

CHAPTER 3 - PERKINS LOT

PROPERTY DESCRIPTION AND LAND USE HISTORY

The Perkins lot is located in the north corner of Liberty. Landlocked, it is 2,400' northwest of Bolen Hill Rd. and thence 1.7 miles south to Route 3 via Bolen Hill Rd. It is partly adjacent to the Montville town line and very near to the Palermo town line. It is adjacent to the southeast side of the Sheepscot River, with a small portion over on the northwest side. The lot is a composite of several former lots. It totals 155 acres, of which 136 acres are wooded. The 19-acre balance consists of a 15-acre shrub swamp, 3 acres of open water (river and beaver pond) and 1 acre of open ground (grassy old field and old wood yard). No buildings are on the lot.

As with most woodland in this area of Maine, the ownership was farmland (both for crops and pasture) in the 19th century. An old road (possibly a former town road?), identified as Ben Colby Rd. on the town tax map and as Mason Hill Rd. on the USGS topographic map, runs through the lot's north portion. Stone abutments remain on the banks of Sheepscot R. A cellar hole is in the middle of the lot, 350' southwest from the road. Stone walls and barbed wire remnants run internally and along some boundary sections. A small cemetery is along the east boundary line. An ATV/snowmobile runs along the edge of the wetland south of Ben Colby Rd. and crosses the southwest boundary. Another woods road comes into the lot from the north, west of the beaver pond, and joins with Ben Colby Rd. The property fits within a rural landscape of mostly forest and wetlands with a few houses in the Chisholm Pond area of Palermo. Swamps are associated with the Sheepscot River. The woods southeast of the lot was heavily cut in the 1990s. Allen Blueberries has an active blueberry field adjacent to Bolen Hill Rd., east of the Perkins lot. South of the blueberries, after a patch of woods, is a mowed field.

A forest management plan was prepared by Hollis Tedford in 1984. The property was commercially harvested in 1993-95 by Peasely Forest Products, under the supervision of Two Trees Forestry. A total of 93 mbf of sawtimber, 1,893 cords of pulp and firewood and 628 tons of chips were harvested. This grossed \$33,830 and netted \$25,372 for the town.

TOPOGRAPHY AND ACCESSIBILITY

The terrain of the lot's southeast half is a continuous moderate slope facing northwest towards the Sheepscot River. The northwest half is much gentler with occasional knolls. Several seasonal streams flow northwest, either into a swamp or a beaver pond. The highest elevation is the east corner at about 620'. The lowest point is river and wetlands at 320'.

Access into the property is from Bolen Hill Rd. Being landlocked, the town has a deeded right-of-way across Allen Blueberry Freezer, Inc.'s southwest boundary (dated Dec. 31, 1987). A 2,400' long truck road was built for the 1993-5 timber harvest, leading to the wood yard. That the truck road is already in place is good news for future harvests, but it is still a long way and will be an additional harvest cost. Bolen Hill Rd. is maintained and passable only in the southerly direction to Route 3. The old roadway is still in place northward to Peaveytown Rd., which connects to Route 220, but is washed out and used primarily by snowmobilers

BOUNDARIES

The property was surveyed in January, 1985 by Rowe & Ellis of Waterville, ME. The town tax map erroneously labels lot 7 as belonging to John Patrick. In concurrence with the survey, a division line through his lot, drawn on the tax map and dated 3/90, isn't the acknowledged southwest boundary of the Perkins lot. The balance of lot 7 is now labeled 7A. Based on the 1985 survey's findings, a deed dated Oct. 27, 1987 was filed to convey this portion from owners Emory Boyer & Francis Haskell to the town of Liberty (with the retention of a right-of-way by Boyer/Haskell across the Perkins lot). Two other corrections are: 1) the lot does not run up along the Montville town line nearly as long as the tax map shows, but rather veers away 900' up from the river; and 2) the lot includes the portion between the river and Chisholm Stream, which is not depicted on the tax map.

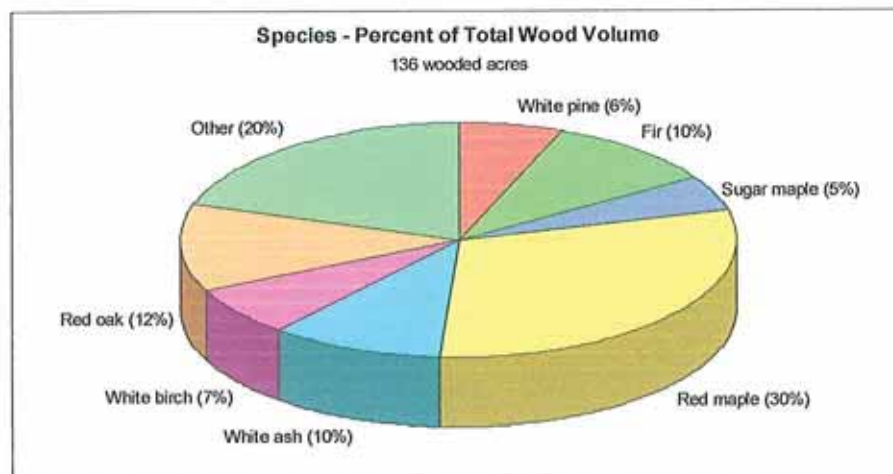
The survey map shows iron pins in several corners, but none were found. The boundaries are marked on the ground with old ax blazes and blue paint. Old flagging is still scattered along the lines; this has been reinforced with new pink flagging in spots. Barbed wire lies along the southeast boundary between Ben Colby Rd. and the wood yard. A stone wall is west of the corner by the yard for 220', and then barbed wire picks up again to a big hemlock on the west bank of the stream. The Sheepscot River is the boundary in the northwest and Chisholm Stream is the boundary for about 800' in the west side. The balance of the lines just run through the woods. The lines in the wetland between the river and stream were not evaluated.

TIMBER RESOURCE

Forests cover 136 acres of the Perkins lot. Most of the acreage is classified as Hardwood. An open shrub/grass swamp with insignificant wood volume, the 2 rivers, a beaver pond and clearings account for 19 acres. Seven stands were delineated. The distribution of timber type among them is:

Type	# of stands	# of acres	% of total
Hardwood	4	100	74
Mixedwood	3	36	26
Softwood	0	0	0
	7	136 acres	100%

In July, 2008, inventory data were taken in the forested areas at 76 variable radius plots using a 15-BAF prism on cruise lines running parallel to the southwest boundary. One plot represents an average of 1.8 acres. The overall volume estimate is accurate within $\pm 9\%$ nine times out of ten. Error is greater for individual species, products and values.



The lot hosts a variety of tree species. For commercial size trees (6"+ dbh) across the entire woodlot, red maple has the most volume, with just under 1/3 of the total. Significant associates include, in descending order, red oak, fir, white ash, white birch, white pine and sugar maple. Minor species include yellow birch, hemlock, black cherry, cedar, spruce, hophornbeam (ironwood), red pine, aspen, brown ash, beech and elm.

Forest stands are further identified based on dominant canopy height and canopy closure. Much of the woodland is made up of mature pole and sawtimber size trees that are 50-80 years old. Several big old legacy sugar maples still linger on near the cemetery. Canopy heights for most stands are either tall or moderate to tall. Forest canopies are either moderately closed or somewhat open. The exception is the uncut stream ravines, whose canopies remain fully closed.

