

MAINE STATE LEGISLATURE

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1964

MAINE PUBLIC DOCUMENTS

1944-1946

(in three volumes)

VOLUME I

JAN 20 1964

STATE OF MAINE

TWENTY-SIXTH

BIENNIAL REPORT

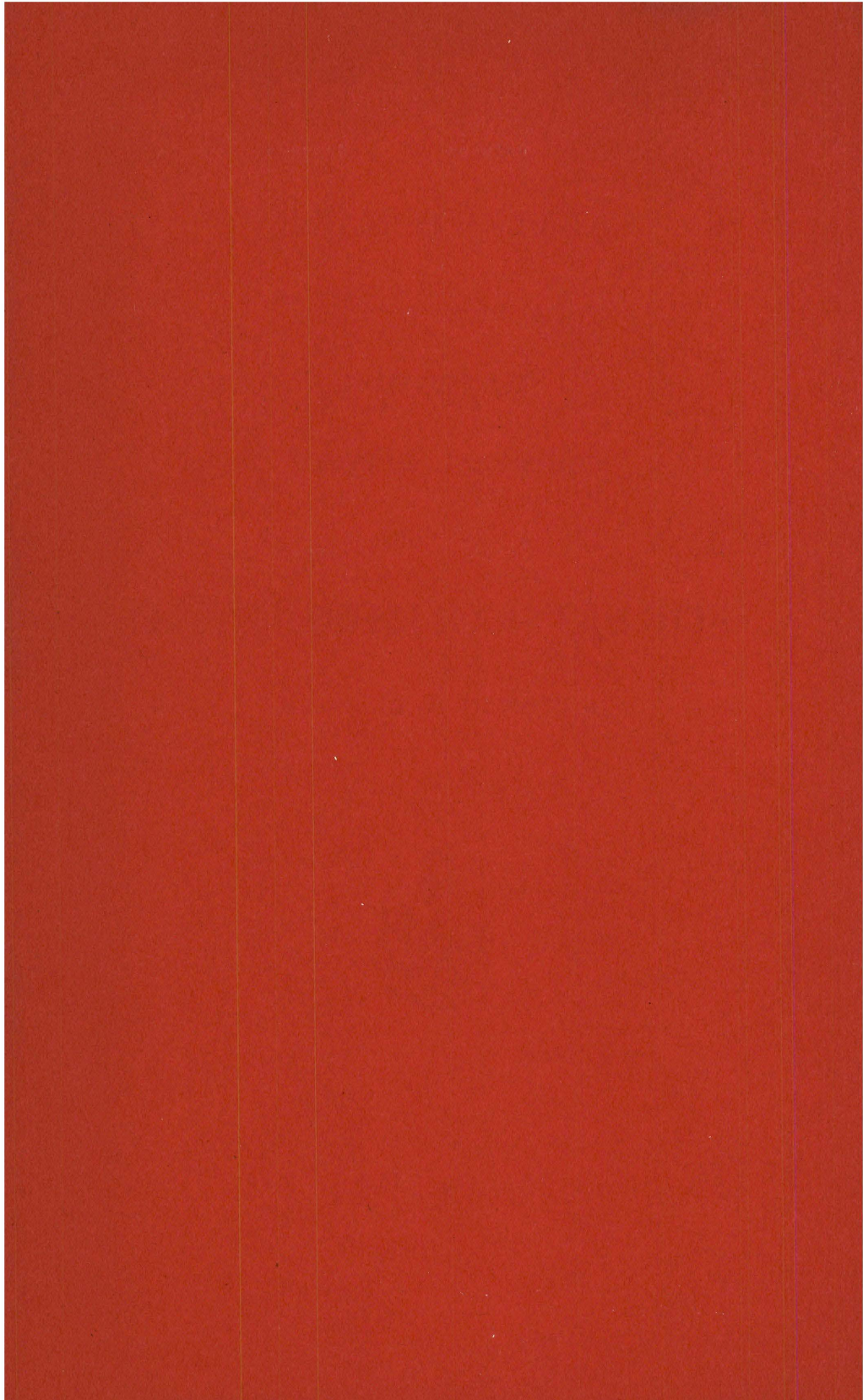
OF THE

FOREST COMMISSIONER

RAYMOND E. RENDALL



1945-1946



STATE OF MAINE

TWENTY-SIXTH

BIENNIAL REPORT

OF THE

FOREST COMMISSIONER

RAYMOND E. RENDALL



1945-1946



STATE OF MAINE FOREST SERVICE

(Land Office)

Augusta

January 31, 1947

Honorable Horace Hildreth
Governor of Maine

Dear Governor Hildreth:

In accordance with Section 14, Chapter 32, of the Revised Statutes of 1944, I have the honor to transmit herewith the Twenty-sixth Biennial Report for the years 1945-1946.

Respectfully yours,

RAYMOND E. RENDALL,
Forest Commissioner

MAINE FOREST SERVICE PERSONNEL

December 31, 1946

Forest Commissioner

Raymond E. Rendall, Augusta

Supervisors

Forestry District

George A. Faulkner, Ellsworth
Harry G. Tingley, Island Falls
Rex E. Gilpatrick, Augusta
Robert G. Hutton, Monson

Organized Towns

Austin H. Wilkins, Augusta

State Entomologist

Henry B. Peirson, Augusta

Assistant Entomologist

Joel W. Marsh, Augusta

Laboratory Entomologist

Auburn E. Brower, Augusta

Laboratory Technician

Gordon Tower, Augusta

Laboratory Biologist

Edith Jones, Augusta

Blister Rust Control Agent

Walter O. Frost, Augusta

District Agents

Daniel S. Curtis, Bridgton
Harrington G. Bradbury, Belfast
Martin G. Calderara, Auburn
Joseph B. Pike, Waterville

Forester

Lyman C. Poole, Milbridge

Draftsman

Robert E. Pendleton, Readfield

Airplane Pilots

Earl F. Crabb, Augusta
Nestor A. Nelson, Augusta

Secretary to Commissioner

Lillian Tschamler, Augusta

Chief Clerk

Blanche L. Violette, Augusta

Accountant

Kathryn F. Larkin, Augusta

Clerks

Mabel C. Rowell, Augusta
Marion Blair, Augusta
Rose Marie Poulin, Augusta

Forest protection consists of fire prevention, detection, and suppression; insect and disease control; and every effort to obtain proper cutting practices to insure a perpetuation of forest growth.

Fire protection is more generally recognized as essential because the public is more or less fire conscious and can visibly understand the material loss caused by fire.

Insects and diseases may destroy large percentages of forest stands and man may devastate by improper cutting practices but fire is, without a doubt, the greatest forest menace. Fire not only consumes merchantable timber which may have a salvage value, but it destroys all immature growing timber and reproduction as well as denuding the forest soil. Money should be expended on each protection, giving full attention to all destructive agencies.

This report deals with "collection and classification of statistics relating to the forests and connected interests of the state" as required by statute, and records progress of the past two years with a hope that it may serve as a basis for future better protection of our forest land heritage.

