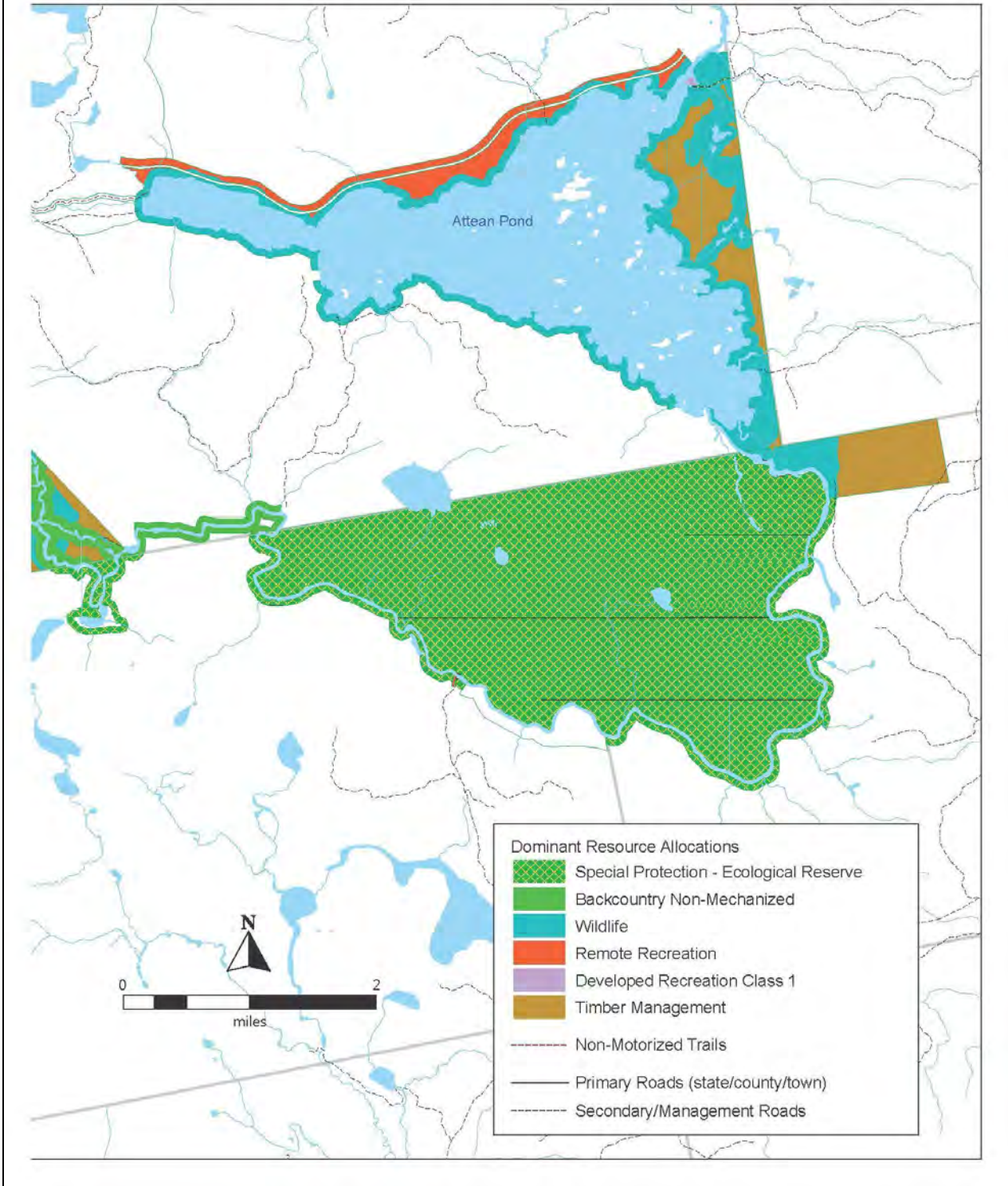


Holeb Unit - West Section Proposed Dominant Resource Allocations



MAP FIGURE 6a.

Holeb Unit - East Section Proposed Dominant Resource Allocations



MAP FIGURE 6b.

Management Recommendations for the Holeb Unit

Recreation

- Continue monitoring, maintenance and rehabilitation of campsites and the portages on the Moose River Bow Trip with the assistance of NFCT.
- Consider development of overflow parking near Attean Landing, outside the shoreline protected zones, to accommodate overnight parking of vehicles and trailers and reduce competition for parking space at the landing.
- Explore options for providing a group campsite somewhere near Attean Landing, with the objective of provide a facility for Bow Trip groups to utilize the night before they begin their paddle trip.

Public Access and Management Roads

- Work with abutters to clarify public access needs and rights and maintenance responsibilities for the Attean Landing Road.
- As resources allow, maintain the Holeb Landing Road to public use road standards. Consider improvement and expansion of Holeb Landing to provide a more attractive alternative to Attean Landing for Bow Trip paddlers beginning their trip.

Wildlife/Rare of Exemplary Ecosystems and Habitats

- Survey the DWA at the southeast corner of Attean Pond to determine its current condition and evaluate whether any actions to improve the habitat are warranted.
- Manage softwood on the Bradstreet Twp. parcel east of the DWA in a manner compatible with wintering deer.

Timber Management

- The Bureau will manage areas allocated to Timber Management as a multiple use working forest. Timber resources where allocated will provide a diverse forested environment and generate high quality-high value products to support Bureau operations and Maine's timber-based economy. The Bureau will practice multi-aged management with a long-term focus primarily on mature quality timber.
- Because of the Unit's visibility from Attean Pond, Holeb Pond, and the Moose River Bow Trip, much of the timber management is subject to Visual Class II considerations.

Administrative Issues

Signage and Visitor Information

- Assess signage and visitor information provided at Attean Landing (and/or at the parking area at the end of public way) and at Holeb Landing for possible improvements.
- Develop an updated and revised Holeb Unit Map and Guide brochure for distribution to the public.

Attean Landing Usage and Commercial Lease

- Work with Attean Lodge to develop a lease for their ongoing commercial use of Attean Landing to support the Lodge's operations, with unfettered public use of the site provided for. Access to and use of the shoreline for boat launching and docks and parking for both Lodge customers and the general public need to be clearly defined.

- Address the impermissible seasonal residency by an Attean Lodge employee at the landing, potentially with the development of an alternative site for the trailer up the road, outside the protected shoreline riparian zones.

Potential Agricultural Lease

- Determine whether harvesting of hay from the field near Attean Landing will continue; if so, develop an agricultural lease to permit and regulate this use.

Cold Stream Forest Unit

This section provides background information on the Cold Stream Forest property, including the general character of the land base; geologic and ecological resources and natural communities; wildlife resources; historic and cultural resources; recreation and visual resources; and timber resources. This is followed by a summary of the key management issues and opportunities that the Plan will seek to address through the Vision, resource allocations and management recommendations for the unit.

Character of the Land Base and Acquisition History

The Cold Stream Unit was acquired in March 2016, with the primary goal of protecting wild native brook trout habitat and deer wintering habitat. The acquisition was accomplished with both Forest Legacy Program and Land for Maine’s Future (LMF) funds. In the application for LMF funds, the Bureau committed to special protective measures for riparian areas, given the significance of the fisheries resource (BPL and TPL, 2014). (The measures were to be specified in a Habitat Management Agreement, which is addressed below, under *Wildlife and Fisheries Resources*.)

The 8,150 acres is divided into north and south sections by Capital Road. About half the acreage surrounds a group of ponds at the north end of the unit. A roughly quarter mile-wide corridor extends south for about eight miles on either side of Cold Stream, before widening out at the south end of the Unit. A mile and a half stretch of Cold Stream upstream of Capital Road flows through a 200-300 ft. deep gorge. Additional forested acreage is near Capital Road, adjacent to the Johnson Mountain and West Forks Plt. NE lots, and at the south end of the Unit. A 100-foot wide Central Maine Power-owned powerline ROW crosses the stream corridor half a mile south of Capital Road, along the Johnson Mountain/West Forks town line.