Tree quality, defined as trees with the potential to become sawtimber, is mixed. Many of the oaks and pines are nice, as well as some ashes and sugar maples. Most of the unacceptable trees are fir, which virtually always is considered pulpwood, due to its predisposition towards early onset of internal rot. Having reached their physiological maturity, some of the firs have died. These are either still standing as snags or have fallen over, adding coarse woody debris to the forest floor. Others are in serious decline. Most of the red maples are also poor quality. Some of the stems are designated as pulp due only to small size and is actually good quality growing stock. Some of the larger pines are rough, with many large lower limbs and/or multiple stems, which degrade the tree's quality. Similarly, the few very large hardwoods contain cavities and rot. Through a program of cutting the poor quality individuals and favoring the better trees, overall tree quality will be maintained or improved over time.

The estimated total wood volume on the Perkins lot is 227,000 board feet of sawtimber and 2,210 cords of pulpwood. For the 136 wooded acres, this comes to 1,670 board feet and 16¼ cords per wooded acre, which is lower than average. The wood is worth about \$58,000. Per unit values have been lowered by 10% as compensation to the long access and long skid. Per acre, it is valued at about \$426/acre, which is also below average. Sawtimber volume is dominated by red oak and white pine, together at 50%. Other significant sawtimber species include ash, red maple and hemlock. The pulpwood volume is dominated by hardwoods, with 79%. Sawlogs comprise 17% of the total commercial wood volume, which is average.

The last harvest has boosted growth rates. It averages ½ cord per acre per year. This will allow a sustainable harvest level of 65 cords per year for the 130 non-wetland acres. For a 15-year cutting cycle, 975 cords can then be harvested (or 7½ cords per acre per year). For a 20-year cutting cycle, this comes to 1,300 cords (or 10 cords per acre). This is only a property-wide total. Due to variability of age, structure and stocking of the forest types, harvest levels will vary among stands. Some may not be cut at all, while others may possibly experience a heavy regeneration cut.

The last harvest has also created a profusion of tree regeneration. It is varied and consists of most of the overstory trees, both hard- and softwoods. Shrubs are also common. The density of the regeneration depends on light/shade conditions and wetness on the forest floor. Berry patches, both rasp- and black, appear in some of the openings. Other shrubs include hazelnut, spirea, witch hobble rose, sumac, nannyberry and arrowwood viburnums, honeysuckle and dogwood, with moist areas supporting highbush blueberry, alder and willow. Small trees include the 2 ironwood species, hophornbeam (*Carpinus*, also known as blue beech or musclewood), and hornbeam (*Ostrya*), striped maple and hawthorn.

INSECT, DISEASE AND WEATHER INFLUENCES

No significant insect or disease conditions were noted on the Perkins lot. The most serious pathological event is simply the physiological maturity of the fir and its decline and mortality. The little amount of beech is infected with the endemic beech-bark disease.

WILDLIFE

The property has a variety of wildlife habitats. Fresh water is present in Sheepscot River, shrubby wetlands and the seasonal streams. Fish and other aquatic animals such as muskrats, minks and turtles are probably active in the wetlands along the river. Beavers are active, both in the river and a separate wetland. They depend on young hardwoods, especially aspen. The oaks provide valuable hard mast with their nuts that are preferred by many birds and mammals, including deer, squirrels, chipmunks, bear, grouse and turkey. Birch seeds and alder plus hazelnuts are additional food. Grouse feed on the aspen buds. Red squirrels prefer spruce seeds. There's plenty of hardwood browse for deer and hares and fir for moose.

The thick ground cover provide cover for birds and small mammals, which are prey to larger predators. The edges between the forest and the field and roads present an interface of habitat for both food and cover for animals such as deer, moose, partridge, fox and hare. Moose and deer evidence is common. Coyote and fisher are probably in the neighborhood.

The Maine Department of Inland Fisheries and Wildlife has *not* mapped any "Habitat of Management Concern," despite the presence of the river and its adjacent wetlands that seem to be eligible for "Inland Waterfowl and Wading Bird Habitat." This seems to be an oversight. The Maine Natural Areas Program (MNAP) reports no documentation for this site to contain 1) rare, threatened and/or endangered plants, 2) rare, threatened and/or endangered animals, or 3) rare and/or exemplary natural communities. Strangely, the MNAP doesn't identify the property to intersect with Atlantic salmon habitat, despite being within the Sheepscot watershed. The Sheepscot Valley Conservation Association (SVCA), in a recent report entitled *Sheepscot River Watershed and Boothbay Peninsula Conservation Focus Areas*, identified both rearing and spawning areas just north of the lot in Montville. The lot does not provide habitat for lynx. The parcel does not intersect with MNAP land trust focus area nor has it been targeted by MNAP for inventory. However, it lies within SVCA's "Chisholm Pond Roadless Area" focus area. No evidence of threatened or endangered plants or animals was noted during the fieldwork. Should such plants or animals be discovered, appropriate measures should be adopted to ensure protection of their habitat.

RECREATION, AESTHETICS AND CULTURAL FEATURES

Recreational activity is probably limited to the use of the snowmobile/ATV trail along the river and on Ben Colby Rd. Few people, if anyone, walk the woodland, though hunting is allowed and fishermen may frequent the river. Aesthetic features include the Sheepscot River, wetlands, tributary ravines and some of the big trees. For a serious effort to bring recreationists to the lot, a trail would need to be kept clear on the truck road across Allen's Blueberry land. Then trails would need to be cleared, mostly on selected skid roads, to points of interest, such as the cellar hole, cemetery, beaver pond and the Sheepscot River.

The Maine Historic Preservation Commission (MHPC) reports no known historic archaeological sites or existing historic buildings on the property. However, the property does contain an old homestead evidenced by a cellar hole and assorted debris and rusted machinery. A small cemetery sits along the east boundary line, though it doesn't seem to have any upright stones. The MHPC notes that "no prehistoric archaeological sites are known only because no survey has been conducted. However, the following area is archaeologically sensitive: The area within 50 meters of the Sheepscot River."

LEGAL RESTRICTIONS

Wetlands are mapped northwest of the Sheepscot River and along the southeast side, ranging 100-400' in width. Another wetland is mapped about 800' southeast of the river. It includes the beaver pond and adjacent wetland, which extends on both sides of Ben Colby Rd. The 250' Shoreland Zoning runs along the edges of these wetlands. See the General Chapter for details.

ESTIMATES OF TIMBER VOLUMES AND VALUE BY SPECIES

Town of Liberty - Perkins lot

Liberty, Maine - July 29, 2008

Products, Species	Volume ^{1,2}	Stumpage ³ Rate	Value ⁴
Sawtimber:	MBF	\$ per MBF	
White pine, grade	48	\$120	\$5,760
White pine, pallet	0	50	0
Red pine	8	55	440
Hemlock	20	45	900
Spruce	13	90	1,170
Sugar maple	6	250	1,500
Red maple	15	70	1,050
White ash	22	90	1,980
White birch	10	90	900
Yellow birch	4	70	280
Red oak	60	170	10,200
Hardwood pallet	21	35	735
Totals:	227 mbf		\$24,915
Pulpwood:	Cords	\$ per cord	
Spruce-fir	310	\$20	\$6,200
White pine	50	4	200
Cedar	45	0	0
Hemlock/Red pine	70	9	630
Hardwood pulp*	960	11	10,560
Firewood*	775	20	15,500
Totals:	2,210 cords		\$33,090

Total Estimated Stumpage Value = \$58,005

¹ Total timber volume estimate is $\pm 9\%$ nine times in ten. Error is greater for individual species or products.

² Pulpwood volumes include topwood from sawtimber trees.

³ Stumpage price estimates based on recent local averages, Summer, 2008, and discounted 15% to accommodate access and skidding conditions. They are gross values and do not reflect forester fees.