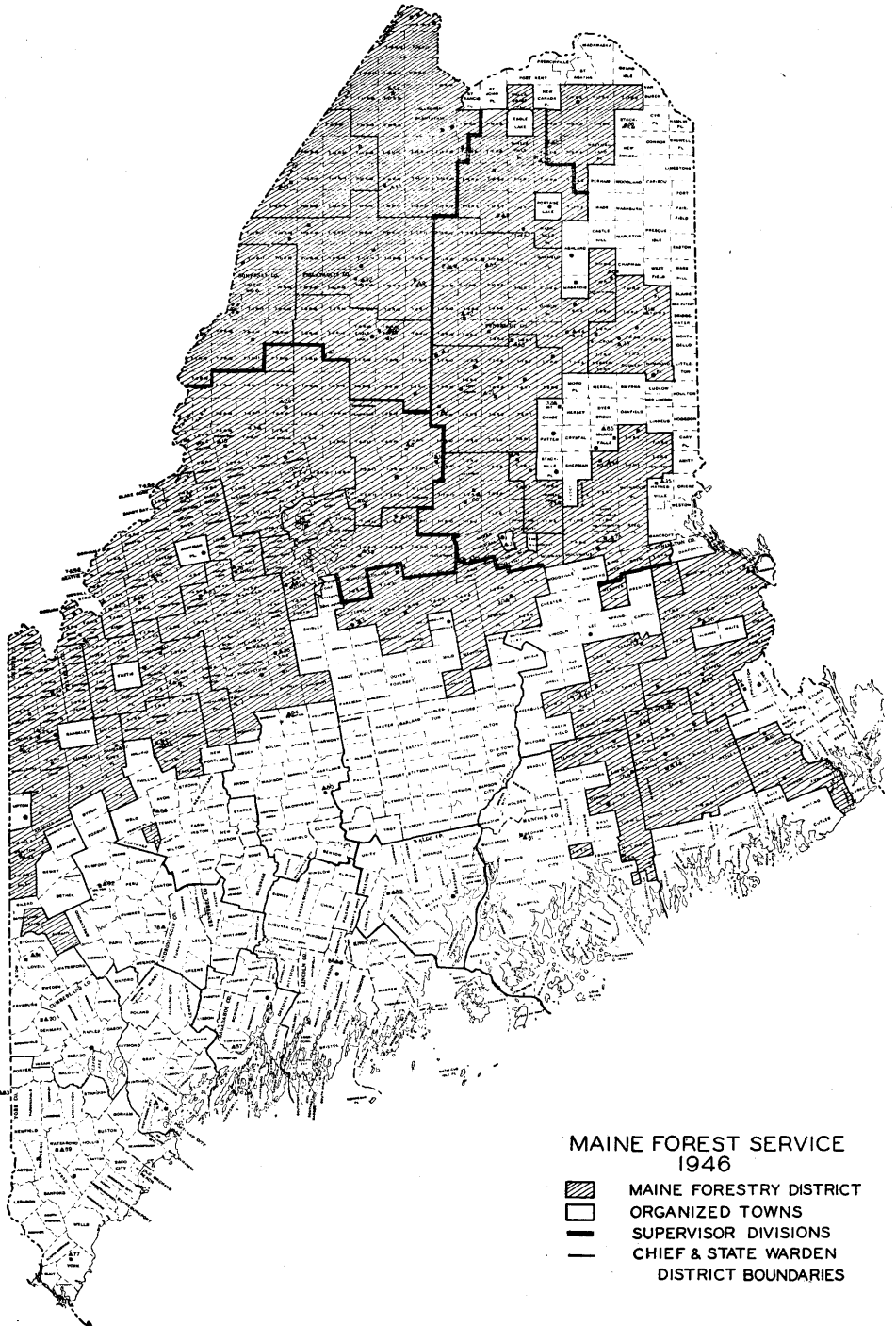
Land Area of Maine

Basis for figures U. S. Census 1940





U. S. Forest Service and Maine Forest Service revision 1945.

		*Forest Land	
Developed Areas	248,183 A.	Federal Forest Areas	100,177 A.
Barren Land	710,552 A.	Maine Forestry District	
Agricultural Areas	2,123,688 A.	(Wildland Townships)	10,000,000 A.
*Forest Land	16,783,177 A.	Org. Town Forest Land	6,683,000 A.
	<hr/>		<hr/>
	19,865,600 A.		16,783,177 A.

On April 25, 1945 the administration of the Forest Commissioner was criticized by three employees before the Governor and Council concerning irregularities and favoritism. The Deputy Attorney General reported "a lack of harmony and cooperation in the Forestry Department which is detrimental to the Commissioner's proper administration of his office."



MAINE FOREST SERVICE
1946

-  MAINE FORESTRY DISTRICT
-  ORGANIZED TOWNS
-  SUPERVISOR DIVISIONS
-  CHIEF & STATE WARDEN
DISTRICT BOUNDARIES

On July 3, 1945 this lack of harmony and cooperation was eliminated in the severance from office of the three men for insubordination. Chief Warden Robert G. Hutton was promoted to the position of Forest Supervisor in the western division to fill one of the vacancies. A forester, Robert E. Pendleton, and an entomologist, Joel W. Marsh, were employed in the main office to fill the other vacancies.

With the ending of the war in 1945, members of the armed forces began to return to their peace time jobs. By the end of the 1946 fire season the Maine Forest Service had reinstated fourteen men and employed thirty-five veterans of World War II, a total of 49.

Each year, in addition to a normal turn-over, there are several who reach the retirement age. During the war years extension of time was approved by the Governor and Executive Council for keeping on our payrolls many of our key personnel.

Recognition is given to the following who have reached the retirement age and who have rendered twenty-five years or more of faithful service, contributing so greatly to the record of the Maine Forest Service in its protection of the forests of Maine:

William J. McRae	Chief Warden—Upper St. John District
A. R. Henderson	Chief Warden—Carrabasset District
John E. Mitchell	Chief Warden—East Branch District
Eunice J. Mitchell	Telephone Operator—East Branch District
Anton R. Jordan	Chief Warden—Union River District
Harry McReavy	Chief Warden—Machias District
Julius White	County Warden—District No. 7

On February 27, 1945 the Maine Forest Service personnel met in the main office to give a farewell party for one of its most valued workers who had completed twenty-seven years of service. The following testimonial was used to accompany the many letters which were received and bound for her pleasure:

MAINE FOREST SERVICE

Augusta, Maine

* * *

In Appreciation
of the

Earnest, Devoted and Loyal Service

of

Lillian J. Coleman
Chief Clerk

from 1918-1945

* * *

MAINE FORESTRY DISTRICT

The 1945 fire record in the Maine Forestry District only showed 83 fires and 888.5 acres burned with a low suppression cost, and the 1946 record shows 151 fires and 3,553 acres burned with a higher than average suppression cost.

Joseph M. Gagnon, chief warden in the Madawaska District retired after 26 years of service and was succeeded by Luther Savage at the beginning of the 1945 season. Other changes in chief warden personnel in 1945 were Elmer Dearborn replacing Edgar I. Carr in the Katahdin District, and Herbert Johnston replaced Emil Leavitt in the Seboomook District.

In 1946 John Sinclair succeeded George Ryan in the Seven Islands District; William J. McRae, Upper St. John District, started the season and retired because of illness in July and was succeeded by Richard Pierce; John V. Wing, Dead River District, resigned in September after 25 years of service and was succeeded by Willard Wight; Kenneth Hinkley succeeded Harold York in the Rangeley District; and Edmund Emery became chief warden in the Chamberlain District, replacing Cyril Jandreau. Upon the promotion of Robert Hutton to supervisor, Warren Worster had charge of the Chesuncook District.

Appalachian Mountain Club

266 miles of the 2,050 mile Appalachian Trail leading from Mt. Katahdin in Maine to Mt. Oglethorpe in Georgia, lie in Maine between Katahdin and the New Hampshire state line at Grafton Notch. White Cap, Borestone, Moxie-Bald, Bigelow, Abram, Saddleback, and Old Spec mountains are locations of Maine Forestry District lookout towers along this section of the Trail.

The Maine Appalachian Trail Club, Inc., through Captain Myron H. Avery, made available in the spring of 1946 the use of tools and \$210.00 to pay for labor to reopen portions of the Trail which had become impassable. This cooperation will clear the Trail for Appalachian Mountain Club members and aid greatly in forest fire protection. Work has been and will be done by personnel of the Maine Forestry District. The Trail was cleared in 1946 from the Ledge House on Maine Highway No. 16 to the top of Mt. Bigelow, a distance of 6.96 miles, and some work was done on the Moxie-Bald mountain

trail. An allocation of \$350.00 will be used in 1947 for clearance of the Trail from Moxie Pond to Bald Mt. Pond dam, between Pleasant River Road and the White Cap fire tower, and completion of trail on Mt. Bigelow range.

Northern Division—Rex E. Gilpatrick, Supervisor

In the northern division of the Maine Forestry District the weather during 1945 and 1946 has been very different each year. 1945 was about normal, while all the districts had an exceptionally dry season during 1946. The lakes and rivers have been at their lowest level in years and remained that way until fall. Travel on the rivers has been impossible a lot of the time. When it has been necessary to travel by canoe, it has been very hard on the canoes and motors.

This northern area covers nearly all of the lands draining into the Allagash and St. John Rivers as well as that part of the Forestry District in northeastern Aroostook around Long, Cross, Square, and Eagle Lakes. It consists of six chief warden districts, all but one of which are the most inaccessible in the state as far as roads are concerned.

In spite of existing conditions, due in part to the aftermath of war, a fair standard of efficiency has been maintained for the past two years. Listed is what we have been able to accomplish and what we need to do in the immediate future.

In the Madawaska District the season of 1945 was about normal until August; then became dry. The telephone line trails were cleaned out all over the district, a distance of about 45 miles.

In 1946, five miles of old wire was replaced with new. Two and one-half miles of new pole line was built between Cross and Long Lakes. A new 20 foot canoe was purchased for headquarters at Cross Lake. A new pick-up truck is needed to replace the old 1931 Ford.

The Allagash District was wet during the first part of 1945; then got dry in August. The fall was about normal. A new roofing was put on Castonguay patrol and Musquacook Mt. camps. 1,000 feet of hose was added to replace some that was old. Power pumps are in fair condition. Three miles of new telephone trail were cut this year and twenty-four miles of old trails rebushed.

In 1946, two new 5 H.P. outboard motors were of great help in the spring until the river got too low to use them. About mid-season a truck caught fire and was destroyed. One from another district was used to get along for the balance of the season, but it will have to be replaced in the spring. Nine miles of new telephone line was built along the new gravel road in T. 18, R. 13 between Rocky Mt. and Camel Branch Brook. The tower on Musquacook Mt. was moved from there to Round Pond Mt. in the fall and three miles of new telephone line run from the tower to connect on to the Allagash River line. The logs for watchman's camp were cut and hauled to the east shore of Round Pond where a new camp will be built next season. A new camp is needed for the patrolman at Estcourt and two new trucks in this district.

The Seven Islands District was about normal during 1945 until the latter part of July. A cyclone storm in August blew down trees for a distance of nearly six miles on the telephone line along Big Black River. A new trail had to be cut and part of the wire renewed. A new engine was put in the pick-up truck in this district and 1,000 feet of new hose added.

In 1946, bushes that had grown under the telephone lines were cleaned out for about fifty miles and several changes were made in location of lines. There is a need for two outboard motors and need for a storehouse at St. Pamphile.

The Upper St. John District was about normal most of 1945 excepting about two weeks in August. One old canoe was replaced with a new 20 foot one and two old ones were recanvased. Outboard motors are in fair condition but a new one is needed. 500 feet of hose was added this year. A new power pump and a new truck are needed. There were about ten miles of telephone trails cut this year.