Natural Resources

(Note: The information in this section is excerpted from the Natural Resource Inventory report on the Cold Stream Unit, which is based on 2017 field surveys and is available from MNAP.)

Geology and Soils

The underlying bedrock consists of various northeast-southwest bands formed over 350 million years ago. The northern portion of the parcel is primarily underlain by sandstone, slate, and rhyolite. The southern portion of the parcel is primarily underlain by mudstone, quartzite, phyllite, and mélange (rock characterized by fragments and blocks of multiple sizes embedded in a matrix of finer-grained material). A relatively small (163 acre) band of calcareous bedrock (limestone) is mapped crossing the stream corridor in the central portion but the vegetation does not appear to reflect this calcareous influence.

Most of the parcel is covered in till (gravel and stones) deposited following the retreat of the last glacier over 11,000 years ago. The property also contains various fine-grained sediment deposits of glacial origin, including glacial outwash deposits, ribbed moraine, ice contact deposits, and several eskers. Soils on the parcel are characterized by silt loams and sandy loams formed from glacial till. The most extensive soil types are the Danforth-Masardis-Shirley series, which tend to be well drained to somewhat excessively drained. However, other soils on the property are somewhat poorly drained to very poorly drained, such as the Telos-Monarda-Monson association around spruce flats and wetlands.

Hydrology and Wetlands

The Cold Stream Forest Unit contains ~30 miles of mapped perennial streams, including a 15-mile section of Cold Stream. Most of the property drains into Cold Stream, which empties out to the south into the Kennebec River. The northernmost portion of the property drains into Parlin Stream, which eventually flows northward into the Moose River. The areas south of the confluence of Cold Stream and the Kennebec River drain into the Lower Dead River to the west and into the Kennebec River to the east. Several stretches of Cold Stream, including Cold Stream Falls, flow through steep, narrow ravines approaching 150 feet in depth.

More than 600 acres of the property is mapped as wetland according to the National Wetlands Inventory. Most of the wetlands occur in the northern portion, including the ponds, as well as at least one bog complex and several beaver meadows.

Natural Communities

Reflecting timber harvesting over the past two decades, much of the Cold Stream Forest exists as a matrix of early successional Lowland Spruce-Fir Forest and Northern Hardwood Forest, within which other smaller patch natural community types (including a number of wetlands) occur. One of the tract's larger wetland complexes lies in the northern portion of the parcel, northeast of Durgin Pond. This ~50 acre peatland supports a Spruce-Larch Wooded Bog, a Sheep laurel Dwarf Shrub Bog, and a Leatherleaf Boggy Fen.

The steepest slopes of the ravine through which Cold Stream flows in the middle portion of the property support a mature to late-successional Spruce-fir-Northern Hardwoods Ecosystem, which is dominated by red spruce with yellow birch, balsam fir, white pine, and old paper birch. Stands on portions of these very steep (>60%) slopes show little to no signs of past harvesting; one cored cedar tree was 130 years old.

Aside from the steep ravine of Cold Stream, mature forest is uncommon on the parcel. One of the areas supporting older forest is around Lang Pond, where a mature, roughly even-aged stand of Lowland Spruce-Fir Forest occurs. Tree ages (~115 years old) and charcoal found in the soil indicate that this stand likely originated after fires around 1900. Southeast of Lang Pond, intact northern hardwood forest occurs along a small rocky stream draining out of the pond. This stand was last harvested 40+ years ago and contains moderate amounts of deadwood. Further south and downslope the sugar maple forest grades into a Beech-Birch-Maple Forest. This forest type is dominated by sugar maple and yellow birch.

There are several other small pockets of mature forest. These include a 2-acre late successional area of Beech-Birch-Maple forest west of Big Berry Pond and an isolated area of the same type of forest within the Spruce-fir-Northern Hardwoods Ecosystem described above, both with numerous large yellow birch and sugar maples. Each of these are considered high value late successional forest stands.

Multiple areas of the parcel apparently burned approximately 100 years ago. In addition to the charcoal found near Lang Pond, the steep Cold Stream ravine slopes showed structural indications of previous wildfire. Rapid early tree growth visible in tree cores, followed by gradually declining growth rates, as well as evidence of previous birch overstory, both suggest that wildfires were responsible for stand origin.

Alluvial areas of the Cold Stream valley floor support a moderately enriched Sugar Maple Forest. Further downstream, an extensive Cobble Rivershore natural community occurs along the stream banks, characterized by lakeshore sedge (*Carex lenticularis*) and several species of flowering herbaceous plants. Small rivershore bedrock outcrops nearby support the uncommon bulbet bladderfern (*Cystopteris bulbifera*) and fragile fern (*Cystopteris fragilis*). A small patch of Hardwood River Terrace Forest (a type of floodplain forest) occurs slightly above the stream channel, with a canopy of black ash and sugar maple. Small patches of Northern White Cedar Seepage Forest also occur where small streams run down the steep ravine slopes.

Exemplary Natural Communities and Rare Plant Species

Both the Cobble Rivershore natural community described above, and a spruce-fir northern hardwoods ecosystem on the adjacent valley floor and lower slopes of the ravine (and partly composed of the enriched Sugar Maple Forest also described above) are mapped by MNAP as exemplary natural communities. Although some uncommon understory plant species were noted during recent surveys, as noted above, no rare plants were found.

Wildlife and Fisheries Resources

Cold Stream Forest's 8,000+ acres provide habitat for a number of wide-ranging game species of Maine's North Woods, including black bear, white-tailed deer, and moose. MDIF&W has mapped 578 acres of inland wading bird and waterfowl habitat (128 rated as high quality, 450 rated as medium quality) in the northern part of the Unit. A large un-mapped Deer Wintering Area (DWA) in the southernmost third of the property provides habitat and connectivity to wintering areas farther to the southwest.

The only record of endangered or threatened wildlife on the Unit is rusty blackbird (*Euphagus carolinus*), an ecologically distinct wetland-dependent species that survey data indicates is in decline, and a species of special concern in Maine. The species has been recorded at two locations in the north part of the Unit. However, the northern half of the Unit has been designated critical habitat for the Canada Lynx, federally listed as threatened by the US Fish and Wildlife Service.

Seven of the nine named ponds in the northern part of the unit have been designated by MDIF&W as SHFWs. No stream or pond in the Cold Stream watershed has been stocked since 1954. Four of the SHFW ponds are considered to have "outstanding" or "significant" fishery

value, per the Maine Wildland Lakes Assessment (see table below). Several are on or close to roads; most others can be reached on foot following existing foot paths. Four are zoned as Remote Ponds by LUPC, with a half mile P-RR protection subdistrict surrounding them within which new roads and other development are restricted.

MDIF&W has established special fishing regulations for the SHFW brook trout ponds as well as Fernald Pond: All are “fly fishing only” and most have a two-fish limit. Additional special regulations apply to some of the ponds. All are closed to ice fishing. Special regulations also apply to Cold Stream south of the Capital Road bridge: artificial lures only and catch-and-release from August 16 to the end of the season on September 30. The lower part of Cold Stream has been documented to provide critical thermal refuge and spawning habitat for wild brook trout inhabiting the Upper Kennebec River and Dead River (E/PRO, LLC, 2000).

Physical and Fisheries Data on Ponds within the Cold Stream Unit						
Water Body	Size (acres)	Max. Depth (feet)	Principal Fisheries (see key)	Stocked? (Y/N)	LURC Fisheries Rating (see key)	LURC Resource Class (see key)
Lang Pond	30	30	BT*	N	O	1B
Little Lang Pond	13	18	BT*	N	O	1B
Durgin Pond	15	9	BT*	N	S	2
(Big) Berry Pond	35	21	BT*	N	S	2
Little Berry Pond	12	17	BT*	N	NA	3
Lone Jack Pond	15	8	BT*	N	NA	3
Snake Pond	8	no data	BT*	N	NA	3
Fernald Pond	8	no data	None	N	NA	NA
Campstove Pond	10	4	None	N	NA	NA

Sources: Maine Lakes: Geographic & Morphometric Information (MDEP/MDIF&W, 2010), Maine Wildlands Lake Assessment (LURC, 1987); Lake Survey Maps (MDIF&W, various dates); Online Maine Fishing Guide (MDIF&W).