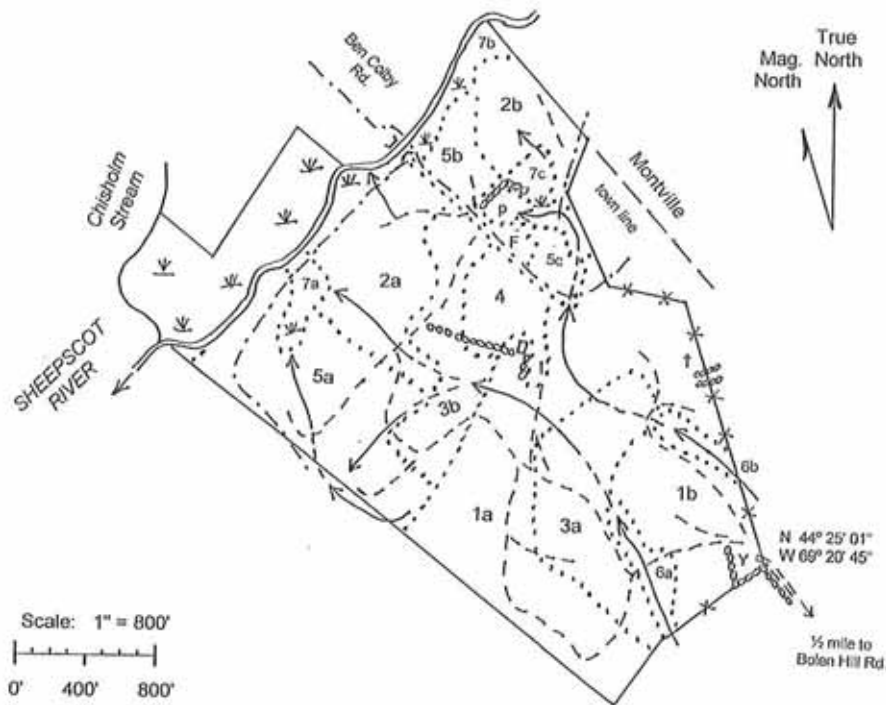
⁴ Represents the "liquidation value" if the entire property was cleared. This is presented for illustrative purposes only and is not recommended.

* Aspen and white birch is pulpwood; balance of the hardwood pulp is split evenly between firewood and pulp

Mitchell Kihn; LPF # 3206
Mid-Maine Forestry

PROPERTY MAP

Town of Liberty - Perkins Lot
Map 11, Lot 10



Scale: 1" = 800'
0' 400' 800'

LEGEND

Stand number & boundary	2
Stone wall	ooooooo
Barbed wire	-x-x-
Truck road	= = = =
Wood Yard / Field	Y / F
Skid road	- - - -
Snowmobile / ATV trail	- . - . -
Bridge abutments) (
Seasonal stream	- - - ->
Swamp	W
Beaver pond	p
Cellar hole	□
Cemetery	†

FOREST STANDS

Stand	type	Acres
1	H-2/3-B* pole/sawtimber	48
2	H-2/3-B* pole/sawtimber	23
3	H-3-C pole/sawtimber	23
4	H-1-A saplings	6
5	M-3-C sawtimber	26
6	H-1-A saplings	4
7	M-2-B pole/sawtimber	6
	M-2/3-A pole/sawtimber	
	H-2-C poletimber	
	WOODLAND	= 136 acres
	Openings	1
	Alder swamp	15
	Open water (pond and river)	3
	NON-WOODLAND	= 19 acres
	TOTAL PROPERTY	= 155 acres

*Codes:

H = 75%+ Hardwood; S = 75%+ Softwood; M = Mixedwood
1 = 0-30' height; 2 = 30-60'; 3 = 60'+
A = 70-100% crown cover; B = 40-70%; C = 15-40%

sapling = trees 1-4" dbh; poletimber = trees 5"-9" dbh;
sawtimber = trees 10"+ dbh for softwoods & white birch;
12"+ dbh for hardwoods

Map details are approximate and based on survey, topographic and soil maps and personal reconnaissance in July, 2008. For forest management purposes - not a boundary survey.

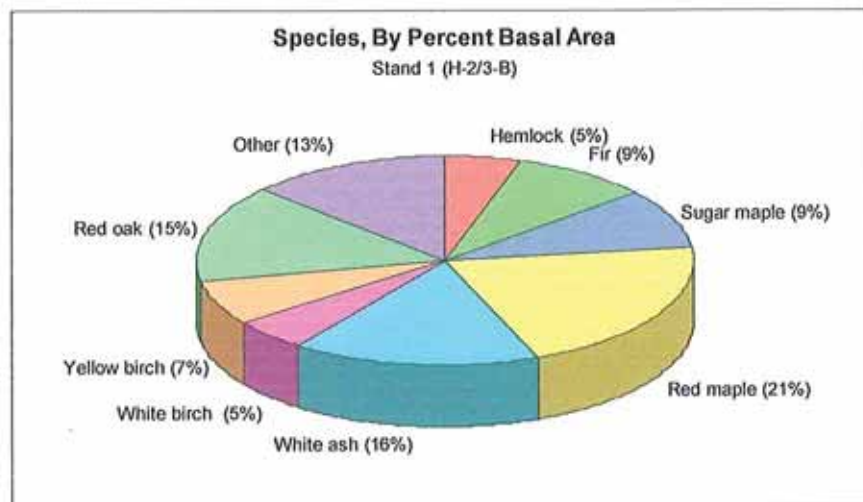
Mitchell Kihn, LPF #3206
Mid-Maine Forestry
September, 2008

STAND DESCRIPTIONS AND RECOMMENDATIONS

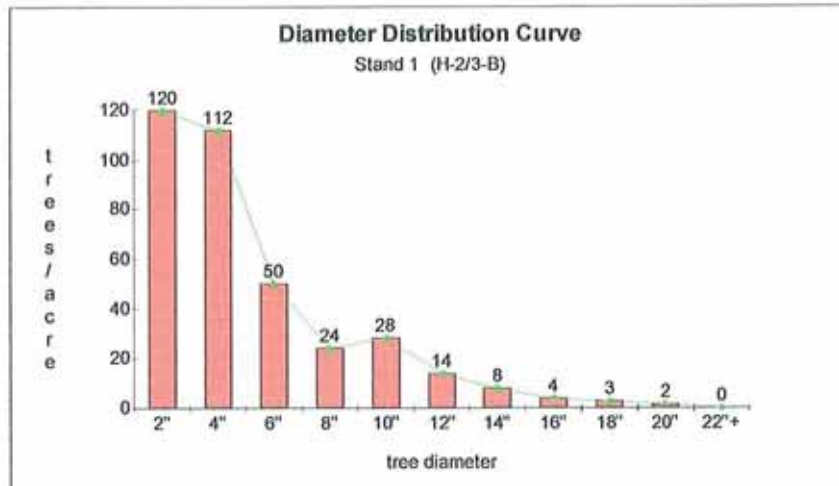
STAND 1 - HARDWOOD POLE/SAWTIMBER (H-2/3-B)

48 acres

Stand 1, the largest stand in the lot, is in 2 units. They are both on the moderate slope in the southeast half of the lot. Stand 1a is "C"-shaped, touching the southwest and northeast property boundaries and the lower part of the moderate slope. It is accessed via skid roads that radiate out from stand 1b, where the wood yard is located. Stand 1b is in the southeast corner. Both areas contain many skid roads, both primary and secondary. Two interesting cultural features are in stand 1a - a cellar hole, and nearby open grassy area, on the northwest side and a small cemetery along the northeast boundary. Soils are well drained on the upper slopes and moderately well drained and seasonally wet on the lower slopes. Two seasonal streams flow through the lower slopes of stand 1a, on either side of the homestead. Soils are very stony. Site quality is excellent for white pine. Operability with machines is very good, limited by seasonal ground wetness on the lower slope. The stand was harvested in 1993-5.