The spring work was started in 1946 under Chief Warden William McRae, but due to ill health he retired on pension the first of July. His duties were taken over by Richard M. Pierce, of Gardiner. The season has been very dry, with rivers low and canoe travel limited. A new camp was built on Baker Brook to replace the old patrolman camp. Logs were cut and sawed for a new chief warden's camp at Daaquam, to be built in the spring of 1947. A new pick-up truck and a new 20 foot canoe have been added. The power pump in this district has been repaired with new parts and works good, but

a new one is needed due to increased hazards. Five new lumbering outfits have located in the district this year.

The Musquacook District had about a normal season in 1945 until July; then dry a while. Extra men were put on to cut bushes along the road under the telephone line from Umsaskis to Churchill Lake, also to repair some of the culverts broken down by heavy trucks. This piece of road is about nine and one-half miles in length and is a part of what is known as the LaCroix road. It is a private road but used by the public and is in very bad condition. It is the only way to move supplies to camps and fire fighting equipment to Churchill Lake by road. It is very imperative that this road be kept in condition to move fire trucks over. From Clayton Lake to Churchill Lake, a distance of seventeen miles, the road is out of repair and the bridges unsafe. If the landowners do not repair and maintain this road, money should be made available to purchase machinery for this purpose before there is a conflagration in that area calling for the movement of men and equipment promptly.

During 1946, a new telephone trail from Churchill Lake to Little Pleasant Lake, east of Clear Lake Mt., was cleared for a distance of about eleven miles. This needs to be continued to the east line of T. 9, R. 11 in 1947 to connect with the telephone line to Norway Mt. in the Aroostook Waters District. A new 16 H.P. outboard motor was purchased for the 18 foot boat at Churchill Lake and a boathouse was built. Hand pumps, shovels, pails, and axes are cached in the boathouse ready to be moved to any fire by boat around Churchill Lake. A new Pacific power pump and 1,000 feet of hose have been added in this district. In the fall and early winter a telephone line survey was made from Umsaskis on a direct line south to Tramway. When this line is built there will be direct telephone communication from any part of this district to any New England Telephone & Telegraph Co. in the state; a much needed improvement in order to contact the Commissioner's office in an emergency. The new line to Tramway will be about twenty miles. There has been an old line which is thirty-two miles long and in bad condition with many telephones on it. The new line will be without any telephones to load it between Umsaskis and Tramway.

The Chamberlain District became a part of the northern division in the spring of 1946. It is a run down district. The camps and equipment for the most part are worthless as such, although the headquarters camp at Tramway is in very good condition and well

equipped. One small motor and power pump with about 1,500 feet of hose are in fair shape. There is one 14 foot Old Town boat in good condition. Due to shortage of labor, material, and transportation in this district this year, there has not been much done to change conditions but it is hoped that the condition will be somewhat improved in 1947. Edmund Emery took over as chief warden this spring, in this district, in place of Cyril Jandreau who resigned after helping out for a few weeks.

Central Division—Harry G. Tingley, Supervisor.

The central division consists of 108.5 standard townships, a total of two and one-half million acres. This area for fire protection purposes is divided into seven chief warden districts.

Average rainfall in 7 districts for 7 years:

	<i>Inches</i>
1940	19.1
1941	16.7
1942	18.9
1943	23.1
1944	23.1
1945	24.5
1946	17.3

The 1945 season shows a rainfall a little above the average for the past six-year period, while the 1946 season was below that of 1945 and below the average for the past seven-year period.

There are 711 miles of telephone lines in this division. No additional mileage has been built during the past two years. 152 miles of pole line and 349 miles of woods or ground line are owned by the Maine Forestry District. 87 miles of pole line are leased from public utility companies and 123 miles of woods line are in joint ownership. There were, however, 7.5 miles of pole line replacements made in 1945. All woods lines are subjected to much damage in areas of heavy cutting and in hardwood lands where the Bronze Birch Borers cause heavy mortality in birch stands.

34 miles of road and trail were cleared of brush and 27 miles of slash burned along highways, telephone and transmission right-of-ways, in 1945. 5 miles of trail were cleared and 49 miles of slash burned in 1946. Equipment added in 1945 consisted of one new pick-up truck, one Pacific power pump, and 3,000 feet of 1½" fire hose. One new canoe, making twenty-five now in service, one 5 H.P. outboard motor, and one pick-up truck were purchased in 1946.

The following improvements were made in 1945: two camps were painted and two reroofed; one storehouse painted and one reroofed; three towers were painted, one repaired, and one reroofed. In 1946 one camp was painted and one reroofed; two storehouses were painted; three towers were painted, two were repaired, and four reroofed.

There should be many more fireplaces placed at suitable lunch ground sites to increase our fire prevention control. Such fireplaces would not need to be sheltered nor tables provided.

During the late fall and summer of 1945 we were able to obtain through the Army three walkie-talkie radio sets. Each weighs $4\frac{3}{4}$ pounds and has a rated range of from 1.5 to 5 miles. We did some experimenting with these sets. Our tests show them to be good for only distances from 1 to 2 miles, depending on the terrain and atmospheric conditions. Their strong points are light weight, small size, extreme portability, and compactness. An operator will sling this set over one shoulder, carry any other necessary equipment, walk to his objective, and scarcely realize that he is carrying any additional load. I recommend them highly for "short hauls", from 1 to 2 miles, for operating directly on fire lines, from fire spotted to fire boss, and to men operating fire pumps.

Portable radios obtained for the 1946 season weigh $17\frac{3}{4}$ pounds with a range from 00 to 6-8 miles from portable to portable, from 6 to 15 miles from portable to mobile sets on ground work, and from 8 to 25 miles from a plane with portable to mobile sets. These distances are workable, always depending on such factors as fairly level terrain and good atmospheric conditions. The portables are very sensitive, take but little to throw them off 40% to 60% of maximum range and capacity, so a close check must be kept on all sets before making tests or putting them into any service calling for maximum output.

The above portables were used with excellent results on the T. 10, R. 4 and T. 8, R. 4, N.B.K.P., fires. On the T. 10, R. 4 fire, contact from radio in planes to radio on the fire line was used to direct fire boss to spot fires both inside burned area (islands unburned) and to spot fires outside burned areas. Due to inadequate, home-made antenna on plane, which was very directional, high efficiency could not be obtained but in no case was a failure reported.

The mobile radio used in the supervisor's car is very efficient. There have been only few opportunities to test mobile set against

mobile set, but on ground work reasonable service can be expected on distances from 20 to 40 miles. From a mobile set in a plane to towers equipped with mobile sets, one could expect service from 30 to 50 miles, all distances depending on terrain and atmospheric conditions.

Western Division—Robert G. Hutton, Supervisor

The season of 1946 was one of the bad fire years of the past decade. Little frost was in the ground, and by the first of July conditions were extremely dangerous for fire. This condition continued into late September. The dryness of the ground, together with the extensive cutting of our forests during and after the war years, brought about a very hazardous condition. Summer pulp and lumber operations, together with an unparalleled number of fishermen in the woods during the fire months, contributed largely to the number of fires during 1946.

Thirty-seven fires occurred in the division, and the following is their distribution by districts: Chesuncook, 7; Moosehead, 8; Seboomook, 2; Moose River, 6; Parlin Pond, 9; Dead River, 2; Rangeley, 3; and Carrabasset, 0.

The Hammond Township fire was the largest, burning approximately 450 acres and 1,200 cords of pulp in the stakes. This was owned by the Great Northern Paper Company. Several of our fires were in mountainous terrain and high up. Some were over two miles from water and in inaccessible country.

Suppression costs were of necessity high, fires occurring in locations which had a scarcity of less expensive local labor. Without exception, crews had to be recruited from the woods, and as the prevailing labor rates are at an all time high, comparable wages had to be met in order to get the men.

The chief wardens, patrolmen, and watchmen of the division deserve commendation for the high type of work performed during the fire season, contributing much toward keeping fires at a minimum.

Considerable telephone work was accomplished during the season. The old metallic circuit on New England Tel. & Tel. Company poles from Newry Corner to Bethel, having been in use over twenty years, was replaced with a new circuit, a distance of six and one-half miles. We were requested to do this by the telephone company as they

wanted our position on their poles. The ground circuit from Skinner to the Boundary along the Canadian Pacific Railroad right-of-way was converted to a metallic line, comprising a distance of seven miles. Three miles of metallic line from Cupsuptic storehouse, along the Brown Company road to Kennebago, was relocated in order to facilitate better service. In cooperation with Austin Wilkins, Supervisor of the Organized Towns, the old telephone line running from Blanchard to Moxie Bald Mt. was rebushed and reconstructed, a distance of 12½ miles. Moxie Bald station commands an excellent coverage of the organized towns of Blanchard, Shirley, Monson, and others. Some work was also done on the Kingsbury-Brighton line this fall. The usual job of repairing and brushing all telephone lines was accomplished before the fire season began.

Several repair jobs were accomplished during the season. New sills were placed under the Spencer Mt. night camp. The garage at Seboomook was thoroughly repaired, reroofed, and painted. The watchman's camps at Green and Little Russell Mountains were painted and repaired.

Another year considerable new work should be done to build up the efficiency of the division. A new storehouse should be built at Jackman and one at Caratunk. This year the Maine Forestry District acquired a lease to the shore rights on Moosehead Lake adjacent to and south of the district headquarters at Greenville for a seaplane base. A float should be built here and one at Chesuncook Dam. The logs for these floats were cut this fall. Major repairs to the Seboomook camp are necessary another year. This calls for new sills, underpinning, and painting.