Key to Principal Fisheries

BT = brook trout (* = State Heritage Fish Water)

Key to LURC Maine Wildland Lakes Assessment resource ratings

Fisheries: O = Outstanding, S = Significant, NA = No rating given.

Resource Class: 1A = statewide significance with 2+ outstanding values (may include fisheries), 1B = statewide significance with 1 outstanding value (may be fisheries), 2 = regional significance with 1+ significant values (may include fisheries), 3 = local significance or unknown significance with no significant or outstanding resource value, or limited information, NA = no rating given/missing data.

Habitat Management Agreements

As required for LMF-funded acquisitions, BPL and MDIF&W have developed two Habitat Management Agreements (HMAs) that will help guide timber management and other activities, particularly in the riparian areas of Cold Stream, its tributaries and the ponds, and in the deer wintering area. The HMAs (provided in Appendix C) were adopted in November, 2016.

The *Cold Stream Forest Fisheries Habitat HMA* covers the entire Unit. The agreement states goals and objectives for wild brook trout, and provides guidelines for management of fisheries resources in the Unit, specifically management/harvest strategies in riparian corridors and management of public access to Cold Stream and the headwater ponds.

The *Cold Stream Forest Deer Wintering Area HMA* addresses 3,000+ acres comprising the southern third of the Unit, most of which was identified as a “biological deer yard” (as described in the LMF proposal). Prior to the State’s ownership, part of this area was managed a “Cooperative Deer Wintering Area,” one of 16 such DWAs managed by Plum Creek in cooperation with MDIF&W. The agreement states goals and objectives for the biological deer wintering area (BDWA), provides guidelines and principles for management of the area, and further addresses several aspects of timber harvesting, road construction, recreational use, and other uses/activities.

Each HMA will be reviewed annually, with renewal of the agreements every 5 years (Fisheries) or 15 years (BDWA) into perpetuity. The Fisheries HMA takes precedence where there is overlap between the two, recognizing the inherent compatibility of fisheries management in the BDWA.

History and Culture

There exists a long history of recreational use of the trout ponds at the north end of the Unit, in some families extending back for several generations. At one time, some of this use may have been associated with private and sporting camps at Parlin Pond; a 1924 USGS topographical map shows a jeep trail extending from the east side of Parlin Pond and branching out to pass by several of the Cold Stream Forest ponds, with structures indicated (possibly outpost camps) at Big Berry and Lang Pond. There are no known archeological resources on the Unit.

Access

All portions of the Unit are accessible to vehicles from US 201 and Capital Road via several forest management roads on which ROWs were granted by Plum Creek (now Weyerhaeuser) as part of the State’s acquisition of the parcels. Parts of this road network cross the State-owned parcels, with ROWs retained by Plum Creek across the State lands. Eighteen of these roads and road segments are included in a Reciprocal Easement Agreement, under which BPL has the right to maintain the roads owned by Plum Creek for public access. Several additional miles of gravel roads on the Unit not covered by the agreement remain open to vehicles.

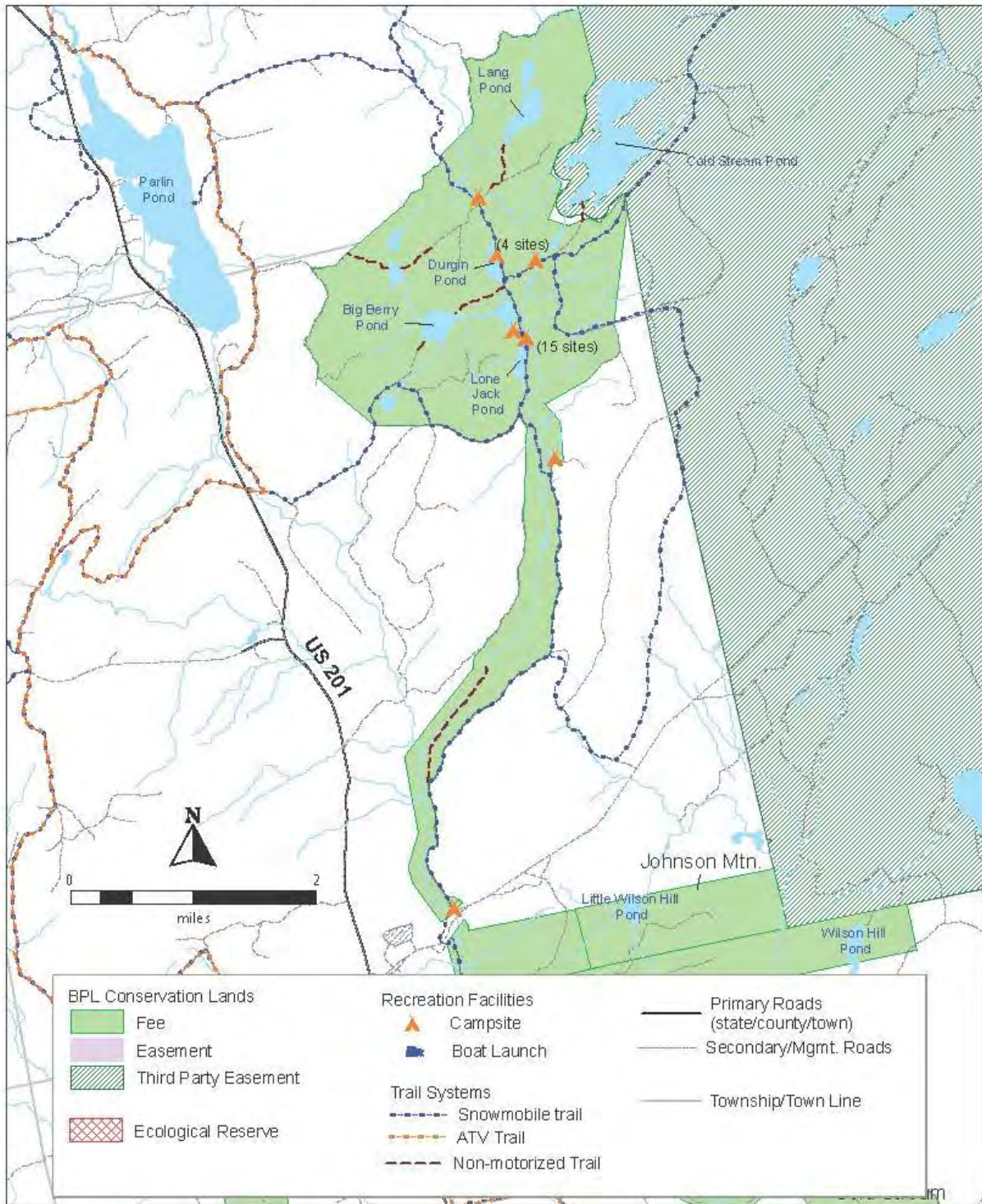
The roads used to access the unit are generally in good condition, and most are drivable with reasonable care by standard non-4WD vehicles. With some notable exceptions, most of the roads within the Unit are also in good condition. Map Figures 8a and 8b depicts the road system used to access the Unit as well as the roads and recreation resources on the Unit.

Recreation Resources

The most prominent and attractive features of the Cold Stream Unit are the several small ponds described above and Cold Stream as it flows the 14.5 miles from north to south through the Unit, passing through several deadwaters and beaver flowages attractive for paddling, and over two small waterfalls.