Stand 1 is a hardwood stand with a wide variety of species. Red maple is the most common, taking up 1/5 of the growing space. Associates include red oak, white ash, sugar maple, fir, yellow and white birch, and hemlock. Minor species include beech, white pine, hophornbeam, elm, black cherry, aspen and spruce. Apple trees are south of the cellar hole, a remnant of the farm's occupation. The stand contains a mix of poles and sawtimber in the canopy with a strong sapling component. The canopy trees are most likely even-aged, with scattered older pasture trees, including legacy sugar maples by the cemetery. Tree diameters range up to 32", with an average of 10". With a basal area of 70 ft²/acre, stand 1 is at the recommended stocking. Canopy height is moderate to tall. Crown closure is only moderate due to the last harvest.



Tree quality is fair to good. There are some nice quality stems, especially oak, mixed with unacceptable stems, particularly red maple. A few snags and broken stems are present. The beech is diseased. The growth rate has increased to $\frac{1}{2}$ cord per acre per year. Volume per acre is moderate with 2.5 mbf of sawtimber and 18 cords of pulp. Red oak makes up 40% of the sawtimber volume. White ash and hemlock each make up 14%. Sawtimber volume comprises 22% of the total volume of commercial wood, which is above average. Regeneration is profuse and dense in spots due to the last harvest. Saplings consist of all the overstory species. Shrubs include raspberry, blackberry, hazelnut, spirea and dogwood, with moist areas supporting highbush blueberry and willow. Small trees include hophornbeam and striped maple.

RECOMMENDATIONS

The long-term objective should be timber production and recreation. Strive for a minimum basal area of 70 ft^2/acre . Over time, management will be based on an uneven-aged basis utilizing a 20-year selection harvest cycle. Favor commercially valuable species such as oak, sugar maple, ash and pine.

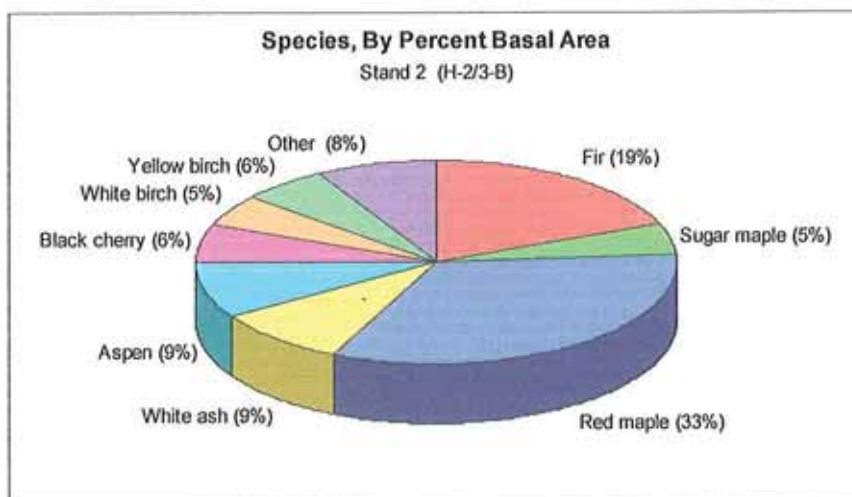
With the current stocking level, there is no need for harvest at this time. In another 15 years the stocking is expected to be 100 ft^2/acre basal area, at which time a harvest would be viable. Protect the streams (for wildlife habitat, aesthetics and ecological integrity) by a 50' no-cut buffer, or at least a buffer where cutting is minimal.

Create trails leading to the cellar hole and/or cemetery. Clear trees in and around these features, if desired, to make them more visible. Cultural research about the farmstead can be done by individuals or a group for educational purposes. The farmstead clearing can be a group camping spot.

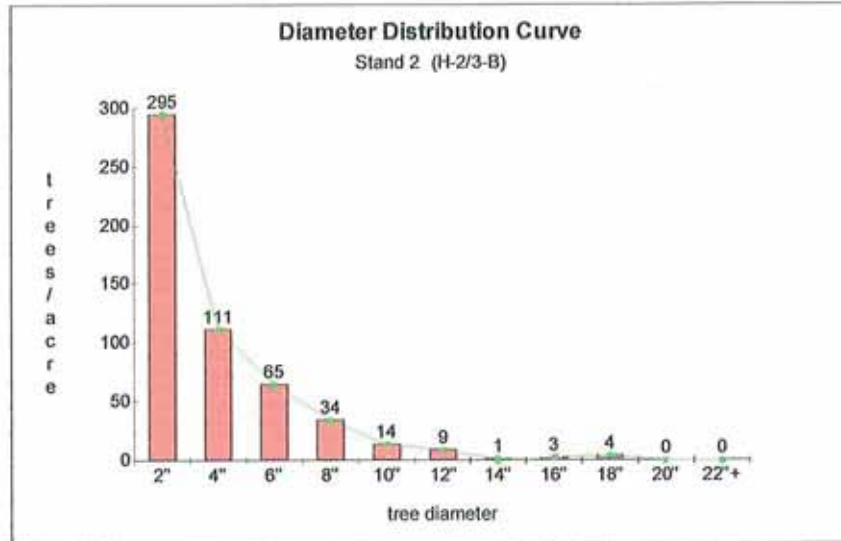
STAND 2 - HARDWOOD POLE/SAWTIMBER (H-2/3-B)

23 acres

Stand 2 is in 2 units. They are both in the northwest end of the lot. Stand 2a is adjacent to the south side of Ben Colby Rd. and the Sheepscot River. Stand 2b is adjacent to the north boundary, the floodplain of stand 7b and the swamp (stand 7c) created by the beaver dam. They are accessed through other stands to the southeast via skid roads and Ben Colby Rd. Being at the "back" of the lot, they are far from the wood yard, especially stand 2b. Skid roads thread through both units. A woods road used by ATVs parallels the river in stand 2a. A good woods road enters stand 2b's east side from the northern abutter, but then gets flooded out in stand 7c. Slopes are gentle to flat. Soils are moderately well drained in the south part of stand 2a, somewhat poorly drained in the northern part. Site quality is excellent for white pine. Soil drainage is poor in stand 2b, and between the river and trail in stand 2a, resulting in only fair site quality for white pine. Several seasonal streams flow northwest into adjacent swamps of the river. Operability with machines is limited by seasonal ground wetness. It was harvested in 1993-5, except for the strip between the river and ATV trail (as a riparian buffer).



Although they share the same type designation (H-2/3-B), stand 2 differs from stand 1 in several ways. Stand 2 is wetter, thus supporting a higher proportion of red maple and fir than stand 1. It also contains more aspen but less oak and ash. Poletimber is more dominant over sawtimber, resulting in a lower average diameter (9") than stand 1. Trees range up to 18" in diameter. Stocking is lower than stand 1. The basal area is only 53 ft²/acre, which although is not understocked, is sub-optimally stocked. The canopy height is moderate to tall and crown closure is moderate.



The quality is poor. Although a few acceptable stems are scattered throughout, most are poorly formed red maple, black cherry and fir (which is always considered to be pulp quality). Growth rate has been increased to $\frac{1}{2}$ cord per acre per year. Volume per acre is moderately low at 0.8 mbf of sawtimber and 16 cords of pulpwood. Sawtimber volume comprises a low proportion (9%) of total commercial wood volume. The little bit of sawtimber consists of red maple, white pine, ash, yellow birch and oak. As with stand 1, regeneration is abundant and varied in stand 2. Shrubs include hazelnut, hawthorn, alder, blackberry, dogwood, spirea and witch hobble. Stand 2b harbors the 2 ironwood species, the small trees of hornbeam and hophornbeam, as well as poison ivy. Beavers are actively chewing aspen saplings in stand 2b near the swampy extension of the beaver pond (stand 7c).

