

## **II. INVENTORY**

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### **PURPOSE**

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This section provides background information about First Roach Pond, the Plum Creek ownership, and the surrounding area. The purpose is to provide a complete picture of the Concept Plan area, so the Plan can be seen in context, so that the natural and built environment around the Pond itself is understood, and so the existing regulatory framework is documented.

In describing present practices and conditions in Part II, and particularly in such subsections as “Forest Resource Management,” “Recreational Resources,” and “Existing Conservation Measures,” Plum Creek does not represent that it or its affiliate companies will maintain such practices or conditions in perpetuity. Those practices and conditions to which the applicant Plum Creek agrees to be bound and upon which Commission approval would be based are set forth only in other sections in this Application.

### **SITE LOCATION**

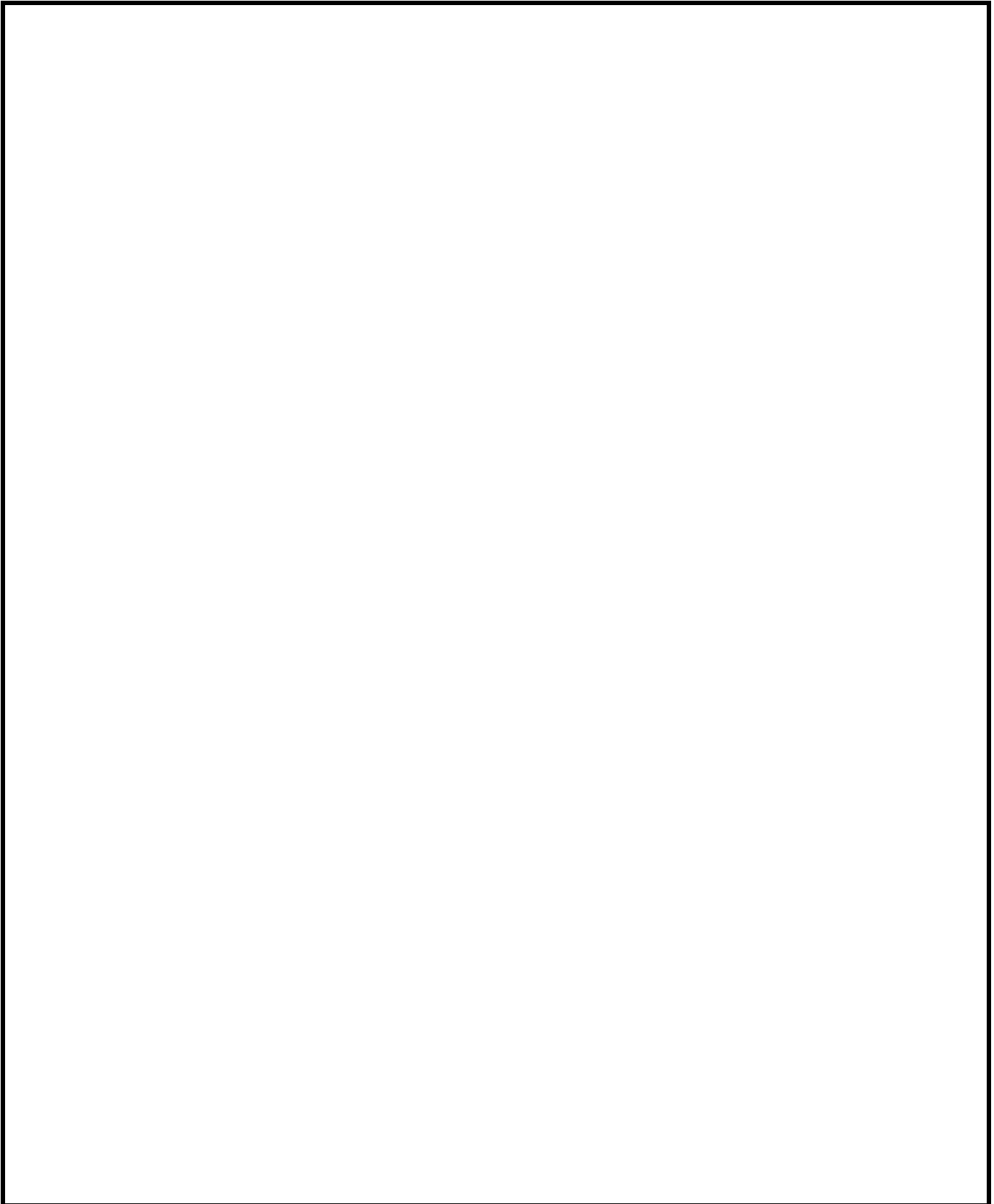
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First Roach Pond is located wholly within Frenchtown (TAR13WELS), an unorganized township within the jurisdiction of the Maine Land Use Regulation Commission. The township lies directly east of the center of Moosehead Lake, some 16 miles by road north and east of Greenville and Route 6/15.

The small village of Kokadjo is on the western outlet of the Pond, on the Lily Bay Road, a tarred road that meets Route 6/15 in downtown Greenville. Newport on I-95, about 60 miles south, is located at the intersection of Route 6/15 and the interstate system. Augusta is some 2½ hours from Kokadjo.

North of Kokadjo the Lily Bay Road is unpaved. Nevertheless, Kokadjo marks the fringe of the Moosehead region and the shoreland development associated with it and acts as a gateway of sorts to the West Branch, the Golden Road, Chesuncook Lake, Chamberlain Lake, Baxter State Park, and much of the north woods.

Map 1 (Site Location) shows First Roach Pond in relation to the State of Maine and the Maine Land Use Regulation Commission’s jurisdiction. Frenchtown is but one town (Beaver Cove) away from the “organized” town and population center of Greenville. First Roach Pond itself is somewhat developed, with well over 100 lots along its shores. It is a Class 3 lake deemed suitable for development by the Maine Land Use Regulation Commission.



**MAP 1 : SITE LOCATION**

*Source: Comprehensive Land Use Plan for Areas Within the Jurisdiction of the  
Maine Land Use Regulation Commission (p. 2), Department of Conservation, 1997*

# **SITE DESCRIPTION – AN OVERVIEW**

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## ***Natural Features***

First Roach Pond is a medium-sized, 3270 acre pond. It is about seven miles long and a mile wide at its widest point; both ends are narrow (an average of some 2000 feet or 0.38 miles). Low hills and mountains ring the Pond. The north shore is unremarkable topographically: mild  $\pm$  10% slopes rise about 80 feet from the shore to the north township line. To the east lies Shaw Mountain, a large presence that rises just under 1000 feet above the Pond. To the west, at the Kokadjo end is a low ( $\pm$  200 feet high) hill. The south shore and the area beyond is mountainous; hills and mountains fill the view and culminate at Number Four Mountain with an elevation of 2890 feet. The elevation of First Roach Pond is 1227 feet.

As Map 2 indicates, First Roach Pond drains westerly down the Roach River to Spencer Bay on Moosehead Lake. The Roach River itself enters the Pond by way of North Inlet Pond and drains a number of “Roach” ponds, including Seventh Roach Pond 7 miles to the east. The immediate First Roach Pond watershed is small and covers about 20,000 acres.

## ***Ownership***

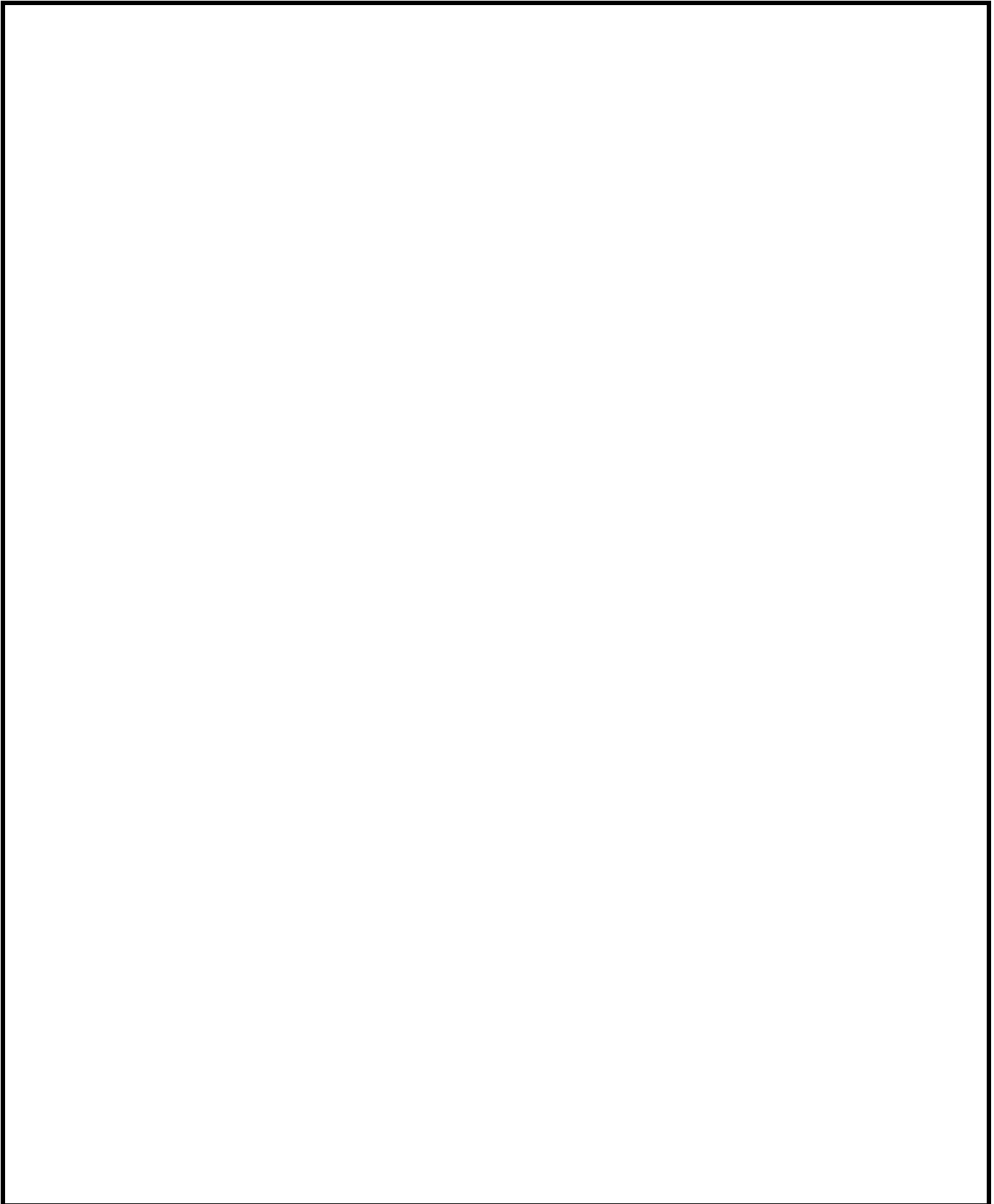
Map 3 shows the eastern part of Plum Creek Maine Timberlands’ approximately 900,000 acre ownership in Maine. The company’s eastern block of lands, on the east shore of Moosehead and surrounding First Roach Pond comprise roughly 115,000 acres.

Plum Creek Maine Timberlands will transfer ownership of their shoreland around the Pond to Plum Creek Land Company. However, many individual camp lots, old lease lots that have been sold to private owners, also exist around the lake and make up about 14% of the shoreline; these lots are small, narrow, and shallow. The State of Maine also owns frontage on the Pond, about 7,900 feet or 7.6%. This land is along the southeast shore. The private lots are primarily around Kokadjo and the south shore.