In that the Sourdnahunk Stream Valley has no mountain coverage since the Doubletop Mt. lookout station was discontinued several years ago, one of the discontinued towers should be erected there. The logical place for this would be the southwest spur of O. J. I. Mt. which would cover that area very well. This peak is in Baxter State Park and commands an excellent view up and down the valley. Several new sites for lunch grounds should be established in order to keep campers more under control.

New trucks have not been purchased since 1942 to replace those purchased in 1938. Of the fifteen vehicles now in use in the division, six were purchased in 1938. One of these is beyond repair and should be replaced this year. The Parlin Pond District, which stands at

the head of the list for the most fires this season, should have an additional truck. Three of the others will need new engines before another season. In order to take care of the tire needs for the coming season, the division will need twenty-two. These will take us well along into the fire season.

A new supply of road signs could be used to advantage, as our present supply is in very bad shape.

This year a concerted drive was made to clean up the roadside slash in the division. At the beginning of the season there were especially bad slash conditions along the Bingham-Jackman and Jackman-Rockwood roads.

As a number of our fires were located on or near small ponds we used small planes of the two-place type to advantage for transporting men and equipment in order that work could be started on these as quickly as possible. This type is very well adapted for fire work especially in the eastern part of the division where fishermen are prone to get back to the small ponds, so many of which are found in this section. More air patrolling would eliminate many of our larger and expensive fires. A patrol plane could be used to a distinct advantage in that many of our major fires could be detected and suppressed in their small stages. Much of the country mentioned above is broken up by mountains and deep valleys and is not covered by our lookout stations.

Stumpage on several of the public lots within the division has been sold for cutting this year. Upon making inspections of these operations I found the operators conforming to good cutting practices.

Eastern Division—George A. Faulkner, Supervisor

The eastern division of the Maine Forestry District, containing approximately 2,000,000 acres of forest land, is subdivided into six districts. During the fire season there is an active field force of 6 chief wardens, 14 watchmen, 9 patrolmen or linemen, and more than 100 deputy wardens whom the chief warden of each district may call upon any time in the case of an emergency. Also, representing the various landowners, lumber and pulp companies, and other organizations, is a large number of general deputy wardens who lend a great deal of assistance during the fire season.

This division maintains and cares for a total of 18 lookout towers, 15 storehouses, 31 camps, 21 camp sites, and over 700 miles of tele-

phone line with more than 100 telephone instruments. Miscellaneous property includes 17 trucks, 4 power boats, 20 canoes, 9 outboard motors, 13 power pumps with 25,000 feet of forest fire hose, over 600 Indian fire hand pumps, and over 2,000 pieces of lesser fire fighting equipment.

The past two fire seasons were vastly different in nature. 1945 was more or less a wet season with the exception of a short period in August when several forest fires occurred causing grave concern but, fortunately, were controlled, and the remainder of the season was taken advantage of in general construction work.

Early in 1946, with a cold and wet May, it began to look as if the 1945 fire season would be repeated. However, by the first of June, fires were being reported generally, and the situation continued all through the season. A total of over 60 forest fires were reported and controlled throughout the season.

During the season of 1945, the department's large storehouse at Brownville with full equipment was completely destroyed by fire of an undertermined origin. Plans were immediately made to reconstruct the building, but on account of delays caused by investigations, insurance adjustments, lack of materials, etc., the department was unable to do anything until 1946. However, during the past season building materials have been obtained and the foundation set, so that construction should commence in the early part of 1947.

Some years ago it was considered advisable for the department to own and maintain a sub-headquarters of the Passadumkeag District at Nicatous Lake. During the season of 1945, a lot was obtained on the west side of Nicatous Lake near the outlet and work was started on the buildings. This past season the buildings have been completed and a start has been made on equipping them. By the end of the 1947 season, the department should have a real working unit in this area.

Another project that was started this past year is that of establishing the headquarters for the Union River District at the so-called Henry Moores farm on the Airline Road. This location is nearly in the center of the district, and when completed will have direct telephone service to all parts of the district as well as the adjoining Machias District.

The telephone line project, Whiting to Marion, which was started in 1944, has been completed, giving direct service from the Whiting

storehouse to the Maine Forestry District lookout towers. The Whiting storehouse is the headquarters for the fire protection system of the organized towns of eastern Washington County.

The condition of the fire fighting equipment, camps, towers, telephone lines, etc., of the eastern division is very good with the exception of one-half ton pick-up trucks and several of the fire power pumpers. At least four old trucks should be replaced by new ones, and four or five new power pumpers should be purchased. Most of the pumpers of this division have been in use for 15 to 20 years, and while the motor parts of the pumpers have been kept in repair, the water pump parts of the units have worn out.

During the past season the department made a start in the field of radio communication. Experiments have been carried on to acquaint the men with the use of the sets and the results obtained seem to indicate that there is a great deal that can be accomplished from the use of radio. A greater range and effectiveness will come by using the sets from airplanes to the ground personnel.

Airplanes

Airplanes were first used for detection and observation in 1927 when a plane was hired at such times as needed. The first plane owned by the Maine Forestry District was a Ryan monoplane, purchased in 1933. This was replaced in 1934 by the purchase of a new Stinson monoplane equipped with pontoons. This was replaced by a Beechcraft in 1937 which was destroyed by fire in 1938. Another Beechcraft was purchased and used until early in 1941 when it was traded for a new model of the same make. In 1943 war conditions influenced all our activities and it became necessary to change to a lighter plane. First, a Piper Cub Coupe was used in the 1943 season, and then a Taylorcraft for the 1944 season. This ship was flown throughout the season of 1945 by W. O. Temple from a base at Shin Pond, located for coverage of the central division.

A plane piloted by Caldwell Sweet was based at Holbrook Pond, east of Bangor, available and subject to call for needs in the eastern division.

The Moosehead Flying Service, at Greenville, was employed as needed for work in the western division, from the Tramway at the headwaters of the Allagash to the Rangeley Lake area.

Earle Miller again flew his Taylorcraft under contract in the northern division and was based at Umsaskis Lake on the Allagash.

Late in the fall of 1945 a motor failure caused a crash which resulted in the complete loss of the District-owned Taylorcraft. Earl F. Crabb, District pilot since 1933, who was on a leave of absence for service in the Army Air Corps from June 1942, returned during the winter of 1945-1946. Nestor A. Nelson, pilot employed in 1942 and granted a leave of absence to enter the Navy Air Corps in 1943, also returned during the winter of 1945-1946. This created the odd situation of having two pilots but no planes.

An order was placed for one of the newly designed Republic "Seabee" amphibian airplanes in December 1945, for delivery on or before April 1. It was August 10 before the plane was received. This new type of plane has proved ideally constructed for forest fire protection work in Maine. Because of its ability to land on land or water, the expense of installing pontoons in the spring and taking them off in the fall, has been eliminated. A reversible pitch propeller is of aid in docking or beaching. The Seabee is a high wing airplane which permits a great range of visibility that is so important in fire protection work. 148 hours were flown after this plane was commissioned for service work.

In June 1946 a Taylorcraft was leased for twenty weeks and flown 253.8 hours during the fire season. Planes with commercial pilots were employed for a total of 268 hours. The total for all planes for the season was 769 hours.

Airplanes have proved of importance in the inaccessible forested areas where transportation is time-taking and servicing of fire fighters is a problem. The use of planes makes it possible to detect a fire from the air. Ground crews are advised of its location, size, type of timber in which it is burning, the direction in which it is traveling, the nearest source of water for suppression purposes, and the nearest lake or river on which the airplane can land the fire fighting equipment and crew. Airplanes have also been used to great advantage for the mapping of fires already in progress. This provides not only an accurate record of the fire but also enables the supervisors to plan effective means of combat. A clearer picture of the conditions around a fire is obtained from the airplane than is possible from the ground.

Plane patrol as a supplement to tower observers is very effective. This is especially true following lightning storms and during periods of hazy weather when the visibility from towers is restricted.

Radio Installation

An initial installation of radio equipment was made in the spring of 1946. This included 10 portable Link, model 695-B, transmitter-receiver units, and 4 automobile Link, model 15UBX, transmitters and 4 Link, model 8UA, receivers. These sets are approved by the Federal Communications Commission and licensed to operate on a frequency of 35.94 megacycles. Station call letters of WMML were assigned for the portable sets and WAQE for the mobile car sets.

The portable radio is battery operated. A 12½ foot telescope steel antenna is used for both transmitting and receiving. A French-phone hand set is used as the earphone and microphone, using a push button when you want to talk. The entire unit is carried in a canvas knapsack and weighs 17¾ pounds. The portable set has a power output of ½ watt and the batteries will last for approximately 125 hours of continuous use. The set has 7 tubes, 4 in the transmitter and 3 in the receiver.

The mobile car sets were installed in the four supervisor's cars. They are similar in operation to the portable sets but are much more powerful, having a power output of 15 watts.

In June 1946 the laws governing radio operators were changed by the Federal Communications Commission whereby operators of our type of equipment need not be licensed. Any employee of the department may use the equipment in fire fighting work.