RECOMMENDATIONS

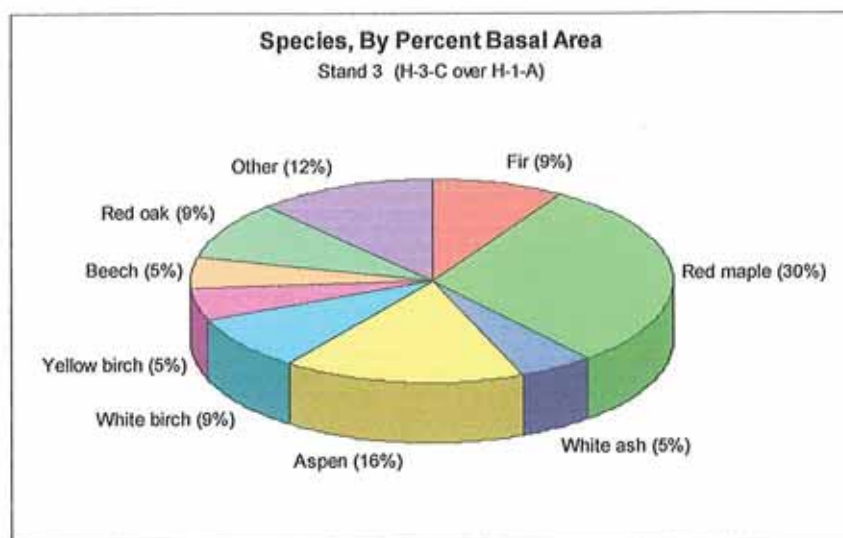
Long-term objective is wetland and wildlife habitat protection plus recreation. Maintain at least a 250' no-cut riparian zone.

Leave alone and allow to grow. Clear and maintain Ben Colby Rd. and the trail along the river for recreational use.

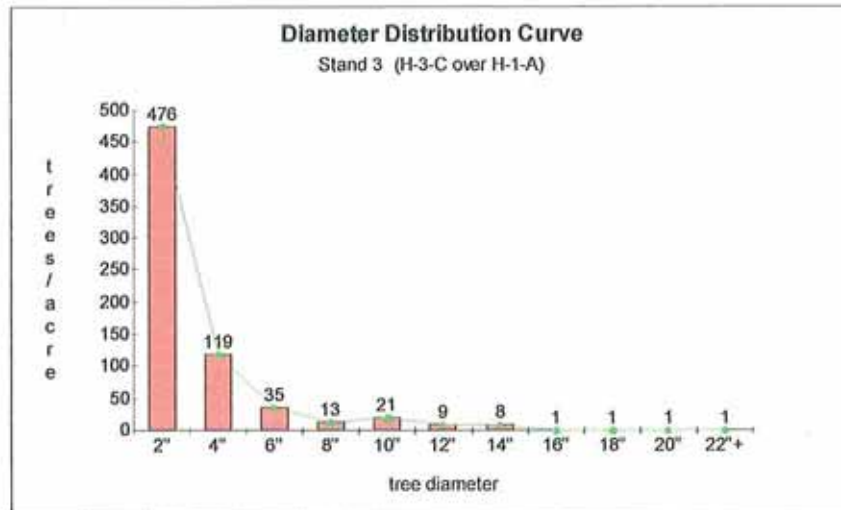
Even if timber production was a priority, there is currently no excess of stocking in stand 2. Low priority.

STAND 3 - HARDWOOD SAPS/POLE/SAWTIMBER (H-3-C over H-1-A) 23 acres

Stand 3 has 2 units. Stand 3a is on the gentle to moderate slope between stands 1a and 1b. It is accessed from stand 1b by several skid roads. Stand 3b is on the flatter terrain west of the cellar hole. It is accessible through stands 1a and 4. Both areas contain many skid roads. Soils are a combination of well to moderately well drained. Two seasonal streams flow through stand 3a, one of which continues through 3b. Site quality is excellent for white pine. Operability with machines is very good, but limited by seasonal ground wetness on the moister soils. The stand was harvested in 1993-5.



Species composition of stand 3 is between that of stands 1 and 2. Red maple dominates with 3/10 of the growing space. Aspen is common, along with red oak, fir, white and yellow birch, white ash and beech. Minor species include white pine, black cherry, hemlock, gray birch and hophornbeam. An area in middle of the south half of stand 3a contains white pine that resembles a shelterwood cut. Saplings are very numerous. They, along with poles and sawtimber each represent 1/3 of the growing space. The cutting here was heavier than in stands 1 and 2, resulting in a 2 aged-stand, with a sparse high canopy of poles and timber over a dense low canopy of saplings. The high canopy is understocked with a basal area of only 45 ft²/acre. Average diameter is 10". But if the saplings are included, the stocking rises to 66 ft²/acre and average diameter drops to 4", making it adequately stocked. Trees range up to 24" in diameter.



Tree quality is fair. Most of the maples have unacceptable form. Some maple, birch and cherry have top dead tops and are declining. Growth is rapid, but wood accrual rate is kept to a low $\frac{1}{4}$ cord per acre per year due to low volume. Volume per acre is only 0.9 mbf of sawtimber and 13 cords of pulp. Sawtimber volume comprises 13% of the total volume of commercial wood, which is below average. It is made up of maple, oak, pine, white birch and ash. Like stands 1 and 2, regeneration is profuse and dense in spots due to the last harvested. Saplings consist of all the overstory species. Shrubs are also common and varied. They include raspberry, blackberry, blueberry, rose, hazelnut, sumac, willow, spirea, hawthorne, nannyberry, honeysuckle, alder and striped maple.

RECOMMENDATIONS

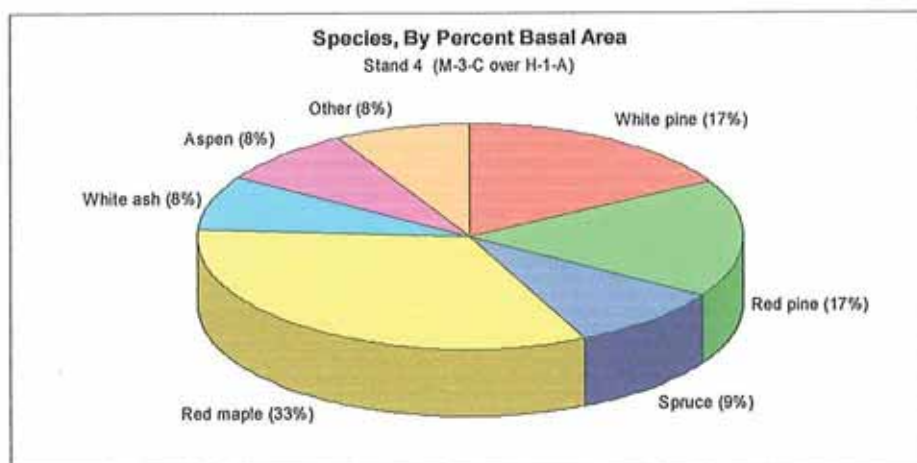
The long-term objective of stand 3a should be timber production and recreation, similar to stand 1. Strive for a minimum basal area of $70 \text{ ft}^2/\text{acre}$ based on an uneven-aged structure utilizing a 20-year selection harvest cycle. Favor commercially valuable species such as oak, ash and pine. Stand 3b, however, located on the lower flat portion nearer the river, should be left alone for water and wildlife protection and used for recreation.