## ***Roads and Access***

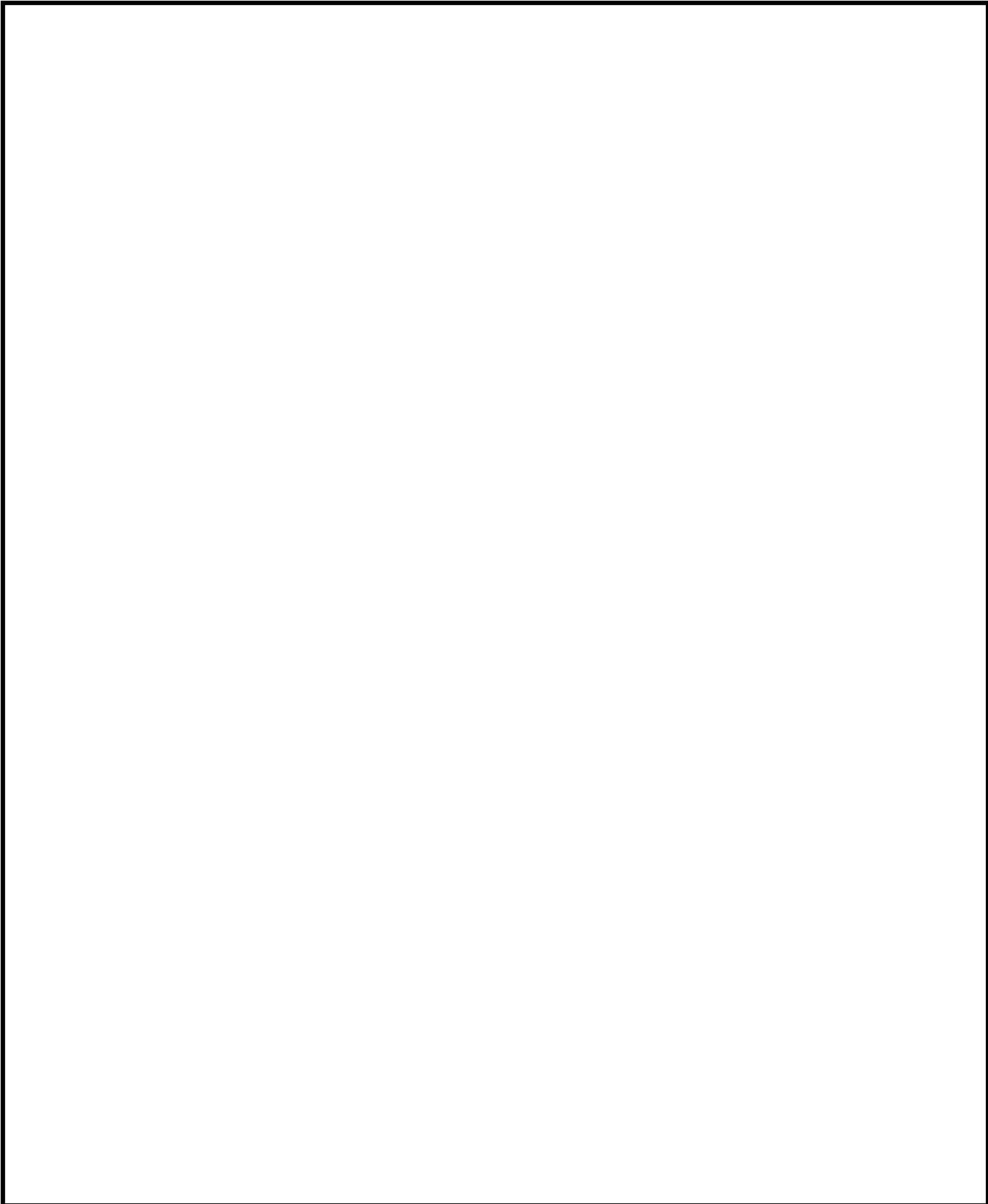
As mentioned, the Lily Bay Road (also known as the Greenville Road) skirts the west end of the Pond. It is a public road, as is the County Road, a gravel road in good condition that follows the south shore of the Pond to just beyond the state-owned campground, beach, and boat launch.

A few, private camp roads are in the immediate vicinity of Kokadjo; however, the remaining roads are all private and are owned and maintained by Plum Creek Maine Timberlands (*see Map 4*). Two of these Plum Creek roads provide access to the east and north shoreland areas. On the east the Shaw Mountain Road skirts the lower slopes and provides potential access to the shore itself—there is no such east shore access now. On the north shore the Frenchtown Road, which is owned by Plum Creek Maine Timberlands, follows the townline, easterly. It becomes a four-wheel drive road about half way down the town line.



**MAP 2 : FIRST ROACH POND WATERSHED**

*Source: Maps 41 and 42, the Maine Atlas and Gazetteer*



**MAP 3 : OWNERSHIP**

*Source: Plum Creek Recreational Map, A Guide to  
the Maine Timberlands of Plum Creek*

# HISTORY

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First Roach Pond is located at the junction of two areas that, like most of northern Maine, have a history that has been shaped by the timber and recreation industries. The landscape surrounding First Roach Pond and to the north, east, and south is still timberland today. To the west and southwest are Moosehead Lake and Greenville, which are major recreational attractions in the state. Kokadjo, at the pond's outlet, historically has been an integral part of both industries.

While surveyors probably came to the area as early as 1764, settlers didn't arrive until 1824. These were silver prospectors who came to T8 R10 near Wilson Stream. Not finding any silver, they soon turned to logging and farming to make their living. In 1825, they cut a road from the south to the southern tip of Moosehead Lake. Loggers were already operating around the shores of the lake, and the road became a supply route for staples for the farms. A settlement grew where the road met the shore, and the town of Greenville was incorporated just eleven years later.

Before the arrival of the railroad to the Moosehead area, loggers in the north woods depended on horse-drawn tote teams and boats to bring them supplies from the south. Several locations became stopovers serving the tote teams and their drivers, the paymasters, and logging company officials. These included Greenville, Lily Bay, Grant Farm, Chesuncook, and Kokadjo.

In the mid 19<sup>th</sup> century John Townsend Trowbridge came to the area to write a series of descriptive articles for a Boston weekly. Henry David Thoreau wrote *The Maine Woods* based on his travels in the Moosehead region in 1853. These and other writers made the larger world aware of the beauty and abundant wildlife of the area.

The Bangor & Aroostook Railroad reached Greenville from Bangor in 1884; it was built by Chinese and Irish laborers. This line was connected with the Canadian Pacific Railroad (now the Canadian American Railroad) which ran westward to Montreal, northern Vermont, and New York. The railroad brought tourists as well as supplies to the area, and so ushered in the tourism industry. "Sports" came from as far as Pennsylvania by rail and/or steamboat to see, canoe, hunt, and fish in this frontier land. Twenty-five years after Thoreau wrote about the Maine Woods, visitors could travel by train from Boston to Greenville in one day, for \$2. Steam boats on Moosehead, formally used to boom logs up the lake, were now also used to transport tourists and their guides. From Greenville, they could go to any one of several destinations, among them, the mouth of the Roach River. Greenville has remained a tourism center to this day.

The arrival of the railroads also boosted the timber industry. There was a veneer mill in Greenville as early as the 1880's which became known as the Atlas Plywood Company. Moosehead Manufacturing, Scott Paper Company, and Great Northern Paper Company (GNP) also worked in the area and used the railroad to access markets all over the US and Canada.

Great Northern Paper Company began its operations east of Moosehead in 1900 and became a major landowner in area. Originally, GNP boomed logs up Moosehead Lake to Northeast Carry by steamer. From there, logs and workers were transported over a short two-mile stretch to the West Branch of the Penobscot River, where they were floated downstream to the mill in Millinocket. At this time, the forest was penetrated by nothing more than rough logging roads used by horse-drawn sleds or skidders.

Log drives on the rivers stopped in the 1970's; state law prohibits the drives in order to protect water quality and boating access on the rivers. Timber and paper companies have since relied on logging roads to access trees and bring them to the mill. Today, the forests of northern Maine are criss-crossed by a web of logging roads. This arrangement has substantially increased the recreational hunting and fishing opportunities in the area. In the area immediately around First Roach Pond, the road running south beyond the state-owned South Inlet Wilderness Campground, those surrounding Shaw Mountain, and the road along the south side of Bluff Mountain are owned and maintained by Plum Creek Maine Timberlands.

The pace of development on First Roach Pond is similar to that of the Greenville area in general. Up until the 1950's, there were as few as 15 camps on the pond. Then, in response to the demand for second homes in the north woods, Skylark, the real estate development arm of Scott Paper, subdivided the shoreline around First Roach Pond. The first of these lots sold in 1970, but most sold in the late '70's and early '80's.

## **EXISTING DEVELOPMENT**

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### *Overview*

About one quarter of First Roach Pond's shoreline is subdivided for camp lots. There are 108 cabins on these lots, most of which lie immediately east of the village of Kokadjo or along the south shore. Many of these cabins date back at least 50 years while Kokadjo itself had its beginnings as a woods farm in the mid 19<sup>th</sup> century.

### *Commercial Development*

There is no development along the Lily Bay/Greenville Road after it leaves the Lily Bay State campground and heads north to Kokadjo. Kokadjo today contains a mix of buildings clustered around the road at the outlet of First Roach Pond. Some of these are the remnants of a once-thriving farm where hay for the woods horses was grown; other buildings are more recent. Altogether there are 6 commercial buildings in the immediate vicinity of Kokadjo, including a store, restaurant, and 2 storage barns.

The only operating commercial structures are the Kokadjo Camps and Trading Post, a general store, and the Northern Pride Lodge. Another store operated in this same vicinity, but it is now permanently closed. The general store is open year round; it serves as both store and meeting place for residents and tourists, snowmobilers, moose hunters, and woods workers. Gas for snowmobilers is available in winter. Five cabins associated with the old store and located at the outlet are available for rent. The Northern Pride Lodge is open year round while the campground is open for the summer season only. Besides lodging, Northern Pride offers boat and canoe rentals and dining, by reservation. Another "commercial" property is the now closed County dump, just off the southwest portion of the County Road.

The campground at the far, southeast, end of the Pond on the County Road can also be considered a commercial use. Although owned by the state, the site is leased (along with some Plum Creek Maine Timberlands' land to the southeast) to the Pages as a seasonal outdoor

camping area for tents and trailers. Thirty-four campsites are available; 14 are on the leased land and 20 are on state land. The campground is known as the South Inlet Wilderness Campground.

Finally, there is an old  $\pm 20' \times 10''$  boathouse, in reasonable condition, located on the east shore of the North Inlet, on the peninsula.

## ***Residential Development***

Small lot, seasonal cabins are found on the north, west, and southern shores of the pond, but not on the east shore. The photographs that follow show typical shorefront cabins near Kokadjo and on the north and south shores. These are, for the most part, in old former Scott Paper leased areas. Originally, these lots had 75 feet to 200 feet of shore frontage. Subsequently, they've been sold and, in some cases, consolidated into slightly larger lots. Most lots have cabins on them.

There are two remaining leased lots with cabins on them:

- The Dean lease on the north shore, about 1000 feet east of the North Inlet; this small parcel has an old, 19<sup>th</sup> century, well maintained log cabin and outbuilding on it;
- The  $\pm 1$  acre Baasch lease on the north shore, lying just less than a mile west of the north inlet; there's a seasonal cabin on this lot.

The state-owned property on the southeast shore covers about 7,900 feet of shore and includes the 42 old Scott leased lots. Some of these lots have been consolidated, and the cabins on them are now leased out by the State Bureau of Parks and Lands. According to the Bureau of Taxation's tax maps (revised in 1993) there are 37 structures along the shore; 32 of these are cabins, the others are outbuildings and garages.