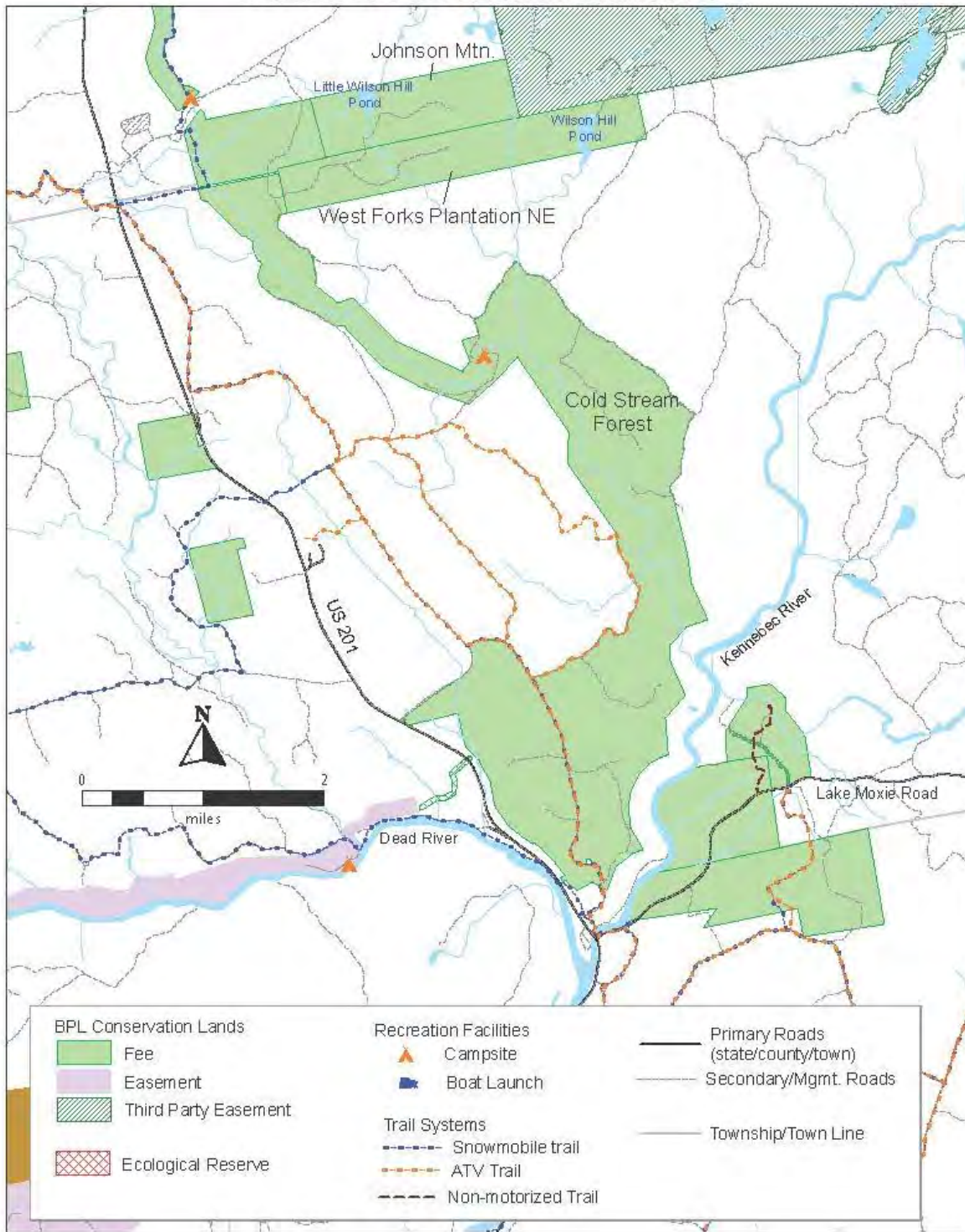
Under the previous ownership, the 15-site Lone Jack primitive campground, with fire rings, picnic tables, and three privies was established along Cold Stream east of Lone Jack Pond. There is a small floating dock on the stream at the campground. Four additional roadside shoreline campsites were established next to Durgin Pond, and several others in scattered

Cold Stream Forest Unit - North Section Roads and Recreation Facilities



MAP FIGURE 8a.

Cold Stream Forest Unit - South Section Roads and Recreation Facilities



MAP FIGURE 8b.

locations near to roads. The campsites, particularly at Lone Jack and Durgin, are frequently used by RV campers, some whom appear to stay for extended periods.



Campsites at Lone Jack campground.

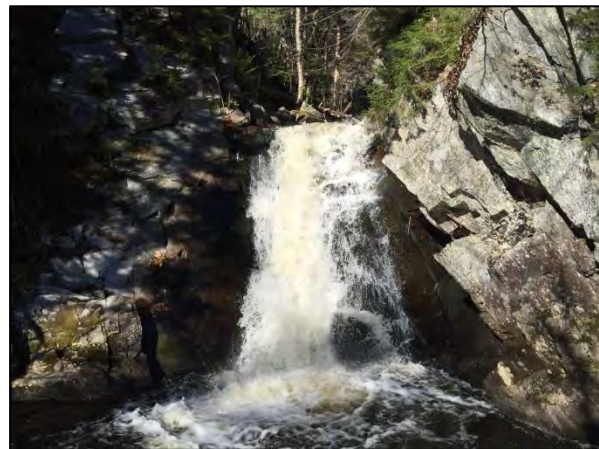


Roadside campsite at Durgin Pond.

Walk-in trails have been established into Lang Pond and Big Berry Pond, all less than 0.5 miles in length. A short trail also extends to the south end of Cold Stream Pond (on the MRCE) from a dead-end management road. There are additional informal trails, by appearances less used and maintained, into Snake and Fernald Ponds, and similar trails into Cold Stream downstream of the headwaters area. A one-mile well-used trail, mainly following an old road, extends from an informal roadside parking area to 20-foot Cold Stream Falls, a scenic highlight of the Unit.



Angler trail to Lang Pond.



Cold Stream Falls.

For several decades, the commercial timberland owners of the property (most recently Plum Creek) had a cooperative relationship with long-time recreational users of the area under which the primitive camping facilities and informal trails were developed and maintained. Maintenance, as well as some road and bridge work, was conducted by the users with the oversight of the landowners.

In general, the existing trails are not adequately signed or blazed; some are difficult to locate. Portions of the trails to the ponds cross wet areas, which has led to development of short detours and placement of poles laid “corduroy-style” across the trail tread.

Historically, recreation use of the area has included the practice of storing canoes and other small boats at several of the ponds, particularly those with only walk-in access. There are also scattered boats stored at ponds accessible by vehicle, such as Lone Jack Pond. Over the years, the number of boats stored has greatly increased to the point that there are now over 80 boats on the south shore of Lang Pond alone. (In contrast, a 1973 MDIF&W survey reported “at least 10” boats left on the shore at Lang Pond.) There are similar numbers of boats stored on the south and north shores of Big Berry Pond. The photos below show a small portion of the stored boats.



Stored boats and rack at Lang Pond.



Stored boats at Big Berry Pond.

At both Land and Big Berry Pond, a broad area of shoreline extending for several hundred feet is occupied by boats. Some of the watercraft are unusable or in poor condition, and few are marked with the owner’s name as required by the IRP. Some do not appear to have been used for several years, judging by the duff and debris accumulated on them. Rudimentary boat racks have been constructed from poles lashed to trees or out of metal scavenged from old camps that had stood nearby. Most of the boats are locked to trees.

The Cold Stream property is also used for dispersed activities, particularly hunting, wildlife viewing and sightseeing, facilitated by the good vehicle and pedestrian access afforded by the road system reaching into all parts of the Unit. The previous landowner leased a total of seven bear bait sites to hunting guides, four on the north part of the Unit (all west of the ponds) and three on the south part of the Unit. Additional bait sites are on the commercial forestland surrounding the Unit.

The area around The Forks is a choke point for motorized trails in the region. ITS 87 runs through the Unit from north to south and is an important regional snowmobile route, connecting to Rockwood and Jackman to the north and The Forks to the south. Other connecting trails extend east and west from the Unit, including one popular branch leading to Coburn Mountain. A designated ATV route crosses the south part of the Unit, connecting to The Forks Area. There are no other designated ATV routes on the Unit.