This past season considerable testing work was done with the radios in an effort to acquaint the fire wardens with the uses of the equipment. As many conditions as possible were simulated so that the men would have a good idea of the limitations and advantages in the use of the equipment. Many of the tests were very satisfactory, and in a few cases the sets were used in fire work.

Several tests were conducted from the airplane, using a temporary installation of the portable radio sets. Because of the low power of the sets, good results were not obtained beyond a 25-mile radius of the ground set. Several patrol flights were made with the radio, using it as the communications system to other portable sets and

the mobile car sets, and in one case to a portable set that had been installed in a tower. On one fire which was in a very inaccessible place, the airplane to ground radio communication system was used with good results.

Plans are being made to install units in our planes and try out sets in certain key towers. This will be the beginning of plane to ground and tower to tower inter-communication system for better detection and pre-suppression.

FOREST COMMISSIONER'S REPORT

MAINE FORESTRY DISTRICT

Financial Statement

1945

Balance overdrawn January 1, 1945.....		\$5,868.71	
Receipts			
1945 Assessment.....	\$134,155.50		
Federal Cooperation.....	90,320.49		
Baxter State Park.....	1,525.00		
Total Receipts.....	\$226,000.99		
Insurance Account Receivable.....	3,967.00	229,967.99	
		<u>224,099.28</u>	
Forestry District tax abatements.....	\$262.62		
Forestry District tax charge-off.....	547.94		
Bills Receivable adjustments.....	15.99		
Bills Receivable charge-off.....	7.35	833.90	
		<u>223,265.38</u>	

Disbursements

Chief Wardens.....	\$37,352.03		
Deputy Wardens.....	1,744.69		
Supervision.....	14,656.92		
Patrolmen.....	50,080.48		
Watchmen.....	43,992.37		
Improvements.....	17,612.57		
Tools and Supplies.....	29,843.82		
Fire Suppression.....	8,789.98		
Administration.....	10,685.83		
Miscellaneous.....	5,965.87		
		<u>220,724.56</u>	
Balance January 1, 1946.....		\$2,540.82	

EXPENDITURES BY WATERSHEDS

	St. John	Penobscot	Kennebec	Andros-coggin	Machias	Totals
Chief Wardens...	\$11,925.44	\$18,005.47	\$6,917.33	\$1,182.00	\$4,321.79	\$37,352.03
Deputy Wardens...	240.00	612.19	290.00	75.00	527.50	1,744.69
Supervision.....	6,030.73	4,060.16	1,048.89	528.98	2,988.16	14,656.92
Patrolmen.....	20,137.61	14,159.13	6,486.76	4,709.14	4,587.84	50,080.48
Watchmen.....	12,234.75	13,582.13	9,090.49	2,555.00	6,480.00	43,992.37
Improvements...	7,263.68	5,441.70	2,461.49	1,037.47	1,408.23	17,612.57
Tools and Supplies	10,823.37	7,956.73	6,684.39	1,181.14	3,197.69	29,843.82
Fire Suppression...	1,069.60	3,948.39	2,263.30	1,044.84	463.85	8,789.98
Administration...	2,086.78	2,176.47	2,199.10	2,132.99	2,090.49	10,685.83
Miscellaneous....	1,666.28	1,919.33	1,455.07	246.31	678.88	5,965.87
Totals.....	\$73,528.24	\$66,861.70	\$38,897.32	\$14,692.87	\$26,744.43	\$220,724.56

MAINE FORESTRY DISTRICT

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MAINE FORESTRY DISTRICT

Financial Statement

1946

Balance January 1, 1946.....		\$2,540.82	
Receipts			
1946 Assessment.....		134,230.38	
Federal Cooperation.....		154,939.77	
Baxter State Park.....		1,525.00	
		<hr/>	
Total Receipts.....		293,235.97	
Forestry District tax abatements.....	\$1,019.03		
Bills Receivable charge-off.....	36.03		
		<hr/>	
		1,055.06	
		<hr/>	
			\$292,180.91

Disbursements

Chief Wardens.....		\$41,142.29	
Deputy Wardens.....		1,328.52	
Supervision.....		17,605.02	
Patrolmen.....		54,942.79	
Watchmen.....		46,769.55	
Improvements.....		27,923.00	
Tools and Supplies.....		33,804.96	
Fire Suppression.....		39,260.97	
Administration.....		11,399.03	
Miscellaneous.....		7,711.83	
		<hr/>	
			281,887.96
Balance January 1, 1947.....			\$10,292.95

EXPENDITURES BY WATERSHEDS

	St. John	Penobscot	Kennebec	Andros-coggin	Machias	Totals
Chief Wardens...	\$13,821.90	\$13,146.41	\$7,658.11	\$1,483.37	\$5,032.50	\$41,142.29
Deputy Wardens.....	106.77	407.35	592.20	5.00	217.20	1,328.52
Supervision.....	6,331.23	4,867.47	1,868.74	1,095.91	3,441.67	17,605.02
Patrolmen.....	13,915.06	13,435.29	9,630.38	6,204.73	6,757.33	54,942.79
Watchmen.....	12,691.88	14,828.93	10,120.24	2,361.34	6,767.16	46,769.55
Improvements...	11,538.57	6,890.19	4,720.43	2,031.39	2,742.42	27,923.00
Tools and Supplies	10,448.27	8,271.63	6,827.96	3,438.57	4,818.53	33,804.96
Fire Suppression..	4,651.93	14,452.02	12,991.75	2,328.45	4,836.82	39,260.97
Administration...	2,280.46	2,279.93	2,280.48	2,279.09	2,279.07	11,399.03
Miscellaneous....	2,461.61	2,095.89	1,616.64	606.74	930.95	7,711.83
Totals....	\$83,247.68	\$80,675.11	\$58,306.93	\$21,834.59	\$37,823.65	\$281,887.96

MAINE FORESTRY DISTRICT FIRE RECORD 1945

Location	Date	Acreage	Cause	Damage
Aroostook County				
T. 8, R. 4, WELS	May 9	.1	Unknown	
Hammond Pl.	June 3	.2	Smoking	
T. 14, R. 6, WELS	June 8		Campfire	
Wallagrass Pl.	June 9	.5	Smoking	
T. 8, R. 5, WELS, SE ¼	June 14		Unknown	
Glenwood Pl.	July 27		Unknown	
T. 11, R. 8, WELS, NE ¼	Aug. 11	1	Smoking	2.00
Garfield Pl., NE ¼	Aug. 14	.1	Campfire	2.00
T. 11, R. 7, WELS, NE ¼	Aug. 15	.1	Campfire	
Nashville Pl.	Aug. 15	.1	Lightning	
Nashville Pl.	Aug. 18	.1	Campfire	
T. 9, R. 3, WELS	Aug. 18	.1	Campfire	
Garfield Pl., NE ¼	Aug. 20	.1	Campfire	
T. 15, R. 9, WELS, NE ¼	Aug. 20	1	Campfire	25.00
T. 4, R. 3, WELS	Aug. 21	.2	Smoking	3.00
Silver Ridge Pl.	Aug. 23		Unknown	
E Pl.	Aug. 24	1	Campfire	
Wallagrass Pl.	Sept. 9	16.5	Miscellaneous	
T. 12, R. 7, WELS, SE ¼	June 21		Unknown	
Franklin County				
Dead River Pl.	Nov. 16		Campfire	
Hancock County				
No. 33 Pl., MD	Aug. 8	3	Smoking	25.00
Township No. 3, ND	Aug. 16	.1	Smoking	
Township No. 40, MD	Aug. 18	.2	Campfire	25.00
Township No. 35, MD	Aug. 11	1	Lightning	2.00
Penobscot County				
T. A. R. 7, WELS	April 10	4	Railroad	
Stacyville Pl., SE ¼	April 12	1	Smoking	50.00
Medway	April 12	.5	Unknown	
T. 2, R. 6, WELS	April 13	3	Campfire	50.00
T. A. R. 7, WELS, NW ¼	April 13	16	Railroad	
Kingman Pl.	April 15	1	Unknown	
Kingman Pl.	April 16	10	Unknown	
Lakeville Pl.	April 17		Lightning	
Kingman Pl.	April 23	1.7	Railroad	1.00
Kingman Pl.	April 23	.5	Unknown	
Stacyville Pl.	April 24	2	Railroad	
Stacyville Pl.	April 24	4	Smoking	
Kingman Pl.	April 24	20	Lumbering	1.00
T. 2, R. 7, WELS	May 27	1.5	Smoking	10.00
Kingman Pl.	June 2	50	Smoking	1.00
T. 4, R. 7, WELS	July 8	.1	Lightning	
Webster Pl.	Aug. 12	.2	Smoking	
Kingman Pl.	Aug. 17		Smoking	
Indian No. 3	Sept. 10	.1	Smoking	
T. 3, R. 1-3, ND	Aug. 22	700	Smoking	3,500.00
Indian No. 4	Sept. 18		Lumbering	
Piscataquis County				
T. 6, R. 9, WELS, SE ¼	April 11	.5	Smoking	
T. 6, R. 9, WELS, SE ¼	April 17	.2	Smoking	
T. 3, R. 5 (Little Squaw) BKP, EKR	April 22	2	Brush Burning	25.00
T. 3, R. 12, WELS	June 25		Lightning	
T. 2, R. 13, WELS	June 30	.2	Campfire	
T. A. R. 14 (Lily Bay) WELS	July 7	1	Lightning	100.00
T. 2, R. 6 (Big Squaw) BKP, EKR	July 7	.2	Campfire	2.00
Elliotsville Pl.	July 8	.2	Smoking	2.00
T. 2, R. 6 (Big Squaw) BKP, EKR	July 8	9	Lightning	250.00
T. 2, R. 12, WELS	July 10		Lightning	
T. 3, R. 12, WELS	Aug. 11	.5	Lightning	15.00
Lakeview Pl.	Aug. 15		Unknown	
T. 1, R. 14 (Spencer Bay) WELS	Aug. 21	.5	Campfire	50.00
T. 6, R. 10, WELS	Aug. 22		Smoking	
T. 7, R. 15, WELS	Aug. 22		Lightning	
T. 6, R. 9, NWP	Aug. 24	2	Smoking	40.00
T. 2, R. 13, WELS	Aug. 25	.5	Campfire	2.00
T. 10, R. 9, WELS, SE ¼	Aug. 18	13	Lightning	78.00