West of the state ownership, on the south shore, are groups of older camps – all old leases sold to private buyers. These are described below, starting west of the state land and continuing west:

- The first group comprises 16 lots, from  $\frac{1}{2}$  acre to  $1\frac{1}{2}$  acres in size, containing 21 structures, 16 of which are cabins.
- The second group comprises 6 lots and 6 cabins;
- The third group comprises 11 lots and 10 cabins;
- The fourth group comprises 14 lots and 12 cabins.

There are two additional lots both with cabins on them between the third and fourth groups. (*Note: all existing residential lots are shown in red on the Concept Plan Map 11, in Part IV.*)

At Kokadjo there are about 7 residential lots west of the outlet and 19 east of the outlet, on the north shore; there are also 5 residential "back" lots. Twelve cabins line this north shore; all are within 2500 feet of the general store at Kokadjo. There is one cabin on the back lots.

Two other clusters of small old leased lots are located on the north shore. All have been consolidated into larger lots and all but one have been sold to private buyers. Just east of the so-called Pulp Road are three lots; each contains one cabin. Further east, but west of the north outlet, is a group of six lots containing five cabins. There is one solitary private lot, with a small cabin in the center of the north shore.



There are a total of 108 cabins on the shore of First Roach Pond; another 6 acres on back lots (see Table 1). The 108 number includes the 2 cabins on leased Plum Creek land and the 32 cabins on state land. In addition to these primary units (i.e., cabins) there are 49 (estimated) accessory structures associated with the residential shorefront lots and about 2 such structures on back lots.

### ***Total Number of Lots***

The table of “Existing Development on First Roach Pond” shows that there is a total of 93 shorefront lots owned by others; i.e., owners other than Plum Creek. Another 11 back lots are owned by others, making a total of 104 lots held by others within the planning area.

Five of these are commercial lots, 4 are state-owned, and 1 belongs to the County. The leased lots on state-owned land are not viewed as private, separate lots and are included as one lot under state ownership.

### ***Summation***

Existing commercial and residential shoreland development is summarized in the table below:

<b>Table 1: Existing Development on First Roach Pond</b>		
<b>Existing Shorefront Lots</b>		
Private commercial lots (at Kokadjo)	3	
Private residential lots	86	
State-owned lots	2	
Leased lots (owned by Plum Creek Timberlands)	2	
Total existing shorefront lots	93	
<b>Existing Back Lots</b>		
Private commercial lots (at Kokadjo)	2	
Private residential lots	6	
State-owned back lots	2	
County-owned lot (old dump)	1	
Total existing back lots	11	
	<b>Primary*</b>	<b>Accessory**</b>
<b>Existing Shorefront Structures</b>		
Private commercial structures	3	4
Private residences/cabins	74	42
Private residences/cabins on leased lot	2	2
Leased cabins owned by state	32	5
Total existing shorefront structures	111	53
<b>Existing “Back” Structures</b>		
Private commercial structures	3	
Private residences/cabins	6	2
Total existing back structures	9	2
*A residence, cabin, store, restaurant, or large storage building.		
** Small ancillary buildings, sheds, and garages.		
Note: these figures are based on tax maps, USGS maps, and tax assessors records; they represent the best information available.		

# **EXISTING SERVICES**

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Given its location, 20 minutes north of Greenville, and the very few year-round residents in Frenchtown and Kokadjo, the First Roach Pond area is not well served by utility and other public services. The following is a synopsis:

## ***Road Building and Maintenance***

There is a public, tarred road in the vicinity that is the state-maintained (MDOT) Greenville/Lily Bay Road. As an arterial, but unnumbered road, it serves heavy trucks hauling wood to mills to the south. It is a paved, narrow, winding road with gravel shoulders and good ditching; overall width is 24 to 26 feet. Maintenance is the responsibility of an MDOT crew in Shirley. No substantial improvements are planned in the next 6 years. According to MDOT this road segment does not have a high accident rating, however, given the high moose population in the area, moose/vehicle accidents do occur. Between 1996 and 1998 four such accidents were reported.

The gravel County Road extends from the Lily Bay Road easterly along the south shore to the state-owned camping area. Responsibility for maintenance rests with Piscataquis County. The road has a good base and good drainage and is well maintained.

Most other roads surrounding First Roach Pond are owned and maintained by Plum Creek Maine Timberlands as year-round gravel woods management roads. They are used by the public for access to some camps, for hunting access and for pleasure driving. Overall the primary roads that serve the Concept Plan area are in good condition with the exception of the Frenchtown Road east of the two-mile mark (out of Kokadjo). Plum Creek Maine Timberlands is continually upgrading these roads and finding alternate routes (in the case of the east end of the Frenchtown Road). The company is in the process of rebuilding a number of stream crossings using improved Best Management Practices.

## ***Electrical Power and Telephone Lines***

Power lines extend up the Lily Bay/Greenville Road to Kokadjo from the south; they then run easterly for about ½ mile and end next to Plum Creek Land Company ownership, on the north shore; the remainder of the north shore, the entire east shore, and the south shore are not served by electricity. It appears that the telephone poles on the County Road could support power lines. The poles are in good condition and spaced appropriately. There are no known plans to extend power, however, Plum Creek may request that electrical power be extended eastward on the County Road for about 10,000 feet.

Telephone lines are on the same poles as the electric service along the Greenville Road and in the immediate vicinity of Kokadjo. They also extend easterly along the County Road to the state-owned campground.

## ***Gas***

There are no gas lines in the region; bottled propane gas is available, however, and is used primarily for lighting (for cabins without electrical service), cooking, seasonal heating, and refrigeration.

## ***Solid Waste Disposal***

Currently taxpayers take their solid waste/garbage to the Lily Bay facilities, located off the Lily Bay Road. This facility, known as the Piscataquis County Recycling and Transfer Station, serves Lily Bay and Frenchtown. It is open at the following times:

- May 1 to December 1 on Tuesdays and Fridays from 12 p.m. to 4 p.m. and Sundays from 8 a.m. to 4 p.m.;
- From the Fourth of July to Labor Day, however, it is open 12 p.m. to 4 p.m.; and
- December 1 to May 1 on Wednesdays and Sundays only, from 8 a.m. to 4 p.m.

## ***Fire Protection and Other Services***

Forest fires, brush fires, and other fires are handled by the Maine Forest Service.

All other services, such as ambulance, hospital, health care services and the like are available in Greenville, 14 miles to the south. Greenville also has a municipal airport and “seaplane” base.

# **ADJACENT REGIONAL DEVELOPMENT**

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## ***Overview***

The “Existing Development” section addresses development around First Roach Pond in Frenchtown. This section reviews historic growth in the immediate region, that is the adjacent towns on the fringes of the jurisdiction and close to Greenville and the eastern shores of Moosehead Lake.

This review shows that the Moosehead Lake region in general and the Beaver Cove, Lily Bay area in particular have been high growth locations within the Commission’s jurisdiction – for at least the last 50 years. The Moosehead Lake Area is identified in the 1997 Comprehensive Land Use Plan as an area of concentrated development with special planning needs.

## ***Building Permit and Subdivision Activity***

A number of seasonal home permits issued in the unorganized towns of Lily Bay and Beaver Cove, as well as in the organized town of Greenville, has on average been much higher than most towns in the jurisdiction. (The Rangeley Lakes Area, Carrabassett Valley, northern Maine, and more recently, a few Washington County towns, have been the other growth centers.) For example:

- between 1971 and 1975 Beaver Cove was one of only 10 towns in the jurisdiction with over 16 building permits issued (based on a 75% sample);
- between 1971 and 1991 over 100 building permits were issued for Beaver Cove and between 40 and 99 permits were issued for the adjacent Lily Bay (*see Map 5*);
- an additional 52 permits have been issued in Beaver Cove since 1991 and 35 in Lily Bay; and

- in Greenville, according to their 1999 Comprehensive Plan, 262 residential lots were created, through subdivision, between 1986 and 1994. One hundred and seven of these were in one project, Rum Ridge Farms on Lower Wilson Pond. In addition, two sets of condominiums, with 7 and 14 units each, have been constructed.

Similar results are reported for subdivision activity. Between 1982 and 1991 both Beaver Cove and Lily Bay had a total of over 100 lots each approved, and Frenchtown, according to the LURC's Comprehensive Plan, had between 40 and 99 lots approved.

The LURC Comprehensive Land Use Plan states: "In the early 1970's most new development on Moosehead Lake was located at its southern end, in Beaver Cove Township and Harford's Point. In the 1980's, a significant number of new building permits were issued in Beaver Cove, Lily Bay Township, Rockwood Strip, and Tomhegan Township. While these areas accounted for 70% of the new building permits issued on the lake between 1971 and 1991, new permits were issued in virtually every other township surrounding the lake as well. In the twenty year period, a total of 452 building permits were issued for new residential structures in the townships fronting Moosehead Lake." Frenchtown, located immediately east of Beaver Cove and Lily Bay, has clearly been part of this trend.

The 1997 Plan goes on to say: "The challenge for the Commission is to allow growth to be accommodated in these areas without compromising the resources that make them so special. Balancing development and conservation in these areas is the key to maintaining their high value, particularly their recreational appeal." Further, it is a central principle of the Plan to encourage "orderly growth within and proximate to existing compatible developed areas, particularly towns and communities."

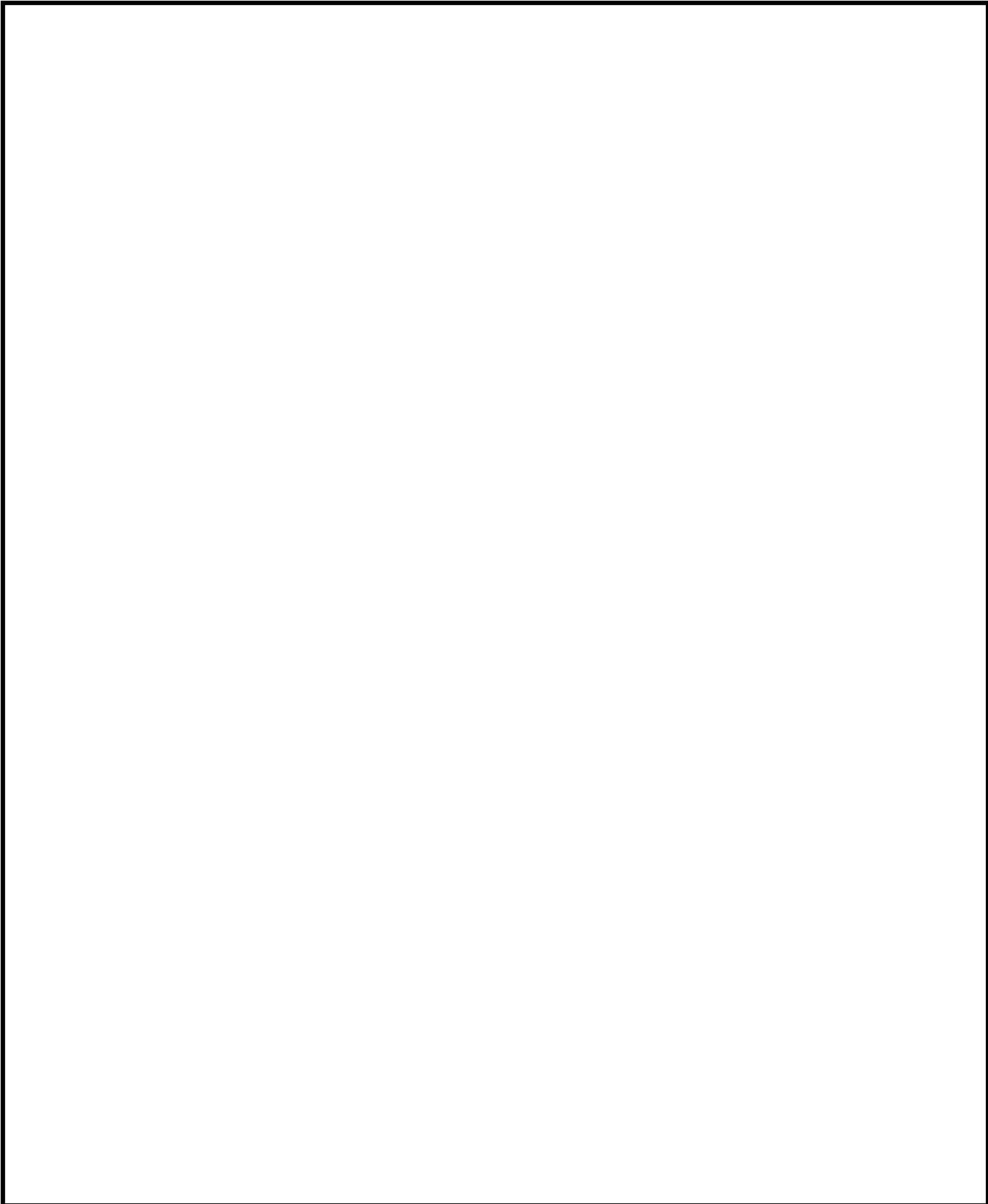
The Greenville Comprehensive Plan reports that year round housing demand is expected to be 3 or 4 houses per year while seasonal demand is expected to be around 10 houses per year. In the economic arena the town's goals are to:

- increase business and industrial activity to provide quality jobs and expand and diversify the tax base; and
- focus on forest products, tourism and recreation, and retail and services.