Timber Resources

Cold Stream Forest is primarily timbered with softwood and mixedwood stands, and to a lesser extent with hardwood stands. Approximately 7,550 of the 8,160 acres (93 percent) are forested.

Work is ongoing to gather sufficient data to accurately determine what portion of the unit will be regulated forest. However, a rough estimate based on BPL foresters' field work to-date indicates that there are approximately 5,920 acres of regulated forest, greater than 72 percent of the total area. Much of the approximately 1,630 acres of unregulated forest or non-forest are the wetlands that occur in the northern part of the Unit and steep areas of the stream gorge.

Harvest History and Stocking

Substantial quantities of forest products have historically been produced from the lands, and the Unit was heavily harvested prior to State ownership. The Bureau has estimated, based on air photos, that most of the area has been harvested by the previous owner in the past 30 years, with the exception of buffer areas around the ponds and along Cold Stream, including significant harvesting during the past decade. Those recent harvests include one 30-40 acre clearcut, and a number of heavy partial cuts. A majority of the forest (particularly the softwoods) is young (seedling/sapling).

Stand Type Characteristics (regulated acres only)

Because it is a recent acquisition, detailed stand-level data on timber resources at Cold Stream is not yet available. This information will be compiled over the next few years based on field surveys and remote sensing data.

Management Issues, Concerns and Opportunities

The Bureau will manage the Cold Stream Forest Unit for multiple uses including outdoor recreation, wildlife habitat, scenic and natural area protection, water quality protection, and production of forest products. The following discussion summarizes the key management issues and opportunities associated with each of these uses on the Cold Stream Forest lands. Protection of wild brook trout habitat will take precedence across the Unit. At this new Unit, the Bureau will be guided in its approach to recreation and administrative issues, in particular, by an accumulating knowledge and observations of visitor use patterns, behavior, and impacts.

Timber Management

Much of the Cold Stream Forest lands will continue to be managed as a multiple use working forest. The approximately 5,920 acres of regulated forest in the Cold Stream Forest Unit may be allocated to timber management as a dominant or important secondary use. Timber management may be designated as a dominant land use but may also occur as a secondary activity on lands with other dominant resource allocations, such as Remote Recreation or Wildlife Management areas. For example, Wildlife will be the dominant use in riparian buffers and on wetlands and beaver flowages. The Wildlife dominant allocation will also be applied to the 3,000+ acres of BDWA in the south end of the Unit, with all harvesting activity conducted within the protocols and guidelines of the Biological Deer Wintering Area HMA. All harvesting activity in riparian areas will be conducted under the guidelines set forth in the Fisheries Habitat HMA.

Visual management is particularly important near the ponds and Cold Stream. Access is good throughout the Unit, with development of the forest management road system essentially complete.

Wildlife and Habitat Protection/Special Resources

The Habitat Management Agreements provide the road map for management of the two most critical types of habitat on the Unit, wild brook trout habitat and deer wintering area, in close cooperation with MDIF&W. The HMAs are incorporated by reference into this Plan and will be the overriding guiding documents for management of fisheries resources and the biological deer wintering area throughout the life of the Plan.

Trout Unlimited and others have expressed interest in potential stream habitat restoration work, including “chop and drop” projects to add large woody debris (LWD) to streams. Natural recruitment of LWD to streams is an objective of the Fisheries Habitat HMA, and “chop and drop” projects using existing MDIF&W protocol are also authorized. Several years ago, a stream restoration project was completed by MDIF&W at the site of an old bridge crossing on the lower part of Cold Stream, involving the placement of several large boulders in the stream. The Bureau would support additional stream habitat restoration, in accordance with the Fisheries HMA and with the involvement of MDIF&W in the planning and execution of any such project.

The wetlands used by the rusty blackbird will be protected as specialized habitat under a Wildlife dominant resource allocation, and with application of the protocols described in the Wildlife Guidelines for the Public Reserved Lands. See Appendix C for a summary of the designation criteria for Wildlife dominant areas.

The only botanical resources on the Unit of a significance that would justify Special Protection allocations are the Cobble Rivershore community and Spruce-Northern Hardwoods Ecosystem associated with the downstream-most section of Cold Stream. Both of these MNAP-mapped areas are within the major riparian zone extending 330 feet from each side of Cold Stream, which will be allocated to Wildlife Management as the dominant use. The HMA’s, both of which address the areas where these resources occur, place additional constraints on timber management and other activities.

Recreation Resources

A few of the campsites at Lone Jack campground and all of those at Durgin Pond as well as some of the individual roadside sites are on or close to stream or pond shorelines, within the riparian zone. The LUPC shoreland (P-SL1), great pond (P-GP) and wetland protection (P-WL1) zoning in these areas prohibits construction of campsites. Although LUPC rules permit these existing sites to be “grandfathered,” it may be appropriate to move the affected campsites, if feasible, outside the protected zone.

Although the existing campsite amenities are generally in good condition, there are picnic tables and fire rings that should be refurbished or replaced. An inventory and assessment of these amenities is needed. The existing privies should also be evaluated and possibly replaced, and additional toilet facilities considered. The functionality and condition of the dock at Lone Jack Campground should also be evaluated, and replacement considered if appropriate.

The existing angler access trails need to be assessed as to which trails will become permanent formalized trails, and those trails brought up to Bureau standards for trail tread, vegetation clearance, blazing and signage. Wet areas should be addressed.

The initial quarter-mile of the trail to Cold Stream Falls follows a short haul road/skid trail, before dropping down a slope into the Cold Stream riparian corridor. This section of trail will likely be affected by future timber harvesting. Relocating this section to the riparian corridor would eliminate this conflict as well as provide a more attractive setting for the trail. The adequacy of the existing small parking area should also be evaluated.

Administrative Issues

Storage of Boats at Ponds

The Bureau recognizes the traditional practice of storing boats at backcountry ponds, and that anglers and others who visit Cold Stream Forest benefit from having a boat available at the ponds with no vehicle access. The Backcountry Pond Watercraft Storage policy (IRP, section D18) allows for storage of boats on designated backcountry ponds 1) at least 25 feet from the shoreline and 2) with the watercraft owner identified on the watercraft. Canoe racks that are unobtrusive and safe are allowed. Watercraft that are not stored according to the above conditions, or that are decrepit, may be removed by the Bureau.

The current storage of boats at Lang, Big Berry and other ponds does not conform to the policy, in that most do not have the owner identified and many are stored closer than 25 feet to the shoreline. In addition, the decrepit boats stored at these sites are not in keeping with the policy.

The Bureau is also concerned to maintain an appropriate backcountry setting at the ponds. The high number of boats stored and the large areas occupied result in substantial aesthetic degradation. The presence of decrepit boats and other usable boats in poor condition, the scattered way the boats are stored, and the make-shift boat racks also contribute to the unsightliness. The Bureau does not consider storage of a large number of privately owned boats that are unused or rarely used and unavailable to all but the owner to be a suitable use of public land, and considers the sprawling and cluttered appearance of the boat storage areas unacceptable.

Campsite Management

Given the concentration of campsites at Cold Stream Forest, it would be desirable for a volunteer campground host to be on site during the spring through fall peak use period. (A similar arrangement has been in place at the Moosehead Lake East Shoreline camping facilities for several years). The host would perform basic maintenance and report any concerns or problems that arise to the Western Region office.

Access and Road Maintenance

The Bureau is responsible for maintenance of the several miles of public use roads and management roads that remain open to vehicles on the Unit. The Bureau may also conduct maintenance on the roads leading to the Unit, in consultation with Weyerhaeuser and as required to maintain recreation access, under the terms of the Reciprocal Agreement.

Some of the roads on and leading to the Unit need resurfacing or other work. Within the Unit, for example, at the time of the acquisition much of the half-mile section of Lone Jack Road between the campground and Durgin Pond had an uneven, rough cobble surface with poor drainage. Beaver activity frequently flooded the road near the campground when two small bridges were blocked, backing up the flow from Little Berry Pond. Also, a portion of Tower Road descending a grade near the south end of the Unit was badly eroded.