MAINE FORESTRY DISTRICT FIRE RECORD 1945

Location	Date	Acreage	Cause	Damage
Somerset County				
T. 5, R. 1, (Attean) NBKP.....	April 18	1	Smoking.....	.....
Moscow.....	May 3	.2	Smoking.....	.....
T. 1, R. 6, (Chase Stream) BKP, WKR	May 11	.....	Smoking.....	.....
West Middlesex Grant.....	July 12	1	Smoking.....	.....
Hobbs town.....	July 24	.7	Unknown.....	200.00
T. 1, R. 5 (Moxie Gore) BKP, EKR..	Aug. 11	1	Smoking.....	.....
Hobbs town.....	Aug. 12	.....	Smoking.....	.....
T. 1, R. 7, (Sapling) BKP, WKR.....	Aug. 13	.5	Smoking.....	50.00
Brassua E.....	Sept. 11	2	Lightning.....	.....
T. 2, R. 4, (Pittston) NBKP.....	Sept. 14	.....	Lumbering.....	.....
Washington County				
Indian Twp.....	April 23	.3	Smoking.....	3.00
Township No. 36, MD.....	July 20	.....	Lightning.....	.....
Township No. 42, MD.....	July 20	.....	Lightning.....	.....
Township No. 43, MD.....	July 27	.....	Campfire.....	.....
Indian Township.....	Aug. 16	.2	Campfire.....	1.50
Township No. 43, MD.....	Aug. 16	.5	Campfire.....	2.50
Township No. 6, (Hinckley) ND.....	Aug. 18	1	Campfire.....	66.00
Township No. 19, ED.....	Aug. 20	.....	Smoking.....	.....
Township No. 18, ED.....	Aug. 23	.5	Campfire.....	6.00
Lambert Lake Pl.....	Sept. 6	.1	Unknown.....	.....

MAINE FORESTRY DISTRICT FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Aroostook County				
T. 8, R. 4, WELS.	May 24	.....	Railroad	.....
T. 10, R. 3, WELS	June 15	.....	Campfire	.....
T. 16, R. 3, WELS	June 16	35	Smoking	287.50
Winterville Pl.	June 29	.....	Lightning	.....
T. 11, R. 10, WELS	June 30	.....	Lightning	.....
T. 15, R. 11, WELS	July 1	.....	Lightning	.....
T. 20, R. 11 & 12, WELS	July 1	.....	Lightning	.....
T. 17, R. 10, WELS	July 3	.5	Lightning	45.00
T. 7, R. 4, WELS	July 5	.....	Brush Burning	.....
T. 15, R. 9, WELS	July 5	.5	Campfire	.....
T. 17, R. 10, WELS	July 18	10	Campfire	1,335.00
T. 19, R. 12, WELS	July 18,	1500	Campfire	5,000.00
T. 8, R. 5, WELS	July 30	.....	Lumbering	.....
T. 7, R. 5, WELS	July 31	.....	Lumbering	.....
T. 18, R. 13, WELS	Aug. 1	18	Smoking	3,000.00
Reed Pl.	Aug. 2	25	Unknown	65.00
T. 8, R. 4, WELS	Aug. 16	2	Smoking	7.00
T. 11, R. 8, WELS	Aug. 27,	.....	Lightning	.....
T. 13, R. 8, WELS	Sept. 1	.....	Campfire	.....
Hammond Pl.	Sept. 5	.....	Campfire	.....
T. 9, R. 3, WELS	Sept. 13	.....	Campfire	.....
T. 12, R. 13, WELS	Sept. 23	.3	Smoking	.....
T. 11, R. 4, WELS	Oct. 9	.....	Unknown	.....
Franklin County				
T. 3, R. 6, WBKP	June 19	.5	Campfire	.....
Sandy River Pl.	July 4	5	Unknown	.....
Hancock County				
Township No. 10, SD	June 13	.1	Campfire	.....
Plantation No. 33	June 20	40	Lumbering	500.00
Township No. 7, SD	June 25	.1	Smoking	10.50
Township No. 10, SD	July 4	.2	Smoking	50.00
Township No. 3, ND	July 15	.....	.....	.....
(Figures in Penobscot)				
Township No. 41, MD	July 17	.5	Campfire	10.00
Township No. 3, ND	July 26	.1	Campfire	5.00
Township No. 8, SD	July 30	.....	Smoking	.....
Township No. 34, MD	Aug. 1	5	Lumbering	625.00
Township No. 10, SD	Sept. 1	.....	Campfire	.....
Township No. 34, MD	Oct. 8	10	Lumbering	160.00
Township No. 3, ND	Oct. 9	.1	Campfire	5.00
Oxford County				
Mason	July 11	12	Lumbering	100.00
Grafton	July 12	.....	Smoking	.....
Lincoln Pl.	Aug. 10	.1	Lightning	.....
Penobscot County				
T. A, R. 7, WELS	May 4	3	Railroad	6.00
T. 1, R. 7, WELS	May 23	.....	Lumbering	.....
T. 7, R. 8, WELS	June 14	1.5	Campfire	.....
T. 5, R. 1, NBPP	June 15	.1	Campfire	20.00
T. 6, R. 8, WELS	June 15	.....	Smoking	.....
T. 1 & 2, R. 7, WELS	June 16	350	Smoking	900.00
No. 3 Indian Purchase	June 21	.....	Smoking	.....
No. 3 Indian Purchase	June 22	.....	Railroad	.....
T. 6, R. 8, WELS	June 30	.....	Lightning	.....
Lakeville Pl.	June 30	.1	Campfire	5.00
Grand Falls Pl.	July 15	.1	Smoking	15.00
T. 3, R. 1, NBPP	July 15	300	Campfire	2,500.00
(above fire includes figures for T. 3, ND, Hancock County—same fire)				
No. 3 Indian Purchase	July 20	.....	Smoking	.....
T. 1, R. 9, WELS	July 26	.2	Campfire	.....
No. 3 Indian Purchase	July 28	.....	Campfire	.....
T. 6, R. 8, WELS	Aug. 1	.....	Miscellaneous	.....
Grand Falls Pl.	Aug. 4	.2	Campfire	2.00
T. 6, R. 8, WELS	Aug. 9	.....	Lightning	.....
T. 6, R. 8, WELS	Aug. 13	.....	Brush Burning	.....
T. 6, R. 7, WELS	Aug. 26	.....	Lightning	.....
Medway	Oct. 7	.2	Smoking	2.00