Lying just 20 minutes to the north, on the fringes of the Greenville service area, Frenchtown seasonal dwelling owners see Greenville village as their service center, just as Beaver Cove and Lily Bay residents do.

## ***Summation***

Given that First Roach Pond in Frenchtown lies within LURC's "fringe" area, and that this area to the east of Moosehead has been the focus of considerable growth and development for the last half century, it seems appropriate that LURC has designated First Roach Pond as a lake "suitable for development" and that a Concept Plan approach is used to accommodate future planned but limited growth.



**MAP 5 : NEW DWELLING UNITS IN LURC JURISDICTION 1971-1991**

*Source: Maine Land Use Regulation Commission Report, Department of Conservation*

# FOREST RESOURCE MANAGEMENT

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Plum Creek Maine Timberlands manages all of the estimated 115,000 acres surrounding First Roach Pond, east of Moosehead lake, as a working forest; it is managed for forest products, which in turn, provide local employment opportunities. This land is accessible to the public for traditional recreation purposes.

It is Plum Creek's intent to continue to manage these lands adjacent to the Concept Plan areas for commercial timber production and other natural resources. This includes making further improvements to land management roads and bridges and extracting minerals (gravel) as needed for road building purposes.

## WATER QUALITY

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Information on First Roach Pond's water quality was obtained from two sources: the state's "PEARL" website which reports on lake water quality monitoring results, and an independent study of phosphorus impacts on the Pond by DeLuca Hoffman Associates, Inc. The full "Preliminary Phosphorus Evaluation for First Roach Pond," by DeLuca Hoffman Associates, Inc., is included in the Appendix.

The PEARL data for First Roach Pond is limited to information from just one station for years 1981 and 1989. The results of measurements taken in those years is presented below.

### *Secchi Disk Transparency*

The average measure for First Roach Pond was 6.4 meters; in 1989 it was 7.2 meters. These measures indirectly translate into algal productivity and, as such, they indicate good transparency and an unproductive algae situation.

### *Color*

Color is measured in SPU units (Standard Platinum Units). Maine lakes average 28 SPU, and First Roach Pond has a SPU of 20. This means First Roach Pond has slightly reduced transparency due to concentrations of natural dissolved organic acids.

### *pH*

The pH of a lake reflects how acidic the water is and helps determine plant and animal species present. The scale is from 1 to 14, with 7 being neutral; the average count in Maine is 6.7. First Roach Pond has a pH of 7.07.

### *Total Phosphorus (TP)*

TP is one of the major nutrients needed for plant growth. It's generally present in small amounts in all lakes and is measured in parts per billion (ppb). As the amount of phosphorus increases ,

the amount of algae increases. In Maine the TP varies from 1 to 110 ppb with the average being 14 ppb. First Roach Pond's TP is 4 ppb, significantly below the state average.

### ***Alkalinity***

This is a measure of the capacity of the lake water to neutralize acids; it's also known as the buffering capacity. First Roach Pond has an alkalinity level of 6.2 mg/l; the average in Maine is 12.2 mg/l.

### ***Conductivity***

Conductivity is a measure of the ability of water to carry an electrical current. Conductivity increases with increased pollutants entering a lake. Maine lakes average 44 uS/cm; First Roach Pond averages 21 uS/cm.

### ***Chlorophyll A***

First Roach Pond has a low level of chlorophyll, i.e., 2.0 ppb. The state average is 4.6 ppb. Chlorophyll is a measurement of the green pigment in all plants. The Pond's low reading indicates low levels of algal biomass.

### ***Watershed Data and Phosphorus Concentration***

According to the Maine Department of Environmental Protection's files there are 8,517 acres of First Roach Pond watershed within Frenchtown and the Pond's Water Quality Category is "Good." They advise that a "High" level of protection be maintained to conserve the cold-water fishery. Given this recommendation, future development should not increase the phosphorus concentration by more than 1.0 ppb.

## **THE FISHERY**

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### ***First Roach Pond***

First Roach Pond is an oligotrophic lake. That is, it has relatively low levels of dissolved nutrient salts and, as a result, sparse organic matter and high oxygen levels. The native fish species are typical for such a lake in Maine and include: brook trout, lake trout, sculpin, white suckers, and cusk. There are also many non-native fish species, such as: smelt, yellow perch, and landlocked salmon.

The fishery appears to be healthy. Of the eleven perennial tributaries, all have fish in them. Plum Creek has conducted thermographic studies of the tributaries to determine whether reductions in tree canopy would affect water temperatures, and thus fish spawning habitat. These studies conclude that there is no risk to spawning habitat from timber harvesting provided LURC's standards are followed.

The LURC Lake Report Form for First Roach Pond rates the fishery as "significant," with a high level of diversity, and water quality, with optimal physical factors that contribute to a healthy habitat. The abundance of the various species is rated "medium," meaning that the number of fish is similar to other fisheries in the region. There are no rare or uncommon species.

Reproduction levels are considered medium, according to the Lake Report, meaning one fishery is supported in part through stocking. Every year, Inland Fisheries and Wildlife conducts fish population surveys with trap nets and stocks First Roach Pond. According to the Inland Fisheries and Wildlife 2000 stocking report, Inland Fisheries and Wildlife introduced 2,200 landlocked salmon to the pond, all between six and eight inches long.

First Roach Pond and the North Inlet are open to fishing May 1<sup>st</sup> of each year. Inland Fisheries and Wildlife regulations prohibit the use of live fish as bait, although using dead fish, worms, and salmon eggs are allowed. The daily bag limit for togue and salmon is one fish; the salmon must be at least 16 inches. Anglers may take up to two brook trout or two splake daily. The minimum length for trout is 12 inches, and only one of two trout taken on any day may exceed 14 inches. There are no size limitations for togue.

Generally, the fishing experience is considered "medium." The Lake Report Form for First Roach describes the size and catch rates of fish to be "fair." The report also describes the aesthetic experience on the pond as typical for the region, with high fishing pressure. The pond is only rated "medium," however, in its economic importance to the region and in terms of the role the fishery plays in supporting local services, guides, and tourism businesses.

First Roach Pond is a managed lake. As such, Inland Fisheries and Wildlife monitors angler effort, catch rates, fish growth, and other parameters to ensure that the fishery meets angler and agency expectations. Although the creation of additional camp lots on First Roach Pond will likely increase the number of angler days per fishing season, the new development should have no substantive impact on the aquatic environment that supports the lake's fishery. Consequently, the quality of the fishery will continue to depend on careful management by Inland Fisheries and Wildlife.

## ***Roach River***

The Roach River is the second largest tributary to Moosehead Lake (after the Moose River). The headwaters of the river flow from Alligator Pond and Seventh, Sixth, Third, then Second Roach Ponds before it enters First Roach at the North Inlet. There are six miles of river between First Roach Pond and Moosehead Lake.

S.D. Warren gave the dam at First Roach Pond's outlet to Inland Fisheries and Wildlife in the mid 1990's. Inland Fisheries and Wildlife also owns the land on either side of the Roach River between Kokadjo and Moosehead Lake; their ownership extends 250 feet out from the water's edge and includes a total of 690 acres. Beyond this corridor, on both sides, is a "no-development" conservation easement; it extends an additional 250' north and south of the corridor.

The Roach River is known for its fine salmon fishing. Inland Fisheries and Wildlife has listed the Roach River as one with high or moderate fisheries value. Fishing on the river is restricted to catch and release fly fishing only. The Roach is mentioned in most fly fishing publications about



Maine, and draws anglers from throughout the New England region. Al Raychard's *Trout and Salmon Fishing in Northern New England* states that the fishing is good just after ice-out in May, but best in September when water is released from the dam, water temperatures drop, and the salmon start running. The water is generally slow-moving, with a few class II and class III rapids.

Access to the Roach River remains somewhat difficult, especially on the western part. Although, Inland Fisheries and Wildlife recently purchased two small lots from Plum Creek (0.3 and 0.6 acres) on the south side of the river, in Kokadjo, (and has built a parking lot, public boat launch to First Roach Pond, and information kiosk there) as well as a ± 9 acre parcel on the north side of the road adjacent to the Roach River, these facilities do not improve access to the rest of the river in any significant manner.

## SCENIC RESOURCES

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### *Background*

The scenic quality of First Roach Pond and its surroundings has (along with its relative remoteness, quiet, and good fishing) attracted second homebuyers and recreationists for many years. The scenic qualities they seek – hills and mountains, blue lake waters, and the changing seasonal colors of the Maine woods can be appreciated from many viewpoints, the most significant of which are:

1. views from the water and the water's edge;
2. views from future cabins and development parcels; and
3. views from special, elevated, vantage points, and roads.

These three “viewpoints” are discussed below, yet they all share something in common and that is a sense of “vastness.” First Roach Pond is a large pond. The scale of the pond is difficult to comprehend at first, yet no matter where the observer stands, most memorable objects are distant. Even the narrower parts of the pond are separated by ¼ to ½ mile; the pond itself is almost 7 miles long and averages just under 2 miles wide.

#### **1. Views from the Water and Water's Edge**

Photographs 1, 2, and 3 on the “Scenic Views” map illustrate three typical shoreline views, views similar to those enjoyed by boaters, anglers on the water, and people hiking along the shore. Photograph 1 shows the view from the west shore, in late fall, towards Kokadjo. Here, at the narrow end of the pond, old (pre-LURC) cabins dominate the immediate view, because no buffers of trees are in place. Further, this northern shore has little elevation; no hills or mountains lie to the north, and all the views from the south, looking north, are unremarkable. However, with the exception of the Kokadjo area, few cabins are visible. By and large the north shore is predominated by woods and small boulders on the shoreline itself. Views to the southern and eastern shores are similar, although existing cabins here are fairly well screened from view. The views to the south, from the pond and north shore, however, are dominated by the low mountains lying to the south and east (*see photographs 2 and 3*). Again, the views are panoramic, not intimate.

## **2. Views from Future Cabins and Development Parcels**

Photograph 3 shows the view from an old log cabin on the northeast shore, looking south. It illustrates that the south shore and any development there is distant and, if properly screened by trees, largely invisible. Indeed, because all new development will meet or exceed LURC's setback and clearing standards, "filtered" views to the pond will be the rule and few, if any, new structures will be visible from the water.