With the high canopy of stand 3a understocked, there is no need for harvest at this time. Re-evaluate in 10 years. Protect the streams (for wildlife habitat, aesthetics and ecological integrity) by a 50' no-cut buffer, or at least a buffer where cutting is minimal.

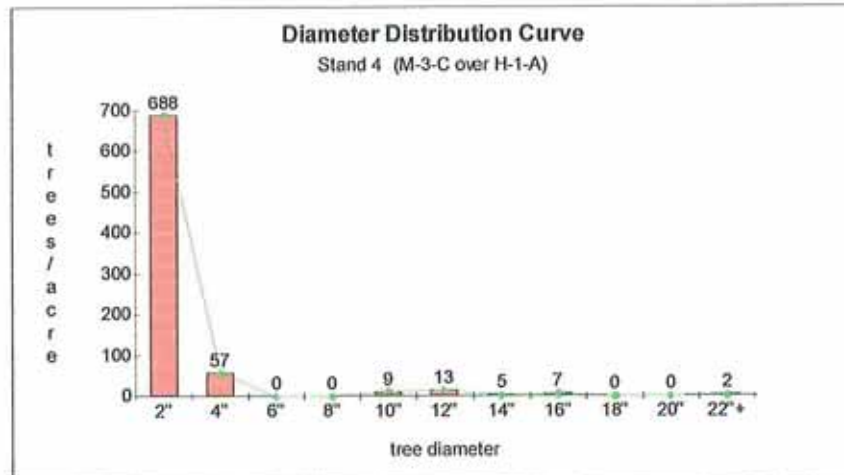
Create trails utilizing selected skid roads in both units.

STAND 4 - MIXEDWOOD SAPLINGS/SAWTIMBER (M-3-C over H-1-A) 6 acres

Stand 4 is a single unit just north of the cellar hole. It is adjacent to the south side of Ben Colby Rd. It is accessed through stand 1a to the east and south. A skid road runs through the stand. The ground is flat to gently sloping. Soils are moderately well drained that are seasonally wet with some wetter spots. Site quality is excellent for white pine (less so where too wet). Operability with machines is excellent contingent on dry or frozen conditions for the moist ground. It could very well have been a field or pasture for the old homestead. The stand was harvested in 1993-5.



Stand 4 is a mixedwood stand that had its start as a red pine plantation. Red maple is currently the most common species, with 1/3 of the growing stock. Both white pine and red pine each take up 1/6, with the balance consisting of white spruce, ash, with aspen and gray birch in the sapling understory. Residual apples are in the north end. Like stand 3, the harvest in stand 4 was heavy, resulting in a 2 aged-stand, a sparse high canopy of sawtimber over a thick low canopy of saplings. Partridge are utilizing the site. Although it still makes up 2/3 of the growing space, the high canopy is understocked with a basal area of only 40 ft²/acre. The trees are fairly big at an average diameter of 14". With the saplings included, the stocking rises to 60 ft²/acre and average diameter drops to 4", making it sub-optimally stocked. Trees range up to 32" in diameter.



Quality of the canopy trees is good. The 22"+ trees are limby white pines that may have been pasture pines. The balance contains acceptable growing stock. Growth is rapid, but wood accrual rate is kept to a low 200 board feet per acre per year due to low volume. Volume per acre is only 4.0 mbf of sawtimber and 8 cords of pulp. Sawtimber volume comprises a very high 50% of the total volume of commercial wood. It is made up of white and red pine, spruce and ash. Like the other stands, regeneration is profuse and dense in spots due to the last harvest. Saplings consist of maple, ash, fir, elm, gray birch, cherry and white spruce. Shrubs are also common and varied. They include raspberry, blackberry, highbush blueberry, spirea, alder and willow. Residual apple trees are in the very south end of the stand, just east of the stone wall near the farmstead. Additional apple trees, as well as poison ivy, are also present in the north end.

RECOMMENDATIONS

Long-term objective for stand 4 is recreation, as well as water and wildlife protection. Located on the lower flat half of the lot, it is in the area targeted for being left alone. Allow natural processes take their course.

With the understocked high canopy, there is no need for harvest at this time. Re-evaluate in 10 years. Protect the streams (for wildlife habitat, aesthetics and ecological integrity) by a 50' no-cut buffer, or at least a buffer where cutting is minimal.

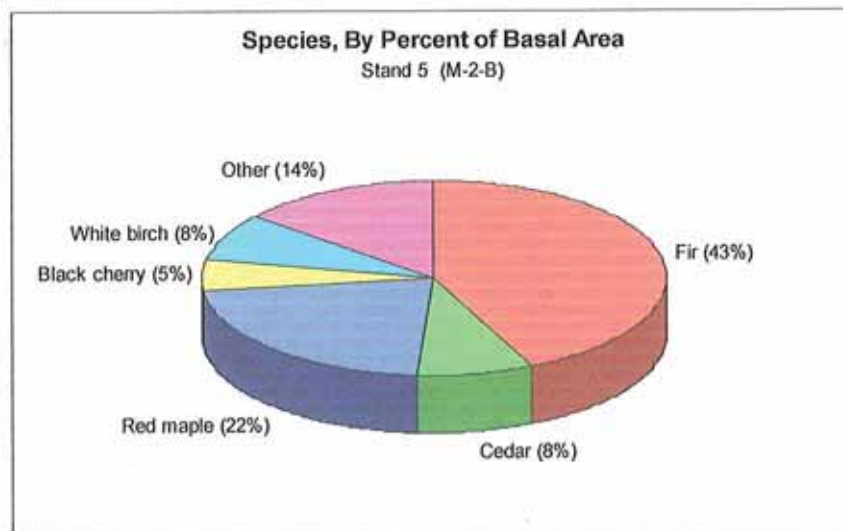
Create and maintain a trail on Ben Colby Rd. and the 1 skid road to serve as an approach to the homestead.

Release apple trees in both the south and north ends of the stand for wildlife benefit.

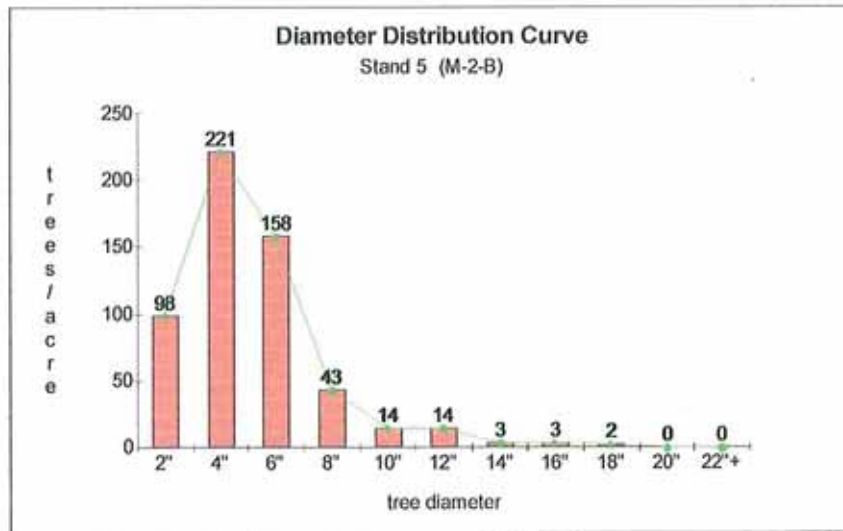
STAND 5 - MIXEDWOOD POLETIMBER (M-2-B)

26 acres

Stand 5 has 3 units, all in the lower northwest half of the property. Stand 5a is in the west corner of the lot, adjacent to the southwest property boundary and the Sheepscot River. Skid roads enter it from the east through stands 2a and 3b. The river trail also runs through its west side. Stands 5b and 5c are both on the north side of Ben Colby Rd. and are accessed directly from it. Stand 5b is between the river's floodplain and the beaver pond while stand 5c is on the southeast side of the beaver pond and swamp. The terrain is flat or gentle sloping. A seasonal stream flows through stand 5 into a swamp (stand 7a) at its north end. Another small stream flows north along stand 5c's east side into swampy stand 7c. Soils are mostly poorly drained. The northeast third of stand 5a is not as wet, being moderately well drained. Stand 5a's west corner and stand 5b's edge along Ben Colby Rd. are dry and well drained. Site quality for white pine is fair on the wet ground but excellent on the moist and drier areas. Operability with machines is good, but limited by wet ground to frozen conditions. The stand was harvested in 1993-5, except for swamp edges of stand 5c and northwest of the river trail in 5a (serving as riparian buffers).