MAINE FORESTRY DISTRICT FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Piscataquis County				
T. 1, R. 9, WELS	April 22	3	Unknown	
T. 4, R. 9, WELS	May 29	.5	Smoking	30.00
T. 2, R. 12, WELS	June 9		Campfire	3.00
T. 1, R. 11, WELS	June 12		Campfire	
T. 2, R. 13, WELS	June 16		Campfire	6.00
T. A, R. 12, WELS	June 26	1	Lightning	50.00
T. 8, R. 10, WELS	June 27	3	Campfire	150.00
T. 8, R. 12, WELS	June 30		Lightning	
T. 4, R. 12, WELS	June 30		Lightning	
T. A, R. 12, WELS	July 1	.1	Lightning	15.00
T. 7, R. 13, WELS	July 5		Unknown	
T. 6, R. 10, WELS	July 6		Lightning	
T. 4, R. 10, WELS	July 6	640	Lightning	1,565.00
T. 2, R. 8, NBPP	July 7	2	Brush Burning	10.00
T. 4, R. 13, WELS	July 7		Lightning	
T. 3, R. 5, BKP, EKR	July 13	2	Lightning	35.00
Deer Island	July 15	1	Campfire	50.00
Lakeview Pl.	July 17	12	Smoking	100.00
Orneville	July 19	.5	Smoking	5.00
T. B, R. 10, WELS	July 19	7	Smoking	785.00
T. 2, R. 9, WELS	Aug. 9		Smoking	
T. 2, R. 9, WELS	Aug. 9		Smoking	
T. 2, R. 9, WELS	Aug. 10		Smoking	
T. 3, R. 12, WELS	Aug. 11		Campfire	
T. 6, R. 11, WELS	Aug. 13		Campfire	
T. 9, R. 12, WELS	Sept. 6	.5	Lightning	
T. 1, R. 12, WELS	Sept. 15	1.5	Campfire	40.00
T. 1, R. 9, WELS	Sept. 17	.2	Campfire	1.00
Burbank	Sept. 27		Campfire	
Sugar Island	Sept. 28	.1	Campfire	20.00
Somerset County				
Moscow	May 4		Unknown	
Big W	May 28		Miscellaneous	
T. 2, R. 3, BKP, EKR	June 7	.5	Smoking	25.00
Dennistown Pl.	June 18	.2	Brush Burning	
T. 1, R. 6, BKP, WKR	June 30		Lightning	
Long Pond Pl.	July 1	.2	Campfire	
T. 3, R. 4, NBKP	July 6	450	Smoking	9,950.00
T. 5, R. 1, NBKP	July 8	8	Lightning	
Moose River Pl.	July 9	.1	Smoking	
Moscow	July 14	3	Miscellaneous	50.00
Flagstaff	July 16	1	Campfire	
West Forks Pl.	July 19		Smoking	
T. 2, R. 7, BKP, WKR	Aug. 13	2.5	Lightning	
T. 2, R. 6, BKP, WKR	Aug. 17		Campfire	30.00
T. 6, R. 19, WELS	Sept. 6		Smoking	
T. 5, R. 6, BKP, WKR	Sept. 15	.2	Campfire	300.00
West Forks Pl.	Sept. 17	6	Smoking	100.00
T. 2, R. 2, NBKP	Sept. 28		Campfire	
West Forks Pl.	Oct. 8		Smoking	
T. 1, R. 5, BKP, EKR	Oct. 21		Smoking	
T. 1, R. 5, BKP, EKR	Oct. 25		Smoking	
Washington County				
Lambert Lake Pl.	May 2	.5	Smoking	
Edmunds Township	May 23		Railroad	
Marion Township	May 24	.1	Smoking	
Township No. 18, ED	June 2	2	Smoking	
Lambert Lake Pl.	June 2	.1	Incendiary	
Lambert Lake Pl.	June 10	.5	Incendiary	2.00
Indian Township	June 10	.2	Smoking	5.00
Wesley	June 12		Brush Burning	
Northfield	June 14	.5	Campfire	
T. 8, R. 4, NBPP	June 14	1	Lumbering	
T. 6, R. 1, NBPP	June 15		Campfire	
Grand Lake Stream Pl.	June 16		Smoking	
No. 14 Pl.	June 17	.5	Smoking	10.00
Township No. 19, MD	June 22	2	Campfire	
T. 1, R. 2, TS	June 24	20	Campfire	602.00
Edmunds Township	June 26	10	Smoking	60.00

MAINE FORESTRY DISTRICT FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Washington County (Cont.)				
Indian Township.....	June 27	.1	Smoking.....	2.50
Township No. 6, ND.....	June 28	.1	Campfire.....	2.00
Township No. 19, MD.....	June 28	3	Smoking.....	.....
Township No. 27, ED.....	June 28	.....	Smoking.....	.....
Township No. 42, MD.....	June 29	3	Lightning.....	.....
Deblois.....	June 29	.....	Miscellaneous.....	.....
Township No. 42, MD.....	June 29	2	Lightning.....	.....
T. 8, R. 3, NBPP.....	June 29	2	Smoking.....	300.00
Township No. 30, MD.....	July 6	.2	Campfire.....	5.00
Edmunds Township.....	July 9	.....	Smoking.....	.....
Trescott Township.....	July 16	.7	Campfire.....	.....
Edmunds Township.....	July 16	3	Smoking.....	10.00
Edmunds Township.....	July 17	1	Miscellaneous.....	10.00
Grand Lake Stream Pl.....	July 18	.....	Smoking.....	.....
No. 14 Pl.....	July 23	.5	Smoking.....	224.00
Beddington.....	July 28	4	Smoking.....	200.00
Northfield.....	July 30	2	Brush Burning.....	20.00
Township No. 37, MD.....	Sept. 6	.2	Smoking.....	5.00
Township No. 18, MD.....	Sept. 18	20	Smoking.....	20.00
Brookton Township.....	Sept. 19	.2	Campfire.....	.....
No. 14 Pl.....	Oct. 10	.5	Campfire.....	.....
Trescott Township.....	Oct. 10	1	Brush Burning.....	.....
Township No. 18, MD.....	Nov. 5	4	Campfire.....	20.00
Township No. 24, MD.....	Nov. 6	2	Campfire.....	10.00

SUMMARY OF FOREST FIRES FOR 1945-1946 BY MONTHS, COUNTIES AND CAUSES—MAINE FORESTRY DISTRICT

	No. of Fires		Acreage		Damage	
	1945	1946	1945	1946	1945	1946
April.....	18	1	67.8	3.0	\$130.00	.....
May.....	4	9	1.9	4.1	10.00	\$36.00
June.....	9	47	51.0	479.1	1.00	2,940.50
July.....	11	48	12.4	2,967.4	554.00	22,094.00
August.....	34	17	736.8	52.8	3,895.00	3,729.00
September.....	6	18	18.7	28.2	.....	486.00
October.....	..	9	..	11.8	.....	167.00
November.....	1	2	..	6.0	.....	30.00
	83	151	888.6	3,553.4	\$4,590.00	\$29,482.50
By Counties:						
Aroostook.....	19	23	21.3	1,591.3	32.00	9,739.50
Franklin.....	1	2	..	5.5	.....	.....
Hancock.....	3	11	3.4	56.1	50.00	1,865.50
Oxford.....	..	3	..	12.1	.....	100.00
Penobscot.....	21	21	815.7	655.4	3,613.00	3,450.00
Piscataquis.....	18	30	38.0	674.4	564.00	2,865.00
Somerset.....	10	21	6.5	471.7	250.00	10,455.00
Washington.....	11	40	3.7	86.9	81.00	1,507.50
	83	151	888.6	3,553.4	\$4,590.00	\$29,482.50
By Causes:						
Brush Burning....	1	7	2.0	5.2	25.00	30.00
Campfires.....	20	47	9.6	1,851.3	232.00	10,121.00
Railroads.....	4	4	23.8	3.0	1.00	6.00
Lightning.....	14	24	28.7	659.7	445.00	1,710.00
Lumbering.....	3	8	20.0	68.0	1.00	1,385.00
Smoking.....	28	48	775.1	923.6	3,686.00	16,103.50
Incendiary.....	..	2	..	.6	..	2.00
Miscellaneous.....	1	5	16.5	4.0	.....	60.00
Unknown.....	12	6	13.0	33.0	200.00	65.00
	83	151	888.6	3,553.4	\$4,590.00	\$29,482.50

ORGANIZED TOWNS

Austin H. Wilkins, Supervisor

No program of forest fire control in the organized towns will ever be without its problems. It is the ever threatening danger which challenges all municipal, county, state, and private protective agencies to keep fires at a minimum. These agencies have cooperated together in the past and are continuing to do so. All realize the common problem and the responsibility of keeping fires out of 6,683,000 acres of valuable forest lands in the incorporated areas. Organization of the forest fire control program in the organized towns has progressed for the period between 1930 and 1946.

State-Town Forest Fire Cooperation

During the period of the creation of the Forest Commissioner's office in 1891 to 1930, the municipalities were entirely on their own in forest fire control. There was little organization, little equipment, and a lack of funds to carry out much of a united program. Many fires got a big start before discovery, which resulted in heavy losses of timber growth and expensive suppression costs. It was not unusual for towns to be obliged to borrow money from banks to meet the large fire bills. In other cases, towns required several years to pay off forest fire indebtedness. Attempts were also made to seek legislative reimbursement. Such a condition could not exist much longer without some form of a state-town cooperative plan.

(a) *Fire Detection.* In 1930 the state began to assist the municipalities with their forest fire problems. The first immediate need was to provide for better fire detection. Too many fires were getting big starts before men and equipment arrived. The first consideration was to establish lookout towers in areas of a high forest fire hazard. Two early towers were erected in 1918, with six in 1930, and others in later years. Today there are eighteen lookout towers which form the network for covering approximately 65% of the 6,683,000 acres of forest land in the organized towns. The present program calls for intensifying the lookout tower system in areas where fires most frequently occur and to expand to those sections of a lesser degree of fire hazard. This expansion will depend entirely upon funds made available to the Forestry Department. A complete coverage of all forest lands is the ultimate goal.

(b) *Supervisory Personnel.* As the problem of fire detection improved, the next consideration between the state and the towns was better supervision of men in fire fighting. It is a recognized fact that local town wardens or selectmen cannot give the necessary time to the problems of fire suppression. Most of them are engaged in business which cannot be neglected. Again in 1930 the state, in full cooperation with the towns, set up a forest fire supervisory personnel of one supervisor and six state wardens. Today this state personnel has increased to seventeen wardens. During the fire season these men devote their full time to forest fire control work in cooperation with the local fire wardens. They are also put through a comprehensive school of fire training. Within the last five years rapid advancement has been made in new techniques of forest fire fighting. Newer advances will be made as more is learned about the behavior of fire through research studies.

The present state warden personnel in the organized towns is still only a skeleton group of key men. The fire districts already established are altogether too large for one warden to handle alone. As frequently is the case, he may have several fires going simultaneously. Additional wardens and deputies will be needed to more firmly control fire situations and carry out the program of public relations.

(c) *Equipment.* A third problem which called for state cooperation was the matter of forest fire equipment. Forest fire fighting requires specialized hand tools and equipment. In 1930 the state equipped its wardens with one-half ton trucks, hand tools, hose, and power pumpers sufficient for several crews of fire fighters. Additional funds have been made available from time to time and there are today eleven established storehouses with hand tools and equipment for hundreds of men. These are made available to the towns at all times on forest fires under the care of a state warden. With several fires going in one district alone, the state equipment is often spread out very thinly and much equipment has to be replaced because of hard usage on fires. Today the state has an investment in hand tools and power equipment of approximately \$50,000.