## **3. Elevated Viewpoints and Scenic Roads**

Photographs 4 and 5 were taken from woods management roads high on the flanks of the mountains on the south and east shore. These views, which provide dramatic yet distant views of Mount Katahdin (*photo 4*) and the Spencers (*photo 5*), are rare and remarkable.

Views from other land management roads, the County Road, and the Greenville Road are scenic but not spectacular, mainly because Plum Creek Timberlands has practiced selective cutting along them, and there are few open views. Of course, during the fall foliage season, all of these access roads are attractive and draw "leaf-peepers."

The pond itself is only seen from a public road from a vehicle on the County Road, at the state-owned land, and at the outlet dam, in Kokadjo.

## ***LURC's Scenic Assessment of First Roach Pond***

In 1988 LURC undertook the Maine Wildlands Lake Assessment. The Lake Report Form on First Roach Pond, dated 6/21/91, rates the pond's overall scenic value as "significant," but *not* "outstanding." The report gives the lake an overall rating of 40 points, out of a possible 100. Specific ratings were as follows:

### Relief: 20 out of 30 points

Dramatic or highly complex relief exists but makes up no more than 25% of the view

### Physical Features: 10 out of 25 points

First Roach Pond scored relatively low in this category because it was seen to have but one "feature," probably shoreline boulders; it lacks cliffs, ledges, rockslides, and islands.

### Shore Configuration: 5 out of 15 points

First Roach Pond does not have a particularly interesting and varied "edge," hence this below average rating.

### Vegetative Diversity: 5 out of 15 points

Because the pond supports only two "vegetation communities" it received just 5 points.

### Special Features: 0 out of 15 points

First Roach Pond was judged to have no special features such as great water clarity and excellent wildlife viewing opportunities.

### Inharmonious Development: 0 out of 30 points

No points were subtracted in this category.

# RECREATIONAL RESOURCES

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## *First Roach Pond*

First Roach Pond is typical of Maine ponds that are of a substantial size, have relatively easy access, and a good fishery. Because of these factors, the pond attracts fishers, campers, and those looking for a place to settle for a week or even the summer, to enjoy the scenery, quiet, and "getting away from it all." There is a private camp area and state-owned campground on the lake that cater to these folks. Others use the seasonal cabins on the pond. (See 'Fisheries' section for a discussion of fishing resources on First Roach Pond itself.)

### **Campgrounds**

Northern Pride Lodge and Campground, is located at Kokadjo, on the northwest side of the dam. They are open year-round and offer 20 tent sites and a lodge, and rent boats for fishing. They have access to both the pond and the Roach River, and are close to the store at Kokadjo.

South Inlet Wilderness Campground is located off the County Road on the southern shore of First Roach Pond, about 4500 feet from the southeast inlet. There are 14 sites for rent, and there is a public, hand-carry boat launch (owned by the Bureau of Public Lands), and picnic tables.

### **Water Access**

There is one other public boat launch on First Roach Pond. This launch was recently installed by the Maine Inland Fisheries and Wildlife on a half-acre site south of Kokadjo, next to the outlet dam and adjacent to a 33-acre commercial lot. There is parking available at the boat launch, and an informational notice board. Overflow parking is located across the road. The public also makes occasional use of the old pulp dump site, next to a small informal camping area, as a boat launch. This is an unimproved, private, access point on the north shore at the Pulp Road. Plum Creek has no plans to improve it.

### **Hiking Trail**

There is one hiking trail near First Roach Pond, but it is not often used. The trail goes up Number Four Mountain, and can be accessed by driving in on the logging roads that run west and south of the south shore road. It ends at the summit of the mountain, at 2890 feet of elevation.

### **Canoeing**

The Roach River is a well-known canoeing route, beginning at Kokadjo, and ending at Moosehead Lake, six miles down river. There are class II and III rapids, meaning that the level of difficulty of negotiating the rapids is easy to medium. Canoeists are advised to make the trip during high water in the spring.

### **Snowmobile Trails**

Snowmobiling is becoming a major economic force in the region. There are international trails that connect Canada with Maine and the rest of the northern U.S., and club trails that meander

around the Moosehead region. Kokadjo is located at the intersection of International Trail System (ITS) trails 85/86 and club trails called Route 66 and the Moosehead Trail.

ITS 85/86 runs from Kokadjo to Greenville to the southwest, where it splits into ITS trails 85, 86, and 87. ITS 85 runs south to Guilford, 86 runs west to Jackman, and 87 runs west and south to Bingham. From Kokadjo east, ITS 85/86 goes to Pemadumcook Lake, the West Branch of the Penobscot River, and Millinocket.

Club trail Route 66 is a scenic route that runs from Kokadjo west to Moosehead Lake. The trail crosses the Lake at Mount Kineo, and ends at Rockwood. The Moosehead Trail goes northwest from Kokadjo around the northern tip of Moosehead Lake, along the southern shore of Seboomook Lake to Canada Falls Lake, then southeast to Rockwood.

There is also an unnamed trail spur that leaves ITS 85/86 about 5,000 feet south of Kokadjo. From there it crosses First Roach Pond, heading east. The trail resumes on land at the foot of Shaw Mountain. There it connects with logging roads that circumscribe the base of the mountain.

## ***The Region***\*

The recreational resources in the region of First Roach Pond are varied and among the best in Maine's interior. The town of Greenville, approximately 16 miles away, and Moosehead Lake act as the gateway to the north woods, and are tourist magnets in their own right. Ripogenus Gorge and the West Branch of the Penobscot River are just 22 miles from Kokadjo. From there, it's just another 23 miles to the Togue Pond gate at Baxter State Park. Big Squaw Mountain, the headwaters of the Kennebec River, and the Appalachian Trail are also within a morning's drive of First Roach. Following is a summary of the recreational opportunities open to the public within a twenty-mile radius of Kokadjo. The Existing Conservation section discusses lands in the region currently or potentially conserved for ecological or recreational purposes.

### **Greenville**

The Town of Greenville offers a wide variety of recreational opportunities. These facilities and programs are made available to the public at little or no cost. The programs are geared for kids under 14 years of age. They include: basketball, swimming lessons, T-ball, baseball, soccer camp, skating, downhill skiing lessons, Little League softball, and ice hockey. Facilities include three beach and picnic areas; Thoreau Park, which also has picnic tables; Pine Grove Playground; and the gymnasium at the Greenville school complex which offers tennis courts, ice skating, outdoor basketball, track, ball fields, soccer, a playground, and nature trails. The school facilities are available to the public during off-school hours.

### **Moosehead Area**

The entire shoreline of Moosehead Lake is within a twenty-mile radius of First Roach Pond, which makes a multitude of recreational opportunities available to those visiting or living on the Pond. The private facilities offer wilderness expeditions, wildlife viewing, kayak school, whitewater rafting trips, ecological tours, ropes courses, trips for bicyclists and hikers, horseback

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\* Sources: *DeLorme Maine Atlas and Gazetteer, 1997; Town of Greenville Comprehensive Plan, 1999.*

riding, sailing, volleyball, water skiing, fishing, dog sledding, downhill skiing, cross-country skiing, snowmobiling, and ice fishing.

Following is a list of the public and semi-public recreational facilities around Moosehead Lake, listed by type. Boat launches and campsites are on Moosehead Lake itself unless otherwise noted.

<b>TYPE OF FACILITY</b>	<b>LOCATION</b>	<b>NUMBER/COMMENT</b>
<b>Trailerable boat launches</b>	Greenville	3 (1 on Lower Wilson Pond)
	Beaver Cove	2
	Spencer Bay Township	2
	Northeast Carry Township	2 (1 on Lobster Stream, 1 on the West Branch of the Penobscot River)
	Rockwood Strip	1
	Taunton & Raynham Academy Grant	1 (on Brassua Lake)
	Big Squaw Township	1 (on Indian Pond)
<b>Hand carry boat launches</b>	Greenville: Rum, Grenell, Salmon, Secret, and Sawyer Ponds	6
	Days Academy Grant	1
	Northeast Carry Township	1 (on the West Branch of the Penobscot River)
<b>State campgrounds</b>	Beaver Cove	Lily Bay State Park
<b>Wilderness campsites</b>	Greenville	4 on Lower Wilson Pond
	Spencer Bay Township	4 (1 on Spencer Stream)
	East Middlesex Canal Grant	1 (on Kidney Pond)
	Big W Township	1
	Sapling Township	2 (on Kennebec River East Outlet)
	Big Squaw Township	1 (on Kennebec River East Outlet)
	Little Squaw Township	5 (1 on Little Notch Pond, 2 on Big Squaw Pond, 2 on Little Squaw Pond)
<b>Maintained campsites</b>	Moose Island	2
	Sugar Island	3
	Deer Island	1
	Lily Bay Township	3
	Spencer Bay Township	5
	Fox Island	1
	Salmon Island	1
	Days Academy Grant	4
	East Middlesex Canal Grant	2 (1 on Lobster Lake)
	Northeast Carry Township	1 (on the West Branch of the Penobscot River)
	Little W Township	1
	Big Squaw Township	1 (on Squaw Brook)
<b>Hiking trails</b>	Mount Kineo	1
	Big Squaw Mountain	1
<b>Steamship cruises</b>	from Greenville	1
<b>Picnic areas</b>	Route 15, Greenville	1

### **Beyond Moosehead**

Outside the Moosehead region, but within a twenty mile radius of Kokadjo, there are still more recreational opportunities. The types of recreation are limited to nonmotorized forms of recreation, with the exception of fishing from motorized boats and snowmobiling (see above). The following chart lists the facilities available, as shown on the DeLorme Atlas and Gazetteer.

<b>TYPE OF FACILITY</b>	<b>LOCATION</b>	<b>NUMBER/COMMENT</b>
<b>Trailerable boat launches</b>	T3 R12 WELS	2
	T1 R12 WELS	1
	Shawtown Township	1
	TA R11 WELS	1
<b>Hand carry boat launches</b>	T3 R13 WELS	1
	Bowdoin College Grant West	6
	TB R11 WELS	1
<b>Wilderness campsites</b>	Lobster Township	1
	T3 R13 WELS	1
	R13 WELS	1
	T12 R12 WELS	2
	Rainbow Township	5
	T1 T13 WELS	1
	Shawtown Township	5
	Bowdoin College Grant West	4
	Bowdoin College Grant East	3
	Elliottsville Township	2
<b>Maintained campsites</b>	Lobster Township	7
	T3 R12 WELS	3
	T1 R11 WELS	8 (Nahmakanta Public Reserve Land)
	T1 R10 WELS	1
	TA R11 WELS	6
	TA R10 WELS	1
	Bowdoin College Grant West	1
	Bowdoin College Grant East	4
	TB R11 WELS	2
	Katahdin Iron Works	4
<b>Hiking trails (other than the Appalachian Trail)</b>	R13 WELS	up Big Spencer Mountain
	Bowdoin College Grant West	around Elephant Mountain
	Elliottsville Township	up Borestone Mountain

There are several notable scenic attractions within the twenty-mile radius surrounding Kokadjo. These landmarks have state and/or national significance.

### **Appalachian Trail**

The Appalachian Trail runs from Georgia to Canada. Many would consider Mount Katahdin, 30 miles from Kokadjo as the crow flies, to be the definitive destination for AT hikers. However, approximately 60 miles of the trail's approach to Katahdin is within the twenty-mile radius of Kokadjo, and passes some spectacularly scenic sites. These sites are not accessible except by the AT, although in some cases, a road may be nearby. There are nine lean-tos along this section of the trail, providing shelter to those camping along the way. Following is a description of these scenic resources, taken from DeLorme's Maine Atlas and Gazetteer.