Work began on Lone Jack Road near the campground in fall of 2017, along with bridge and culvert work, grading, graveling and brush control there and at other locations on the Unit. Later, work was done on the Tower Road grade to improve the surface. Additional bridges and culverts need to be inspected and evaluated for condition, fish passage, and ability to pass high flows, which may be more frequent as Maine's climate changes. (Passage of peak flows without constriction of stream channels, and culverts that provide passage for fish, amphibians and invertebrates at all flows are also requirements of the Fisheries Habitat HMA.)

An access and road maintenance plan is needed to designate primary access routes into the north and south portions of the Unit and prioritize road and bridge work. The priority for future road work, continuing the work already begun, will be protecting water quality and providing safe passage for all users. Designation of primary access routes may depend in part on expected road usage and maintenance on the abutting lands as dictated by timber harvesting in the area.

Signage

As a new acquisition, there is no BPL signage or information posted on the Unit. A plan for installation of entry signs identifying the Unit, information kiosks, directional signage, etc. is needed. Designation of primary access routes will help determine the locations of entry signs and kiosks. Formalization of the existing trails will help determine locations for trailhead signboards.

MDIF&W has jurisdiction over posting of fishing regulations. Trout Unlimited and brook trout anglers have expressed concern that visitors to Cold Stream Forest may be unaware of the special regulations for the headwater ponds and Cold Stream due to a lack of signage, and that this may threaten the native brook trout resource. The Bureau needs to coordinate with MDIF&W regarding this issue.

Bear Bait Sites

As described above, the Bureau has inherited several bear bait sites on the unit from the prior owner. No changes have been made regarding these sites for the first few seasons of the State's ownership. However, there is a need to evaluate the appropriate number of the sites on the unit and their locations (e.g., proximity to existing trails).

Vision for the Cold Stream Forest Unit

The Cold Stream Forest lands are a relatively accessible forestland surrounding high-value cold-water streams and ponds, with significant ecological, fisheries, wildlife, timber and recreational values. The overriding objective of management will be the protection of native brook trout habitat, as well as deer wintering habitat in the southern part of the Unit.

These lands will provide a flow of forest products with much of the property managed as a multiple-use working forest for quality timber, respecting fisheries and wildlife habitat needs and accommodating access trails to remote ponds.

Protections will be provided with appropriate allocations for sensitive natural resources, such as exemplary natural communities, wetlands and riparian habitats. The wild brook trout and deer wintering area habitats that were the primary purposes for the State's acquisition of the property will be further protected and enhanced, as guided by the Habitat Management Agreements (HMAs) signed by BPL and MDIF&W.

These newly acquired public lands are recognized as having a unique history, with generations of anglers drawn to the renowned wild brook trout resource. In addition to natural area protections, the remote ponds will continue to be managed for remote recreation experiences, with walk-in access only. Actions will be taken to reduce the number of boats stored at the remote ponds and otherwise reduce the adverse impact on the aesthetic quality of the storage locations. Primitive campsites will continue to be provided at the existing Lone Jack campground and other sites. Some campsites may be relocated in order to meet riparian and shoreline protection requirements. A foot path will be maintained to Cold Stream Falls.

In addition to fishing, traditional dispersed recreation activities such as hunting, trapping, and canoeing will continue on the unit. Snowmobile and ATV use of existing routes, primarily on management roads designated and signed as shared use roads, will continue.

The Bureau will take steps to establish signage on the Unit and provide other visitor information disseminated through maps and brochures. Road and bridge improvements will be conducted as resources allow, in close coordination with MDIF&W and in compliance with the Fisheries Habitat HMA. Priority will be placed on water quality protection and safety for all users.

Proposed Resource Allocations for the Cold Stream Forest Unit

The following "allocations," as shown on Map Figures 9a and 9b – Cold Stream Forest Proposed Dominant Use Allocations, define general management objectives and direction for specific areas within the Unit. (Secondary allocations are not shown on the map.) See Appendix C for a description of designation criteria and management direction for the various allocation categories.

Wildlife Management Areas (Dominant Allocation)

- A total of about 2,975 acres as a dominant allocation within the biological deer wintering area that occupies most of the south end of the Unit. This includes all of the area covered by the Biological Deer Wintering Area HMA, with the exception of 185 acres included in

the HMA to ensure operational and management planning efficiency. Remote Recreation is a secondary allocation in this area.

- A total of about 1,525 additional acres as a dominant allocation within the major riparian zones (330 feet) and minor riparian zones (75 feet) surrounding the ponds and along the perennial streams in the Unit, as well as mapped inland waterfowl and wading bird habitat. Remote Recreation is a secondary allocation in these riparian areas.

A secondary Timber Management allocation is also designated for the riparian buffer areas, subject to wildlife, recreation, and visual resource concerns, and the guidelines contained in the HMAs.

Remote Recreation Areas (Dominant and Secondary Allocation)

- A Remote Recreation buffer would apply to areas within 500 feet of the existing angler access and Cold Stream Falls trails, outside the riparian areas with a Wildlife dominant allocation, totaling about 40 acres.
- Remote Recreation would apply as a secondary allocation in the riparian areas and the deer wintering area with a Wildlife dominant allocation, as described above.

A secondary Timber Management allocation is also designated for the trail buffer areas, subject to wildlife, recreation, and visual resource concerns.

Visual Consideration Areas (Secondary Allocation)

- Visual Class I areas (generally areas where foreground views of natural features that may directly affect the enjoyment of viewers) will be defined as a secondary allocation on the ground for areas adjacent to the primary access roads, and areas around campsites and designated non-motorized trails.
- Visual Class II areas will be defined as a secondary allocation in areas beyond the immediate foreground, such as background views of forest canopies from ridgelines and background hillsides viewed from public use roads, or interior views beyond the Class I area likely to be seen from a road, trail or water body.

Developed Recreation - Class I Areas (Dominant Allocation)

- All roads or trails designated for public motor vehicle use, snowmobile use, or ATV use.
- Existing primitive campsites and the Lone Jack campground, as well as existing parking areas; these are small areas of less than an acre.

Timber Management Areas (Dominant Allocation)

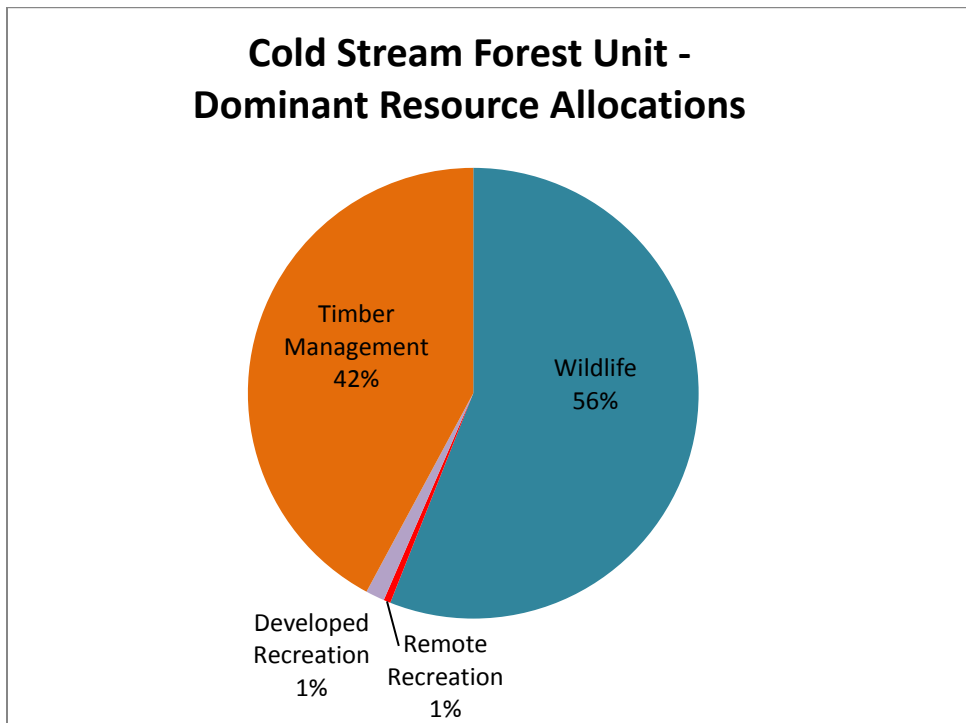
- All other areas not allocated above are designated Timber Management dominant (approximately 3,390 acres); includes a majority of the northern section of the Unit, excepting the portions allocated to Wildlife in the shoreline and stream riparian areas, and the small areas allocated to Developed Recreation and Remote Recreation. Recreation will be recognized as an important secondary use within the timber dominant allocation.