Stand 5 is a mixedwood stand primarily composed of poletimber. Fir is the dominant species. Associates include red maple, white birch, cedar and black cherry plus smaller amounts of spruce, white pine, elm, hemlock, red oak and white ash. Trees range up to 18" in diameter and average 8". Most trees are 14" or less. The basal area is 76 ft²/acre, which puts it just into the understocked category. Stocking, of course, varies, with basal ranging from 60 to 150 ft²/acre. The canopy height is moderate and crown closure is moderate.



Tree quality in the stand is fair. Being short-lived and rot-prone, fir is always considered unacceptable. Many fir snags and deadfall are in the uncut corner of stand 5a. Most of the maple and many of the others are poorly formed. The cedar is not marketable as pulp, but some stems can be utilized for poles and posts. Growth rate is $\frac{3}{4}$ cord per acre per year. Volume per acre is moderately low with 0.7 mbf of sawtimber and 22 cords of pulpwood. Sawtimber volume is a small proportion (7%) of total commercial wood volume. It is mostly white pine, with some hemlock, spruce and white birch. Regeneration is abundant in most places and includes fir, cherry, aspen, gray birch, maple, spruce, oak and ash. Shrubs are also prolific, sometimes dominating a given area. They include raspberry, spirea, alder, blueberry, witch hobble, hazelnut, honeysuckle, blackberry, nannyberry and arrowwood viburnums and willow. Shrubby trees include striped maple and hawthorne. Apples are in stand 5c.

Beavers from the pond are actively chewing aspen saplings in stand 5b. They have established a trail through stand 5b to move back and forth to the river. Additional beaver activity is also occurring by another dam across the Sheepsfoot near the north end of stand 5a.

RECOMMENDATIONS

Long-term objective is wetland and wildlife habitat protection plus recreation. Maintain at least a 250' no-cut riparian zone.

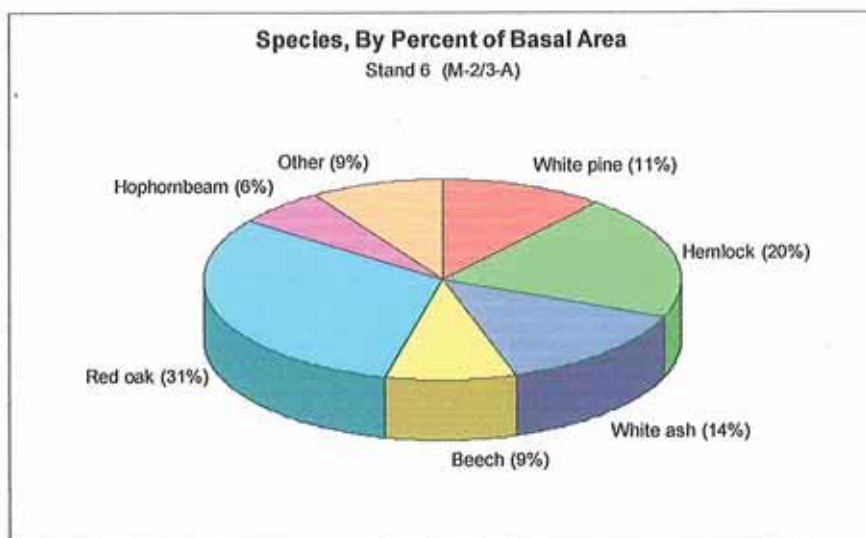
Leave alone and allow to grow. Even if timber production was a priority, there is currently no excess of stocking in stand 5. Low priority. Clear and maintain Ben Colby Rd., the river trail and the skid road cutting across stand 5a for recreational use.

If desired, release the apple trees in stand 5c for wildlife benefit. Consider removing softwoods from near the beaver pond so that hardwoods would better prevail.

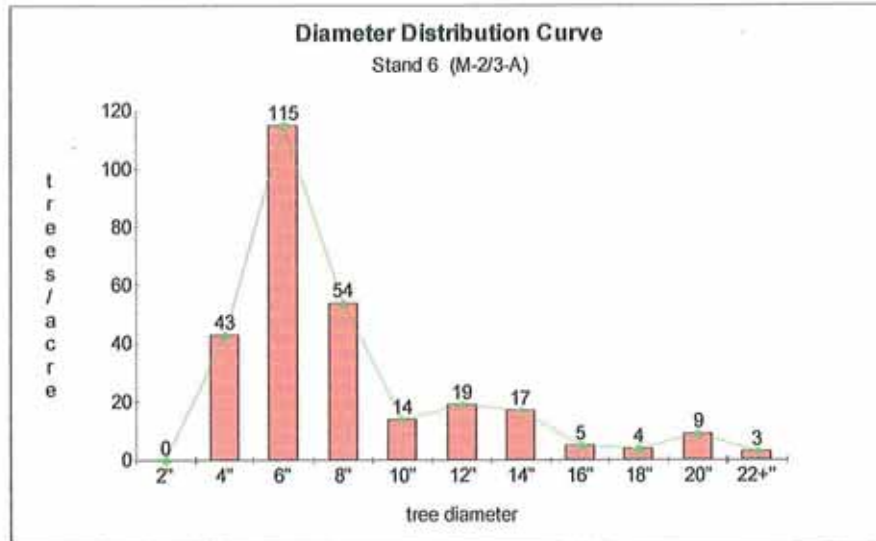
STAND 6 - MIXEDWOOD POLE/SAWTIMBER (M-2/3-A)

4 acres

Stand 6 consists of 2 ravines, plus some edges along the top of the banks, that have been left uncut from the 1993-5 harvest. Stand 6a straddles the east end of the southern of the 2 main streams. It is accessible from stands 1b and 3a. A skid road forms the west border with stand 3a. A main skid road crosses it at a low point. Stand 6b is along the east end of the northern stream. It is accessible from stands 1a and 1b. A skid road forms the southwest border with stand 1a. A main skid road crosses the stream at its west end. Slopes are mostly steep along the sides of the ravines and moderate on top of the banks. Soils are very stony and are either well- or moderately well drained. Site quality is excellent white pine. Operability with machines is poor due to slope and the streams. If desired, however, trees can still physically be winched out with a cable. The bank tops are much more accessible and operable. These 2 areas have not been harvested with the rest of the lot in 1993-5.



Stand 6 is a mixedwood stand primarily composed of sawtimber. Red maple is the dominant species taking up 1/3 of the growing space. Associates include hemlock, white ash, white pine, beech and hophornbeam plus smaller amounts of sugar and red maple and yellow birch. Quite a few older and bigger trees are present. Diameters range up to 32", with an average of 10". Stocking is adequate with a basal area of 127 ft²/acre. Canopy height is moderate to tall and crown closure is full.