### **Waterfalls**

Little Wilson Falls, in Elliottsville Township, is one of the highest falls in Maine: 13 yards, with a long canyon below. Slugundy Falls is also in Elliottsville. Both falls pass through gorges. West Chairback Falls, in T7 R9 NWP, is an 18-foot drop and has relatively easy access. Screw Auger Falls is in Bowdoin College Grant East, just before one reaches Gulf Hugas. It consists of a series of 3-4 foot twisting drops, with very clear water. Hay Brook Falls is in the same township, but off the Appalachian Trail. It can be accessed from Katahdin Iron Works, and jeep trails. This waterfall is a series of three shooting cascades.

## Unique Natural Areas

There are three areas along the Appalachian Trail within twenty-miles of Kokadjo that the Gazetteer lists as "Unique Natural Areas." The westernmost is Little Wilson Falls Gorge, which encloses the falls mentioned above. The gorge itself is 300 yards long and up to 30 yards deep. About one mile east are Big Wilson Cliffs. These are huge slate outcroppings overlooking the valley to the east. Gulf Hugas is the westernmost area, in Bowdoin College Grant East. Gulf Hugas is known as the "Grand Canyon of the East." The canyon is three miles long, with five major waterfalls. The walls of the canyon reach 40 yards in height. A hiking trail skirts the rim, and connects to the Appalachian Trail. Screw Auger Falls is located just south of where the Gulf trail meets the AT, and a little further south is a nature preserve called The Hermitage. The preserve includes Pugwash Pond and a stand of old growth white pines on a bluff overlooking the West Branch of the Pleasant River.

## *West Branch of the Penobscot River*

Approximately 11 miles of the West Branch of the Penobscot River lie within twenty miles of Kokadjo. This is, perhaps, Maine's most famous river, offering nationally renowned canoeing, fishing, and whitewater rafting opportunities. Along this stretch of the river, there are two boat launches, and two maintained campsites (as noted in the tables above). On the outer edge of the twenty-mile radius from Kokadjo, along the West Branch, are two sites worth mentioning.

### Old Roll Dam

The Old Roll Dam in Seboomook is a former log driving dam, now used as a portage. The river drops in a series of small falls over green slate bedrock. From the dam to the lower end of Chesuncook Lake are 42 miles of Class I and II water for canoeists and kayakers.

### Ripogenus Gorge and Below

Ripogenus Gorge is just below the dam of the same name, at the outlet of Chesuncook Lake. The gorge is one mile long, and up to 80 yards deep. Below the gorge are some of the most famous salmon fishing holes on the West Branch of the Penobscot River. This stretch of the river is also well known for its whitewater. Rafters, kayakers, and experienced canoeists shoot the 23 miles of river from Big Eddy to Ambajejus Lake, which offers class I to class IV rapids.

## CULTURAL RESOURCES

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### *Historic Property*

There are just four structures within the Concept Plan area.

- The **Dean cabin** and **shed** owned by the Dean family and located on the Peninsula on a  $\pm$  1 acre leased lot;
- The **Baasch cabin**, located on the north shore west of the North Inlet, on a  $\pm$  1 acre leased lot; and
- A **boathouse** on the southwest end of the Peninsula is owned by Plum Creek Land Company land.

The Dean cabin and outbuilding may have historic value. The Baasch cabin and the boathouse are unremarkable structures, built within the last 50 years. The Baasch cabin is similar to numerous small cabins around the pond. The boathouse, about 20 ft. x 10 ft. in size, is of milled wood and clapboard construction with bituminous shingle roof and is located above the high water mark.

### **The Dean Cabin and Shed**

These log structures are said to be 100 years old. They were built by C. A. Dean, president of the old Hollingsworth and Whitney timber company. Under the proposed subdivision plan for the Peninsula the 1 acre leased lot would be incorporated within a larger 11 acre parcel and sold to the Deans. This is the only change proposed. The cabins, of course, belong to the Deans. The cabin, raised on logs set on large stones, is all log construction with a standing-seam all metal roof. It is “T” shaped in plan with the top of the tee facing the pond to the south and containing a  $\pm$  40 foot long front porch. The rear (or bottom) of the tee on the north has gable ends facing east and west (see photos). The shed ( $\pm$  30 ft x 12 ft) is also of log construction with metal roof. Both structures appear to be made of hand-hewn fir or spruce logs.

### ***Other***

Three remnants of the logging days are also found on the shore. Two old pulp dumps, raised stone-filled log platforms, are seen at low water but are submerged at high water; one is on the north shore, the other on the west. The vague outline of a stone foundation to what may have been a mill is visible in the brush and silt near the mouth of Intervale Stream.

The old Kokadjo “farm” barns and worker houses can be glimpsed from the pond but are not in the view shed of the subject properties. The old Oakes summer cabin probably built  $\pm$  100 years ago at Kokadjo is now Northern Pride Lodge, a private venture. It too cannot be seen from Plum Creek Land Company property.

## **SOILS**

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### ***Overview***

This section describes the results of the soils inventory and analysis undertaken on the shorelands adjacent to First Roach Pond. The purpose was to conduct a medium intensity soil survey (a Class D survey as defined by the Maine Association of Professional Soil Scientists) (MAPSS) sufficient to determine the soils suitability for subsurface septic systems.

The results of the survey are depicted on Map 7, titled Soils Constraints. Overall there is a high incidence of soils that have “medium potential” to support septic systems around First Roach Pond. Further, most slopes are in the 5% to 15% range, a range suitable for subsurface waste disposal system installation.

### ***Extent of Area Surveyed***

Initially about 2107 acres in Areas 1 through 4 were surveyed; subsequently further soils information for specific sites within Area 5 was obtained. Map 7 shows the extent of the mapping and the results of the soils survey.



## ***Methodology***

The soils work was conducted by soil scientists with S.W. Cole Engineering according to MAPSS standards to a scale of 1" = 1320'. Initial mapping was on color aerial photographs. In all, 174 test pits were excavated by hand-shovel and/or 1" diameter soil auger. A field test pit log and field notes were kept and are on file at S.W. Cole's offices. Pits were positioned, flagged, and located on aerial photos. Test pit locations are based on orientation to ground features seen on aerial photos.

Soil mapping units were taken from existing published country soil survey legends. Map unit boundaries show the location of soils that have common properties for general land use planning. The map units were taken from a report prepared by the USDA Soil Conservation Service for Scott Paper Company in 1986. A separate report on file with Plum Creek, by S.W. Cole, summarized soil unit properties, such as texture, depth to seasonal high water table, and depth to bedrock. "Native soils" observed were correlated to existing soils and classified according to National Cooperative Soil Survey standards. Subsequently additional on-site work was undertaken by S.W. Cole staff, to verify the accuracy of this earlier work.

## ***General Findings***

The soil scientists identified four groups of soils; these were soils with:

**High Potential**, i.e., 90% probability that the delineation area is suitable for construction of subsurface wastewater disposal systems and development of low density residential or seasonal dwellings. Very little (less than 5%) of the + 2000 acres surveyed has high potential.

**Medium Potential**, i.e., 60% probability that the delineation area is suitable for construction of subsurface wastewater disposal systems and development of low density residential or seasonal dwellings. A majority of the site study areas has reasonable soils for septic systems serving 2 to 3 acre sites. It's estimated that 60% of the area surveyed has decent soils with medium potential.

**Low Potential**, i.e., 30% to 60% probability that the delineation area is suitable for construction of subsurface wastewater disposal systems and development of low density residential or seasonal dwellings. Hydric soils may occupy up to 50% of this delineation. These hydric soil areas will present limitations because of their association with freshwater wetlands; however, with careful on-site analysis, suitable septic sites may be found. About 20% of the study area falls into "low potential" category.

**Very Low Potential**, i.e., less than 30% probability that the delineation area is suitable for construction of subsurface wastewater disposal systems and development of low density residential or seasonal dwellings. The area is dominated by hydric soils that may present regulatory limitations because of their association with freshwater wetlands. These locations are unsuitable and should be avoided; they make up between 10% and 15% of the mapped area.

The box, over, shows which soil map units fall into each category.

### ***Mapped Soil Units for Around First Roach Pond***

#### **Soils with High Potential**

12B Adams-Croghan association, gently sloping  
18B Machias-Masardis association, gently sloping  
34C Danforth-Shirley-Elliottsville association, rolling

#### **Soils with Medium Potential**

6XB Nicholville-Roundabout association, gently sloping  
74B Telos-Monarda-Monson association, undulating  
76C Telos-Chesuncook-Elliottsville association, strongly sloping  
76D Chesuncook-Elliottsville-Telos association, moderately steep  
77C Telos-Chesuncook association, strongly sloping  
77D Chesuncook-Telos association, moderately steep  
89C Elliottsville-Monson association, strongly sloping  
942C Lyman-Schoodic association, hilly  
942E Lyman-Schoodic association, steep

#### **Soils with Low Potential**

78B Telos-Monarda association, gently sloping  
94C Monson-Elliottsville-Ricker association, moderately steep

#### **Soils with Very Low Potential**

0A Histosols association, nearly level  
7B Boothbay-Swanville association, gently sloping  
8A Swanville-Biddeford association, nearly level  
79B Monarda-Burnham association, gently sloping

## ***Findings by Area***

The First Roach Pond area was divided into five general areas for ease of reference. Subsurface conditions of each area within the proposed Concept Plan area, are summarized below. Area 1 and the eastern half of Area 2 have the best potential for development. Area 3 has low to medium potential for general development. Area 4 has low to moderate potential due to limitations of steep slopes and shallow depth to bedrock. Area 5 also has moderate potential, in the two, limited areas analyzed.

**Area 1.** This area is dominated by bedrock-controlled ridges and poorly to well drained silty till soils in areas between ridges. The eastern portion of this area has some areas of moderate to high development and septic system potential near the North Inlet area. Also worth noting are isolated pockets of poorly sorted sand and gravel deposits at the higher elevations, in the eastern half of this area. These areas are small in size but have high potential for development and septic systems. Of special significance is over 3 miles of shoreline, within this area, that generally has moderate to high potential for development and septic systems.

**Area 2.** Except for a small area on the west end of Area 2 and the eastern half of this area, the shoreline area is too wet for development or septic systems. An approximately 0.75 mile length of shoreline on the eastern end of this area generally has moderate to high potential for development and septic systems.

**Area 3.** This area has moderate potential for development and septic systems. With the exception of the northeast corner of this area, immediately north of the North Inlet area, the area

typically has low to moderate potential for development and for septic systems. Of special significance is the approximately 1.0 mile long and 0.30 mile wide peninsula formed by the North Inlet and First Roach Pond. This area has soils and slopes that have moderate to high potential for septic systems and development. About one-third of the eastern shore of the Pond has moderate potential for septic systems and development. About two-thirds of this eastern shore, however, has low potential, in areas within 500 feet of high water.

**Area 4.** Area 4 is a small ridge top and ridge slope west of the Lily Bay Road. The top of the ridge, shown as map unit #89C on the soil survey map, has moderate to high potential for septic systems and development. Because of its elevation and location, this ridge top area has some of the best views of the First Roach Pond area observed during investigations. The remainder of this area, with the exception of land on either side of the Lily Bay Road, is steep, shallow to bedrock or wet with low development and septic system potential, except for small isolated pockets of soil on flatter portions of the ridge slope and the shore.

**Area 5.** Only a limited portion of Area 5 was surveyed. This included the undeveloped shoreline areas and one small upland site. A 1500 foot section of shorefront comprising about 20 acres, was found suitable for septic systems and an upland “bench” site, high above the pond, near the state-owned land, was judged to have “medium” potential for septic systems and development and suitable for a “cluster” of septic systems.