Summary of Proposed Cold Stream Forest Unit Resource Allocations

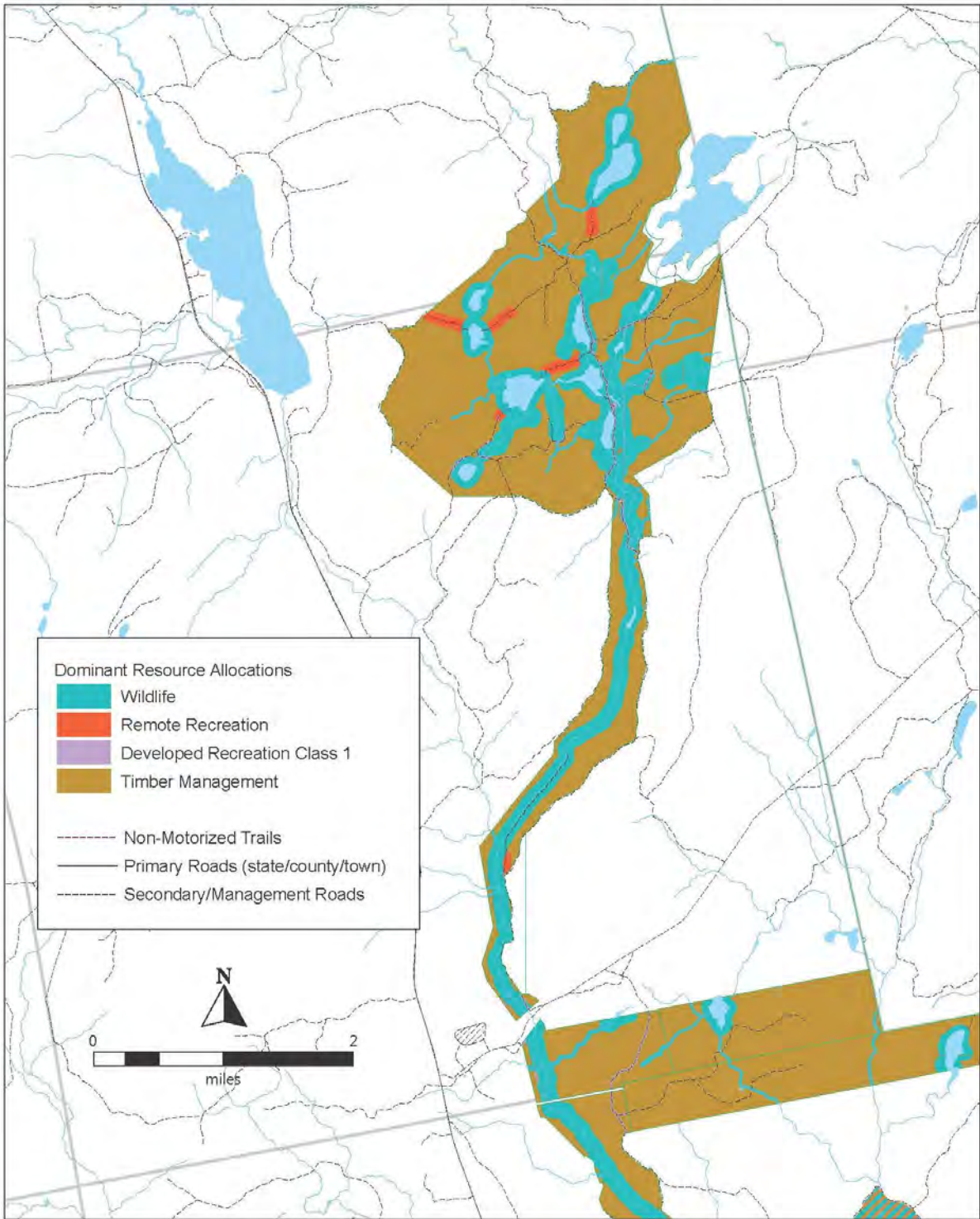
Allocation	Number of Acres			%
	Dominant	Secondary	Total	
Wildlife Management	4,500	Not applicable	4,500	56.0
Remote Recreation	75	4,500	4,575	56.9
Visual Consideration – Class I	0	1,680*	1,680	20.9
Visual Consideration – Class II	0	150*	150	1.9
Developed Recreation – Class I	110	Not applicable	110	1.4
Timber Management	3,355	2,565	5,920	73.6

Note: Acreages are representations based on GIS metrics rounded to the nearest 5 acres, and do not sum to the total Unit acreage due to measuring error and limits of GIS precision (above acres are overall low by approx. 1.5%).

* Preliminary estimate, to be refined in the field as part of forest prescription process.

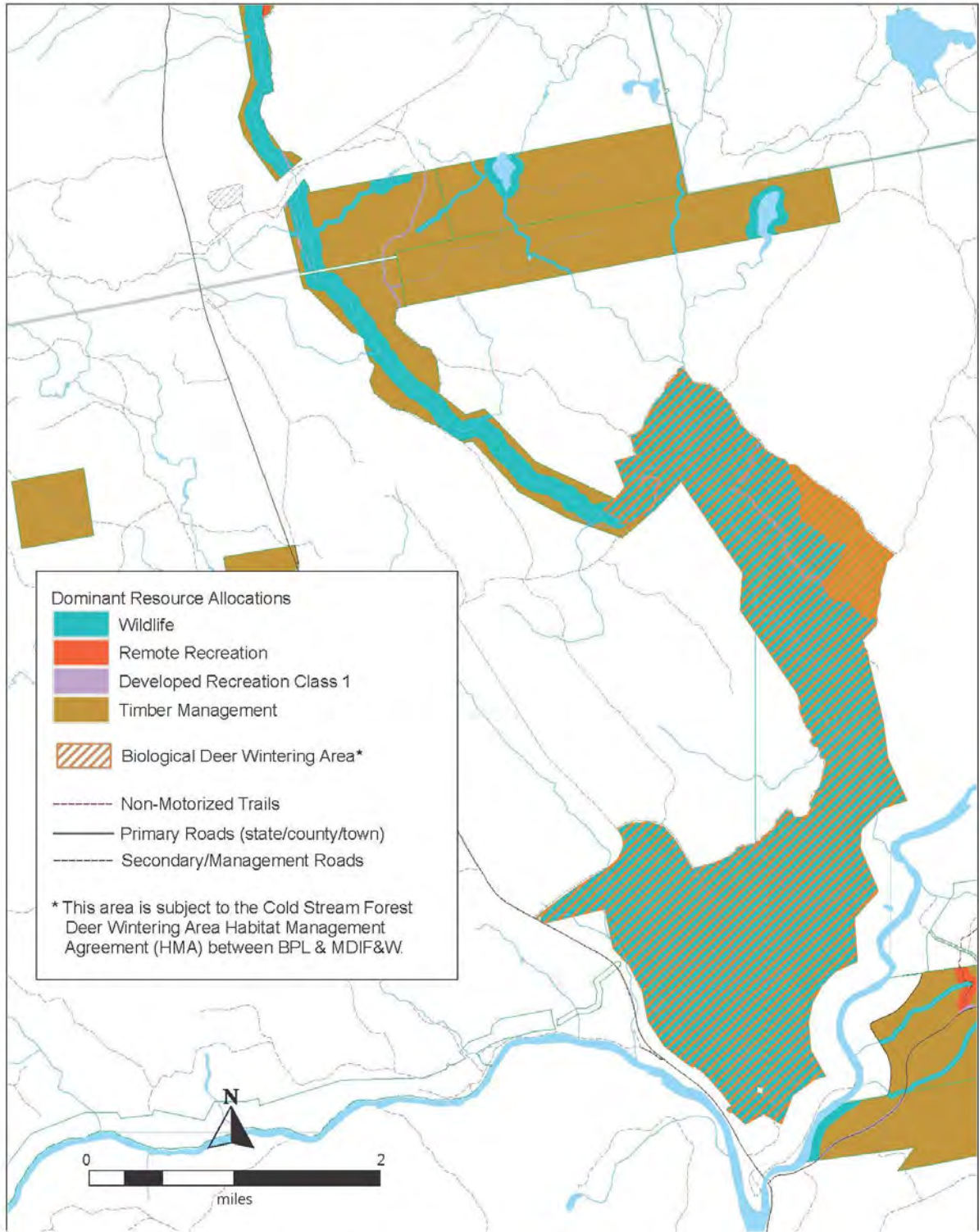


Cold Stream Forest Unit - North Section Proposed Dominant Resource Allocations



MAP FIGURE 9a.