Tree quality in the stand is good. It's a mix of some poor hemlocks and hardwoods in better quality oaks and pines. Snags and cavity trees are present, which are useful for wildlife. Growth rate is 0.4 cord per acre per year. Volume per acre is moderately high with 6.0 mbf of sawtimber and 29 cords of pulpwood. Sawtimber volume (white pine and oak) is 30% of total commercial wood volume, which is high. With more shaded ground, the regeneration is mostly shade-tolerant species such as beech, sugar maple and fir. There is also ash, oak and pine on the edges. Shrubs are lacking.

RECOMMENDATIONS

Long-term objective is wetland and wildlife habitat protection plus aesthetics. Maintain at least a 50' no-cut riparian zone.

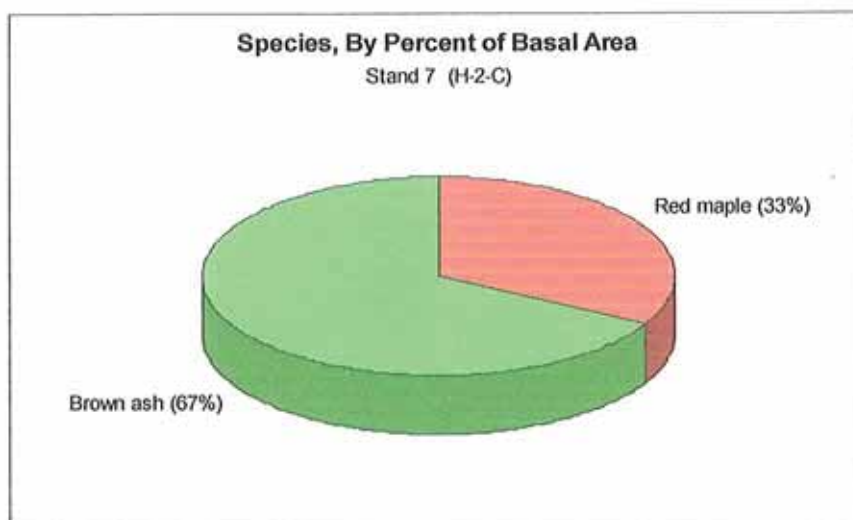
Leave alone and allow to grow. Clear and maintain the skid roads cutting across the 2 areas for recreational use.

If desired, some of the sawtimber on top of the banks (east side of stand 6a and south side of 6b) could be harvested during the next entry. Low priority.

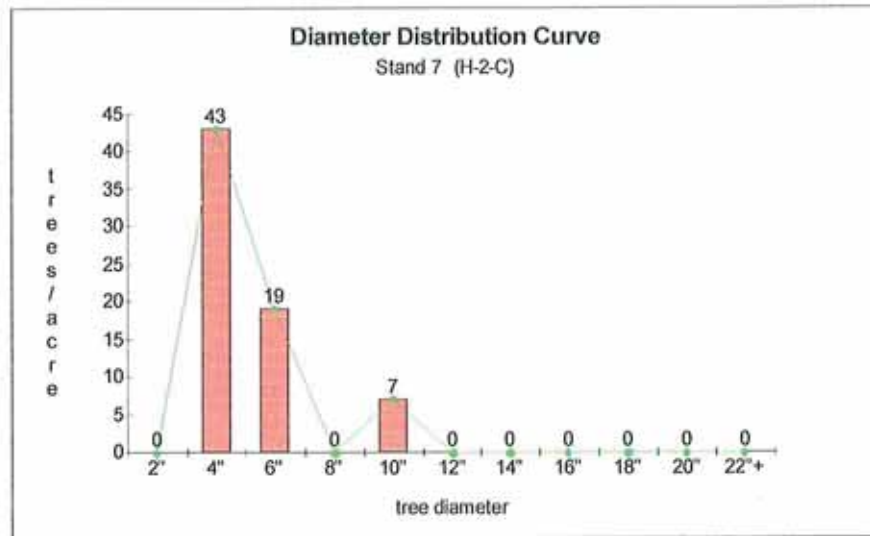
STAND 7 - HARDWOOD SAPLING/POLETIMBER (H-2-C)

6 acres

Stand 7 has 3 units. Stand 7a is a swamp adjacent to the Sheepscot River, between stand 2a and 5a. The river trail runs through its north end. Stand 7b is a floodplain along the river in the property's north corner. It is accessed through stands 2b and 5b. Stand 7c is the beaver pond and extended wetland 600' uphill from the river and north of Ben Colby Rd. It is accessed from stands 2a, 5b and 5c. A good woods road enters it from the north (stand 2b) but is then flooded out from beaver impoundments. The terrain is a gentle slope down to the east end. Soils are moderately well to poorly drained. Site quality for white pine is excellent to fair, depending on soil wetness. Operability with machines is poor, limited somewhat by wetness. No cutting occurred in stand 7 during the 1993-95 harvest.



Stand 7 is a hardwood swamp made up mostly of brown ash and red maple, but elm and fir are also present. Trees are poles and large saplings ranging from 4" to 10" in diameter, with an average of 6". Stocking is very low, with a total basal area of only 11 ft²/acre, and canopy cover is sparse. Canopy height is moderate.



Tree quality is poor. Many trees (tamarack, ash, maple and elm) are either dead or dying. Growth rate is low, at less than 0.1 cord per acre per year. Standing volume is low, with only 2 cords of pulpwood per acre and no sawtimber. Regeneration is inadequate in most places and is limited to mostly fir. Shrubs are alder and spirea.

Beavers are currently living in the pond adjacent to stand 7c, actively maintaining a dam that is very close to Ben Colby Rd. plus several smaller ones upstream. A beaver trail heads downhill through stand 2b to stand 7b and the Sheepscot River. A beaver house is on the bank of the river actually in stand 2a, just 200' west of the bridge abutments. Another dam is across the river near stand 7a.

RECOMMENDATIONS

The long-term management objective is protection of the wetlands for their intrinsic ecological function and beauty, as well as value as a wildlife habitat.

Stand 7 should be left undisturbed and left to develop naturally. A no-cut protective buffer should be established around these wetlands in stands 1a, 2, 3b, 4 and 5.

CONCLUSIONS

The Perkins lot contains excellent sites for timber production. It is certainly accessible but the long trucking distance plus the fairly long uphill skid compromise the commercial timber value. Operability within the lot is good, albeit long from the back end. Due to the lot's location within the SVCA's 6,569-acre "Chisholm Pond Roadless Area", strong consideration should be made in favor of non-timber uses. Riparian zones should not be cut to protect the integrity of the wetlands and associated wildlife habitat. This should be at least 250', but may incorporate the entire lower half of the property (northwest of the homestead and the bottom of the moderate slope). With the existing trails plus potential use of selected skid roads, recreational opportunities exist, especially with cultural features such as the farmstead as focal points. Trail work, apple tree release and cultural research can be done through organized group activities. The clearing by the farmstead can serve as a group camping spot. John Bunker, apple expert from Palermo, can possibly be recruited to identify the apple varieties.

SUMMARY OF MANAGEMENT PRIORITIES 2008-2018			
Year	Stand	Activity	Estimated Income/(cost)
2008-12	All	Blaze and paint boundaries (~7,940'), east of the Sheepscot River	(\$470)
2008-18	All	Let grow	
2008-18	All 2a & b, 5a & b, 7	Clear and maintain trail system utilizing selected skid roads Join SVCA's goal of establishing a foot path connecting to a trail system in its Northern Headwaters area.	
2008-13	1a 4 & 5c	Clear homestead, if desired Release apple trees	
2018	All	Update management plan	(\$?)