## ***Conclusion***

The soil analysis, based on thorough soil sampling, indicates that much of the shore within  $\pm$  500 to 1000 feet of the water is suitable for septic disposal systems associated with conventional cabin or cottage style homes. Approximately 5.75 miles of shoreland, for at least 500 feet back, has high to medium potential for development. Even in areas of low potential, pockets of soils suitable for development and septic systems may be found, provided the lots are in the 2 to 3 acre range and provision is made for setbacks from runoff streams, and adequate vegetated buffers are left in place.

## **SLOPES**

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First Roach Pond lies in a gentle depression. The shore edge, especially when the lake level is drawn down, is rocky and only gently sloping. Upland from the shore the slopes continue to be mild; sustained slopes rarely reach 20% grade, most are in the 5% to 10% range.

There are a few exceptions. In the North Inlet/Peninsula area stretches of the shore have a high ( $\pm$  6 ft.) bank, at the normal high-water mark. The only sustained, steep (+20%) slopes occur away from the shore, on hill/mountain sides. Generally these locations are inappropriate for development; most are a thousand feet or more away from the shore.

This slope information is based on the USGS map, not the Class C Soil Survey. Based strictly on the Soil Survey, there may be areas within 500 feet of the shore that *may* exceed 20%. However, the soil survey map unit slope information is given in a range (i.e., 5 to 30% slope). Ultimately, on-site analysis will determine where slopes of 20% or less are to be found. Such sites are suitable for septic systems.

# WETLANDS

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## *Overview*

In order to determine possible wetland constraints to development, at a concept plan level, a field reconnaissance study was undertaken and aerial and mapped information was studied by qualified experts. The results of this work are reported here and summarized on Map 8, Wetland Constraints.

Overall, the fieldwork verified that existing LURC “protection” district maps are accurate, though discrepancies appear in some forest wetland areas; the fieldwork also verified and matched the hydric soils mapping. Nevertheless a few additional “red flags” were raised, and were mapped as being unsuitable for development.

## *Methodology*

The wetland analysis was conducted by Duke Engineering’s senior wetland scientist. Base maps used included USGS maps, LURC Land Use Guidance Maps, 1995 color aerial photography, and S.W. Cole’s soil unit mapping. An ARC/INFO GIS data base was created that incorporates all these elements, and this base map was overlaid with information gathered in three days of on-the-ground observation, using GPS technology to plot specific locations.

The results provide a semi-qualitative characterization of wetland constraints to development. Wetlands were characterized as a slight (S), moderate (M), or extensive (E) constraint to development on the First Roach Pond map. The boundary of wetlands were not delineated as part of this constraints analysis, however, the general location, abundance, ease of recognition, and type of wetlands were noted during GPS reconnaissance traverses around the Pond. A rigid, explicit definition of development relative to density, lot size, or lake frontage was not established as part of this characterization. More detailed wetland delineation maps will be provided when follow-up subdivision applications are filed with LURC.

The wetland constraint characterization for the areas around the Pond does provide useful input for concept-level planning. The characterization identifies areas around the Pond where development could proceed unimpeded by wetlands as well as areas where wetlands would pose surmountable challenges to development and areas where development would be extremely difficult and should therefore be avoided.

## *Findings*

The Wetland Constraints map (Map 8) shows mapped wetlands under LURC’s protection subdistricts as well as broad areas (marked S, M, or E) where there are constraints, as noted above. The map refers to five large areas on the pond which are referenced and described below.

The most extensive wetlands mapped by LURC are in the North Inlet area and adjacent areas to the north and east, on the southeast inlet stream, and well south of the southern shore of the pond. These areas contain: wetlands of “special significance,” within 250 feet of the pond shore (P-GP-WL1 wetlands); wetlands with 25 feet of a stream channel (P-WL2); and forested wetlands (P-WL3) that are at least 15,000 square feet in size. The field reconnaissance found

some forested wetlands not depicted on the LURC maps; this discrepancy is most likely due to the difficulty of interpreting forest wetlands on aerial photographs.

**Area 1.** Wetland constraints are relatively slight (S) for the western two-thirds of Area 1 and are either topographically contiguous with streams (P-SL1) or are discrete areas associated with specific soils units (79B). At the east end of Area 1, wetland constraints are moderate (M) to extensive (E) due to either: 1) the more complex relationship of a variety of soil units which results in wetlands more dispersed throughout the landscape, or 2) more extensive wetland systems as is the case in the vicinity of Rowell Brook. Forested and non-forested wetlands also occur on the west side of the channel leading from the Pond into North Inlet; the wetlands within the area designated P-GP are rated P-WL1 (i.e., wetlands of special significance).

**Area 2.** Wetland constraints are extensive at the west end of Area 2, moderate in the central section and slight at the east end of this parcel. The configuration and abundance of predominately forested wetlands (P-WL3) on this parcel is associated with Lagoon Brook and an unnamed stream at the west end of the parcel. Topography generally steepens to the east on this parcel which results in an improvement in drainage and a reduction in wetlands with increased distance from Lagoon Brook.

**Area 3.** Wetland constraints are moderate to extensive at the north end of Area 3 in the vicinity of Rowell Brook, North Inlet and the Roach River. Sizable areas of upland are present (e.g., soils unit 89C) but these are interspersed with smaller areas of wetland. Access to this part of Area 3, if needed, would require extensive upgrading since the corduroy road running along the north side of this parcel is barely passable in a four-wheel drive vehicle. South of the Roach River to an area on the north side of an unnamed perennial stream, wetland constraints are slight. South of the stream and to the north side of Inlet Brook, forested and scrub-shrub wetlands are common along the Pond shore and pose extensive to moderate constraints that are correlated to gentle topographic slopes and poor drainage.

**Area 4.** Wetland constraints in Area 4 are rated as slight. Where present, wetlands are associated with Lagoon Brook and occur as all types (P-WL1, 2, 3).

**Area 5.** There are no wetland constraints in the two small area identified for development in Area 5. The remainder of this area is almost fully developed; the few undeveloped segments are wet.

## **PLANTS AND WILDLIFE**

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### ***Significant Plant Life***

There are no known rare plants in the area surrounding First Roach Pond. The LURC Lake Report Form for First Roach, dated June 1991, states that there was a rare plant, swamp birch (*Butula Pumila*), near the lake in 1884, but there are no known specimens now. Review of Plum Creek records of Maine Natural Area Program data shows there are no significant natural resource areas or specimens in the vicinity of First Roach Pond.

### ***Wildlife***

Wildlife, especially in northern Maine, have become a major economic resource. Hunting, trapping, feeding, observing or photographing wildlife as well as guiding or catering to those that

do, generates \$444.5 million in retail sales, \$197.3 million in wages and salaries, \$631.7 million in total economic output, and supports 10,310 full-time and part-time jobs each year (University of Maine study). The Greenville area is central to this industry by virtue of its status as a gateway to the north woods in general, and as a stopover for those visiting Chesuncook, the headwaters of the Kennebec River, the Allagash Wilderness Waterway, Baxter State Park, the Forks, Jackman, and the Penobscot River. Following is a discussion of the major species which contribute to the economy of the region.

## ***Deer***

The number of white tailed deer has been increasing in Maine (the statewide population has doubled to 300,000 since 1986). The Greenville area has also seen increasing deer numbers. However, regional Inland Fisheries and Wildlife's wildlife biologists are concerned that there may be too little habitat to support them. The amount of habitat suitable for deer yards has been shrinking, and Inland Fisheries and Wildlife has been working to evaluate the situation. This may foretell changes in the number of deer permits for Wildlife Management District (WMD) 9, of which the First Roach Pond area is a part. Inland Fisheries and Wildlife is hoping to increase the amount of wintering habitat over the next 30 years in northern, western and eastern Maine in order to increase the deer population density by 2-5 times to between 10 and 20 deer per square mile. Currently, there are no known deer wintering areas in the vicinity of the pond. Nationally, Maine is known for its trophy-size bucks (age 4½ and older) because the hunting pressure on deer is relatively light compared to other states. In northern Maine, it is estimated that 30% of the bucks are 4½ or older, although any increase in the number of hunters, hunter effort, or season length has the potential to lower the number of trophy bucks.

According to Inland Fisheries and Wildlife statistics for the 1999 hunting season, WMD 9 accounted for relatively few harvested deer (230 versus a low of 97 for WMDs 2 and 3, and a high of 4,610 for WMD 17). However, a greater percentage of these were bucks (73% versus 61% for the state as a whole). WMD 9 is typical of other central management districts in the percentage of deer registered by resident versus non-resident permit holders: 59% resident, 41% non-resident.

## ***Black Bear***

The bear population has fluctuated widely in Maine. Estimates of the number of bear in 1950 were estimated to be between 5,000 and 7,000. In 1985, the estimate was 21,000, falling back to 18,500 in 1990. In 1999, the population was estimated at 23,000. Bear hunting regulations are designed to maintain the population at the 1985 level of 21,000. The 2000 hunting season ran from August 28<sup>th</sup> to November 25<sup>th</sup>.

Bear hunting supports a commercial guiding industry that provides hunts over bait and behind hounds. This industry is fueled largely by nonresidents who are attracted to Maine by a longer hunting season and a wider variety of legal hunting methods than in other eastern states. Although most bear hunting permit holders are residents of Maine, most of the bears harvested are taken by nonresidents. In 1999, 2,446 (70%) of the bear killed were taken by nonresidents. 479 (14%) of the bear taken that year were killed in Piscataquis County, and 152 (4%) in WMD 9. Of the bears hunted with bait, 74% were killed by nonresidents, and 78% of those hunted with hounds were killed by nonresidents. Overall, 2,258 (65%) of successful bear hunters employed registered Maine Guides. One hundred of these hunted in WMD 9.

## ***Moose***

Moose hunting resumed in Maine in 1980. Currently, permit holders are assigned to one of seven zones within the state within which they can hunt. In 1999, 185 hunters were assigned to the south-central zone, of which First Roach Pond is a part. Hunters in that zone enjoyed the highest success rate of any zone in the state: 96%.

Moose hunters tend to want only bull moose, and it is relatively easy to be selective since a hunter may see more than one moose per hour while hunting. In 1999, 149 or 84% of the moose taken in the south central zone were bulls. Over the entire state, 70% of the moose harvest is bulls. Because of concern about the increasing moose population, moose-vehicle collisions, and the prospect of a herd made up largely of cows and young bulls, Inland Fisheries and Wildlife has begun issuing 17% of all moose permits for antlerless moose only. None of the antlerless permits were issued to the south-central zone, although this may change.

Inland Fisheries and Wildlife has also changed its management goals for moose. The moose population will be managed depending on one of three primary objectives for each WMD. Each district is categorized as either a Recreation Management Area, where moose are hunting and viewing are the protected values; a Road Safety Area, where reducing the number of moose-vehicle collisions is the primary goal; or a Compromise Management Area, where recreational and safety concerns are balanced. The south-central zone is categorized as a Recreation Area. Accordingly, the number of moose is maximized in accordance with the ability of the land to support a healthy population without damaging the forests. This means the number of moose will probably stay about the same or perhaps, increase slightly.

Other changes in the hunting regulations is that there is no longer an upper limit on the number of moose permits issued, and the season is not limited to six days. The 2000 hunting season was changed from the first to the second week in October in order to avoid conflicts with grouse hunters. The new management policies regarding moose will undoubtedly enhance hunting and wildlife viewing opportunities in the First Roach Pond area.

## ***Furbearers***

Furbearers include all mammals harvested primarily for their pelts. These include: coyote, red and gray fox, bobcat, fisher, marten, raccoon, mink, otter, and beaver. Figures from the Maine Inland Fisheries and Wildlife show that gross proceeds from trapping has varied widely over the years from 1994 to 2000. The lowest statewide gross (from harvesting all the above-named species except raccoon) in this time period was \$282,646 in the 1998-999 season. The highest gross was \$723,200 in the 1996-1997 season.