Cold Stream Forest - South Section Proposed Dominant Resource Allocations



MAP FIGURE 9b.

Management Recommendations for the Cold Stream Forest Unit

Recreation

Campground and Campsite Management

- Evaluate the need to relocate campsites to bring them into environmental compliance, particularly within riparian resource protection zones. Upgrade or relocate campsites as needed based on this evaluation.
- Remove the collapsing privy in the woods near the Durgin Pond campsites. Depending on the above evaluation, consider replacing the privy with a new unit nearby, or with a portable chemical toilet placed in the area each camping season.
- Evaluate the condition of picnic tables, fire rings, and privies at the Lone Jack campground and other campsites; repair or replace as needed. Evaluate privies for possible relocation to protect water resources.
- Evaluate the need for privies at established individual roadside campsites and informal sites that may receive heavy use, or possible closure of sites where no good options exist for installation of a privy.
- Implement a volunteer caretaker program to provide a visible management presence and routine maintenance of the existing Lone Jack campground and all individual campsites.

Trail Maintenance

- Maintain access trails to Lang Pond, Big Berry Pond and Snake Pond to provide adequate clearance for those carrying in/out boats, remove blowdowns, etc. Consider minor rerouting of these trails and/or improvements to trail treads in wet areas, as resources allow. Install trailhead signage and mark trails as needed.
- Mark and maintain the trail to Cold Stream Falls and formalize the parking area, including trailhead signage; reroute the first quarter-mile of the trail off the old skid trail to minimize conflict with future timber harvesting, and improve the trail users experience.

Motorized Recreation

- Continue to allow ATVs to use the existing routes, on the southern end of the Unit near The Forks, primarily on management roads, to maintain important regional routes and trail connections. No additional ATV routes will be developed. Existing trails may be rerouted, if necessary, to address problematic sections or in response to other management concerns.
- Continue to allow snowmobiles to use the management roads for currently designated trails across the Unit, as part of the regional ITS route and to maintain important trail connections. Temporary alternate routes may be designated to avoid conflicts with winter harvests.

Bear Bait Sites

- Evaluate number and location of bear bait sites; remove or relocate sites as necessary to bring the sites into compliance with Bureau standards.

Public Access and Management Roads

- As resources allow, continue to upgrade the road between Durgin Pond and Lone Jack campground with the objective of providing access for non-4WD or high-clearance vehicles to the camping, angling and other recreational opportunities in the north part of the unit.
- Consider additional work to improve drainage in the vicinity of the Tower Road grade.
- Continue to inspect and evaluate bridges and culverts for condition, fish passage, and ability to pass high flows, as required by the Fisheries Habitat HMA.
- Develop a road plan within the next few years by which to maintain the access road system, and determine the most appropriate primary access routes on which the Bureau will focus resources. The primary objectives of the plan will include:
 - Stop water siltation caused by road traffic
 - Brush back road sides to improve visibility and aid in early season drying of roads
 - Address roadside water ponding to reduce effects on water temperature (warming)
 - Replace unsafe water structures (bridges, box culverts)
 - Replace water crossings that impede fish passage
 - Improve roadside ditching and road surfaces to achieve a gradable surface

Wildlife/Rare or Exemplary Ecosystems and Habitats

- Implement the Fisheries Habitat HMA. As stipulated in the HMA, BPL will confer with MDIF&W when conducting timber harvesting or other activities with the potential to affect fisheries habitat.
- Implement the Biological Deer Wintering Areas HMA. All timber harvesting and other forest management within the BDWA will be conducted in accordance with the HMA and in consultation with MDIF&W.
- Coordinate with MDIF&W on any potential non-motorized trail or campsite development/relocation in areas allocated to Wildlife Management to ensure protection of sensitive wildlife habitats.

Timber Management

- The Bureau will manage areas allocated to Timber Management as a multiple use working forest. Timber resources where allocated will provide a diverse forested environment and generate high quality-high value products to support Bureau operations and Maine's timber-based economy. The Bureau will practice multi-aged management with a long-term focus primarily on mature quality timber.
- Because of the popular and accessible trout ponds on this unit as well as the scenic Cold Stream corridor, certain areas nearest those features will be subject to Visual Class I considerations.

Administrative Issues

Boat Storage at Ponds

- Implement a phased program to bring boat storage at the ponds into compliance with BPL policy as stated in the IRP, and address to the extent possible – recognizing boater and angler needs/desires and historic use patterns – the undesirable aesthetic impacts on the remote pond setting.

- Phase I will focus on removal of all unusable and abandoned boats and ensuring all remaining boats are properly marked with owner identification. BPL will make a rigorous effort to contact boat owners before usable boats are removed. Removed boats will be stored by BPL off-site for a period of time, and owners will be given the opportunity to retrieve them if desired.
- Phase II, after an assessment of the effects of Phase I on the number of boats stored at the ponds and site aesthetics, will seek to further consolidate boat storage in more limited, defined areas, potentially with storage racks constructed by BPL, and may seek to further reduce the number of stored boats to facilitate the consolidation of the storage areas and to minimize storage of unused or rarely used boats.

Signage and Visitor Information

- Develop a plan for signage to be installed and visitor information to be provided on the Unit, to include BPL's standard yardarm signs at primary entrance points, directional signage, and informational kiosks. The role of the Land for Maine's Future program and the state's partners in the acquisition process (Trout Unlimited, Trust for Public Land and others) should be a feature of the kiosks.
- Coordinate with MDIF&W regarding posting of fishing regulations on the Unit.
- Develop a Cold Stream Forest Unit brochure and map for distribution to the public.

Sandy Bay Unit

This section provides background information on the Sandy Bay property, including the general character of the land base; geologic and ecological resources and natural communities; wildlife resources; historic and cultural resources; recreation and visual resources; and timber resources. This is followed by a summary of the key management issues and opportunities that the Plan will seek to address through the Vision, resource allocations and management recommendations for the unit, which conclude the section.

Character of the Land Base and Acquisition History

The 2,712-acre Sandy Bay Unit is a largely forested block of land touching on the Canadian border at its northern end. The Unit is dominated by a broad central ridge of modest height, with the highest ground at approximately 2,200 feet, about 550 feet higher than the lowest ground at the south end of the Unit. The US Department of Homeland Security operates the Jackman border crossing facility adjacent to the northwest corner of the unit.

The property was conveyed to the State of Maine in 1985 as a part of a land trade with Louis O. Hilton. There are several outlots zoned for commercial uses adjacent to the border crossing facility, and a residential lot straddling the international border nearby.

Natural Resources

Geology and Soils

The Sandy Bay Unit is underlain by the large Frontenac Formation, a wide band of bedrock extending more than 50 miles to the northeast and westward into Canada, and characterized by interbedded mudstones and sandstones within the broader landscape of sedimentary and metamorphic rocks. The surface geology of Sandy Bay is mostly basal till, a heterogeneous