It is difficult to determine species populations based on trapping harvest data, since the number of animals harvested depends to a significant degree on the current pelt prices and the number of trappers. However, Inland Fisheries and Wildlife biologists believe that populations of bobcat and fisher are high due to a corresponding increase in the snowshoe hare population. Marten populations tend to fluctuate primarily with the beechnut crop. Red fox numbers seem to be decreasing, perhaps because of the incidence of rabies.

Coyote snaring is allowed in management districts where coyote predation of deer is believed to be preventing the deer from reaching Inland Fisheries and Wildlife's long-term population goals. This would not appear to be the case in WMD 9.

### ***Loons***

Anecdotal accounts from First Roach Pond property owners note that loons are common on the pond and in the North Inlet area. No count of the population is available from the Audubon Society. Local accounts indicate the population level is stable.

### ***Eagles***

Although bald eagles are seen soaring and hunting in this region, Inland Fisheries and Wildlife has no record of eagle nesting sites within the First Roach Pond watershed.

### ***Ruffed Grouse***

Approximately half of all licensed hunters in Maine hunt for ruffed grouse (partridge) and woodcock, so upland birds constitute a significant draw for hunters. While Inland Fisheries and Wildlife have not studied ruffed grouse populations since the early 1980's, the department has surveyed moose hunters to find out how many grouse they see for every 100 hours of moose hunting. Based on these figures, the department estimates that the number of grouse is increasing in general, although there are wide fluctuations in the number of birds taken by moose hunters from year to year (from 1,707 in 1996 to 7,939 in 1995)\*. The ruffed grouse population is primarily a function of the availability of habitat. The birds live in young forests, so forestry practices that favor sapling and pole stands of hardwoods, as well as mixed stands, will improve or sustain ruffed grouse habitat.

### ***Woodcock***

As mentioned above, woodcock are popular with hunters in Maine. However, woodcock numbers are in decline across their range. The U.S. Fish and Wildlife Service instituted a shortened hunting season (30 days) for woodcock in 1985 and 1997, and required that the season open no sooner than October 6<sup>th</sup>. Inland Fisheries and Wildlife plans to continue these management strategies. Despite these restrictions, however, the population remains low compared to levels in the 1960s. Maine biologists attribute this to loss of habitat due to urban and industrial development and forest maturation. Industrial forestry will improve the outlook for woodcock by creating areas of young forest.

## **EXISTING CONSERVATION**

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Published material and maps, especially the series titled "Maine Land in Federal, State, Municipal and Non-profit Conservation Ownership" (published by the State Planning Office) show that a number of conservation parcels exist in the Frenchtown/First Roach Pond area and that other significant conservation initiatives are underway. The following is a summary:

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\* Note: The Maine IF&W estimates that this figure represents less than 1% of the total grouse harvest.



<b>Parcel</b>	<b>Owner</b>	<b>Explanation</b>
First Roach Pond South Shore	Department of Conservation Bureau of Parks and Lands	124 acres; campsites, beach, and cabins for lease; includes boat access
First Roach Pond Outlet	Maine Department of Inland Fisheries and Wildlife	approximately 24 acres on both sides of road, at Kokadjo; includes boat ramp
Roach River, from Kokadjo to Moosehead	Maine Department of Inland Fisheries and Wildlife	690 acres; 250 feet on each side protects this valued fishery; another 250 feet beyond, on each side is under a Plum Creek Timberlands conservation easement
East Beaver Cove (3 miles south of First Roach Pond)	Department of Conservation Bureau of Parks and Lands	778 acres of forest land
Second Roach Pond	Department of Conservation Bureau of Parks and Lands	240 acres shorefront, forested acres
Nahmakanta Lake (4 to 6 miles north-east of First Roach Pond)	Department of Conservation Bureau of Parks and Lands	42,912 acres of remote lakes and mountains, purchased under the Land for Maine's Future program
Appalachian Trail Corridor (6 miles southeast of First Roach Pond)	National Park Service	a 30,685 acre corridor across Maine to Mount Katahdin

Other public conservation lands within a  $\pm$  10 mile radius include: Days Academy Grant and shoreland along Moosehead Lake; Sugar Island in Moosehead; Lily Bay State Park; and Lobster Lake. Baxter State Park lies 20 miles to the northeast, as the crow flies.

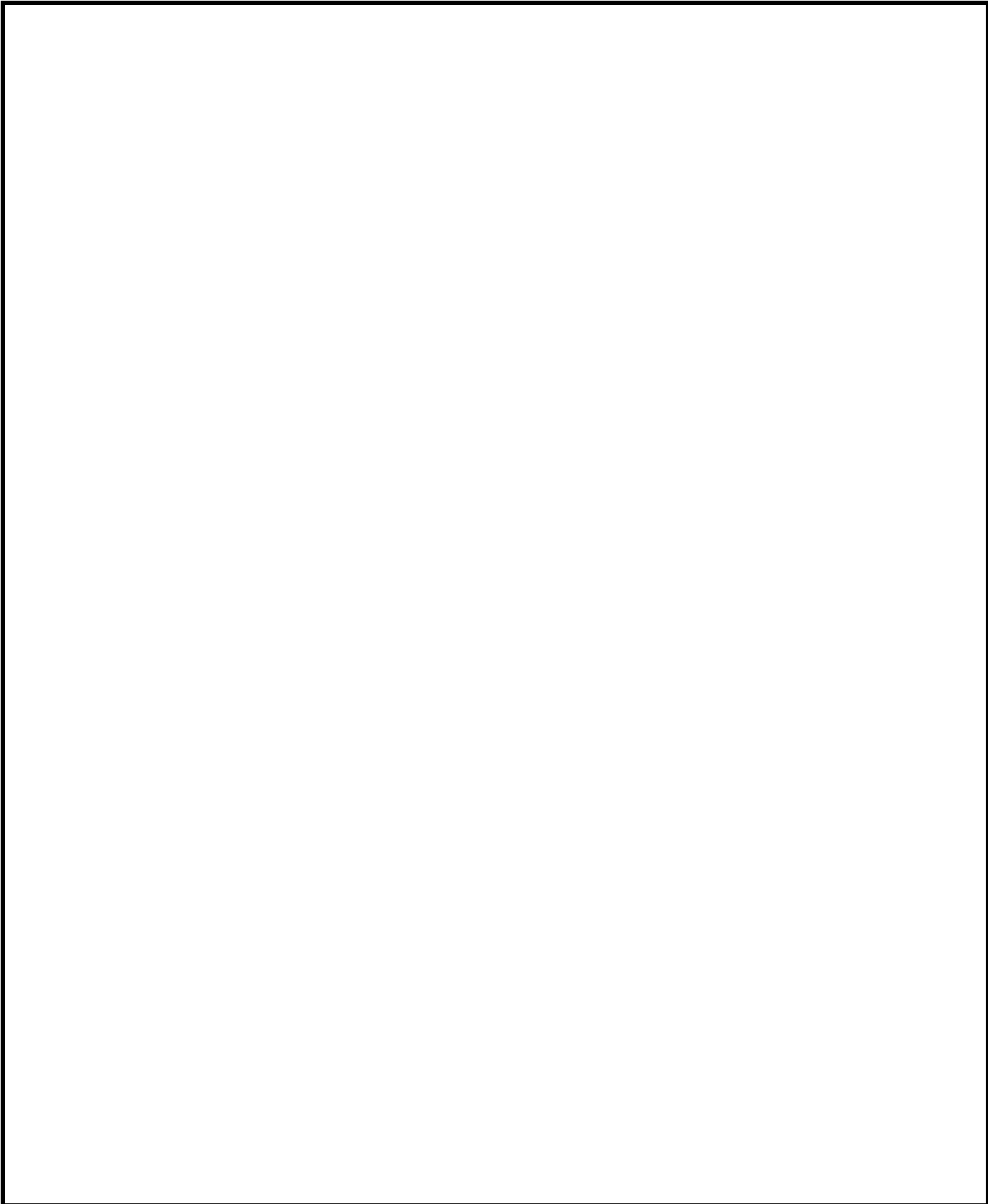
Public/private conservation initiatives are also in progress. To the north of First Roach Pond and Moosehead Lake 656,000 acres within the general West Branch of the Penobscot River are proposed for conservation (i.e., no development but on-going timber harvesting). In addition, working with the state and a private non-profit group, Plum Creek Timberlands is exploring ways to protect about 600,000 acres of forest land, in the townships around First Roach Pond and the west Moosehead shore.

## **EXISTING ZONING**

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LURC's existing zoning districts around First Roach Pond are typical of many developed lakes in the jurisdiction. Within 250 feet of the shoreline two subdistricts predominate: the P-GP (Great Pond, Protection) zone and the D-RS (Residential, Development) zone. Beyond, most of the land is in the M-GN (General, Management) zone. Smaller areas are zoned (P-SL2, P-WL1 & 2, and D-GN) within this general zoning pattern.

The Concept Plan planning area around First Roach Pond covers at least the first 500 feet of shoreland and, in places, covers a greater area. The extent of the main shoreland zones within the planning area are summed up as follows:



## **MAP 9 : EXISTING CONSERVATION**

*Source: Maine Land in Federal, State, Municipal, and Non-Profit Conservation Ownership  
(Millinocket Section), by Richard D. Kelly, Jr., Maine State Planning Office*

<b>Subdistrict</b>	<b>Shorefront</b>	<b>% of Total<sup>1</sup></b>	<b>Comment</b>
P-GP	76,500 ft.	73.9%	Includes some overlying P-WL1 zone (14,700 ft.)
D-RS	24,000 ft.	23.3%	Occurs on all but the east shore
D-GN	3,000 ft.	2.9%	Primarily at Kokadjo and the state-owned camping area
Total	103,500 ft.	100%	

No unusual subdistricts protecting special features (such as the Recreation (P-RR), Soil and Geology (P-GG), or Wildlife (P-FW) occur within the planning area.

The major characteristics of all the subdistricts within the First Roach Pond Concept Plan are described in the table that follows:

<b>Subdistrict</b>	<b>Characteristics and Location on First Roach Pond</b>
M-GN General Management	Its purpose is to allow forest management activities to occur with minimal interference from unrelated development, provided no special resource protection is needed. This district surrounds the pond, 250 feet beyond the shore.
P-GP Great Pond Protection	The purpose of this zone is to regulate residential and recreational development on Great Ponds to protect water quality, recreation potential, fishery habitat, or scenic character. Single family detached dwelling units are allowed by permit. Timber harvesting is permitted following specified standards. This district occurs around much of First Roach Pond where there is no residential (cabin) development.
P-WL Wetlands Protection	Both large (+ 10 acres) and small freshwater wetlands occur around the pond. These wetlands must be preserved in their natural state because of the indispensable natural functions they perform. One major wetland (P-WL1) subdistrict encompasses the north shore of the North Inlet pond; small (P-WL2) wetlands are found at the outlets of some of the minor streams entering First Roach Pond. Forested wetlands and scrub wetlands, designated P-WL3 on the map lie about 250 feet beyond the pond shore of the North Inlet and in the furthest, southeast end of First Roach Pond. They occupy very little of the Concept Plan area (i.e., less than 3%).
D-GN General Development	This subdistrict encompasses areas of existing development considered to be commercial. Just two such areas are within the Concept Plan area: 1,800 feet of shore property immediately around the outlet at Kokadjo; and 1,200 feet at the state campground on the southeast shore.
D-RS Residential Development	The RS zone sets aside land appropriate for residential development; in the case of First Roach Pond this includes many shorefront cabin areas that predate LURC. The subdistrict covers much of the south shore (17,300 linear feet) and includes shoreland around Kokadjo and two stretches of the north shore, containing over 2,000 feet of shorefrontage each.

All of these subdistricts are depicted on Map 10 “LURC Subdistricts.”

<sup>1</sup> Includes both First Roach Pond and North Inlet.