(d) *Financial Aid to Towns.* A fourth and final problem in which the state has aided the towns is the defraying of some of the forest fire suppression costs. By act of the 1945 legislature the towns today are reimbursed one-half of their fire bills. More mention of this will be discussed in this report under activities of the two

years of 1945 and 1946. Suffice it to say that this financial aid to towns has been the means of getting more men and equipment on to fires and thereby bringing fires under quicker control.

(e) *Conclusion.* It can be seen clearly that since 1930 a rather definite program of forest fire control is now established in the organized towns. It constitutes a framework upon which, in future planning, present fire districts can be intensified and new districts created.

Record of Activities for 1945-46

(a) *Weather.* Of all the factors affecting the behavior of forest fires weather is one of the most important. The spring of each year for 1945 and 1946 was almost identical. Beginning about the middle of March unprecedented warm weather set in. Temperatures for over twelve days were between 70-80 degrees. The snow level was quickly lowered in the woods, and the fields, pastures, and blueberry lands were practically bare. This is all the more interesting because there was a considerable accumulation of snow during the winter. Even the lakes, ponds, and streams were free of ice, setting an earlier date than was heretofore known. Frost was out of the ground and back roads passable. With this condition the spring fire season presented a problem. Normally the fires of early spring, burning of hayfields and blueberry lands stopped at the edge of woods. With the early disappearance of snow in forested areas in 1945 and 1946 fires quickly spread into the forest growth. Towers had to be quickly opened and manned and winterized trucks and equipment put into immediate serviceable condition. There was still a shortage of man power as World War II was still going on in the spring of 1945.

In May of 1945 there was a complete reversal of the weather. On the tenth and eleventh of that month a heavy fall of wet sticky snow blanketed the southern half of Maine. The snow depth varied in places from 12 to 22 inches.

On the lower levels much damage was done to communication lines, heavy branch and top breakage to forest and shade trees, and roofs of old farm buildings collapsed under the extra weight of snow. It is significant that on higher elevations the snow was dry and damage negligible.

July, August, and September of 1945 were dry months but fires were kept down to a minimum. In 1946 July and August were

extremely dry with bad fires going. Both seasons ended with heavy rains and there was very little trouble during the hunting season.

(b) *Woods Closures.* In 1945 forest fire conditions became critical the latter part of August. Upon the recommendation of the Forest Commissioner the Governor, by proclamation on August 22, closed the forests of the entire state to smoking or building of fires out of doors except at public camp sites maintained by the Maine Forest Service. This was the first enforcement of the ban under the 1945 law which repealed the prohibition of hunting or fishing, and limited the proclamation to smoking and building of fires. The ban remained in effect until the morning of September 5, comprising a period of fifteen days. On July 20, 1946 the Governor again by proclamation closed the forests of the entire state to smoking and building of fires. On the morning of July 25 the ban was lifted, excepting Hancock and Washington Counties. For these two counties the ban was on for a period of 39 days. This is the longest period that the state, or a section of the state, has been closed.

(c) *Emergency Forest Fire Planning.* With the continuation of the wars with Germany and Japan to May and August of 1945, respectively, all emergency coordinated protective agencies were maintained. Following the cessation of hostilities, extreme emergency set-ups were dropped or curtailed. These were civilian aircraft warning stations, Office of Civilian Defense, the F. B. I., Army and Navy authorities, and other auxiliaries.

By increased state appropriations the six critical fire protection areas were absorbed as part of the permanent forest fire organization in the organized towns. As a result of this addition there are seven forest fire districts fringing the entire coastline and a second tier of four districts inland. Another inland district is contemplated for 1947.

(d) *Fire Danger Stations.* Seven fire danger stations were maintained through the 1945 and 1946 seasons. The longer these stations are established the more valuable they become. A series of cumulated records for each station form the basis for more accurate fire weather predictions. It is now possible to alert or dismiss crews of men as the class day fire danger is predicted. Further research studies are being made to determine more accurately the behavior of fire and expectancy of fire under certain conditions. When more is learned from these studies a better action plan can be formulated.

Fire Danger Classes Inflammability and Fire Behavior

- | | |
|---|--|
| 1 | NONE: Fires will not start from ordinary firebrands, nor will brush-pile fires or campfires spread beyond immediate edge. |
| 2 | LOW: Fires will start from matches, camp and brush fires, and spread slowly to moderately fast. |
| 3 | MEDIUM: Fires will start from such smokers' materials as matches and pipe heels, and from brush and camp fires, and spread rapidly as they increase in size. |
| 4 | HIGH: Fires will start from all smokers' materials (save cigarettes), locomotive sparks, and camp and brush fires, and spread rapidly with some crowning. |
| 5 | EXTREME: Explosive conditions under which fires will start from all ordinary fire brands, spread rapidly, burn fiercely, crown and spot readily. |

(e) *Training Schools.* Training schools are now a standard part of the forest fire control program in the organized towns. Most of the men serving in the various cooperative protection agencies are on a volunteer basis. This means that there is quite a turnover of men due to deaths, transfers, and other employment. Thus, to maintain a working nucleus of trained key men in fire fighting, periodic schools of instruction are held and refresher courses are held for the state warden personnel.

These training schools are conducted on a classroom-field exercise basis. Group discussions are encouraged, case histories of fires are worked out, outside speakers invited, and tactical field problems solved. The value received from these courses has most always manifested itself on the fire lines. Men with a knowledge of what to do and the proper tools and equipment to use have increased their efficiency in fire suppression.

Cooperative Agencies

The American Red Cross has set up a definite action plan of cooperation in the event of major forest fire disasters. They have participated in fire prevention by distributing literature, preparation of radio skits, and establishing Junior Red Cross Chapters. There are thirty-five Red Cross Chapters in Maine, each with a disaster committee. In the Forestry Department's directory the disaster chairman of each chapter is listed. In July of 1946 there was occasion to alert the Red Cross for a serious fire situation in York County. Everything functioned smoothly.

The State Guard, now reorganized as the National Guard, has been recognized and trained as the second line of defense in fire control. Sectional training schools were held for the several battalions throughout the state. Last summer the Guard was alerted for a fire in York County.

The Maine Fire Chiefs' Association has always shown a strong interest in forest fire work. Speakers from the Forestry Department occasionally address their quarterly meetings.

Other cooperative agencies such as the Coast Guard, volunteer fire departments, boys' and girls' camps, Civil Air Patrol, agricultural county agents, State Police, and Fish and Game Wardens, all form a part of the forest fire organization.

New Legislation

In 1945 a new law was passed which provided for the state, from a yearly appropriation of \$25,000, a fund to reimburse the incorporated towns one-half of all forest fire suppression costs. Although the law has been only two years in effect notable results are shown. The tendency to hold back the hiring of extra men or call outside help for fear of incurring big bills is now lessened. The prime purpose is to get all the help and equipment onto the fire as quickly as possible. This has resulted in the good showing of many fires brought under control before reaching large proportions. Although the costs are somewhat high the results are justified. In time bills on fires should begin to scale down as more efficient fire control organization is developed.

New Construction and Repairs

In the spring of 1945 a new 50' modern wood-ring connector tower was completed on Harris Mt., Dixmont, Penobscot County. This tower fills in a blank area which heretofore was without any fire protection. A three mile metallic circuit pole line through the woods connects this tower with the N. E. Tel. & Tel. Company on Route No. 7, one-half mile out of Dixmont Village. A new 14 x 16' watchman's camp was also constructed to accommodate the towerman.

A new 60' steel tower was erected in the summer of 1946 on Atherton Hill, Windham, Cumberland County. This tower is unique in that twelve towns, at their annual town meetings, raised a sum of \$170 each to purchase the steel, construct a camp, and

three miles of metallic circuit telephone line. With the relocation inland of the old Blackstrap tower to New Gloucester in 1942, this new tower again restores fire protection to many coastal towns in the vicinity of eastern Cumberland County. The state becomes owner of the tower on July 1, 1947 and will be responsible for maintenance and the watchman's services. A watchman's cabin was built and trail cleared in preparation for the erection of a tower on Peaked Mt., Clifton, Penobscot County.

The heavy snowstorm in May 1945 caused severe damage to several tower telephone lines. Three miles had to be rebuilt on Pleasant Mt., two miles on Sabattus Mt., one mile on Mt. Zircon, and one mile on Ossipee Mt.

Publicity

The ever popular red fire season celluloid calendars, with fire protection slogan and rules for fire prevention, were again printed for 1945 and 1946 and distributed to the public.

Forestry exhibits received space at the fairs in Skowhegan, Bangor, Fryeburg, and Topsham.

Fire prevention literature was distributed publicly and to the various protective agencies.

ORGANIZED TOWNS

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ORGANIZED TOWNS

Financial Statement

1945

Receipts

Balance January 1, 1945.....	\$2,400.19
1945-46 Appropriation.....	30,200.00
Federal Cooperation.....	15,250.00
Miscellaneous.....	3,874.75

\$51,724.94

Disbursements

District Wardens (Salary).....	\$20,106.36
District Wardens (Expense).....	3,315.47
Watchmen (Salary).....	14,410.92
Watchmen (Expense).....	1,137.46
Supervisor (Salary).....	3,183.38
Supervisor (Auto mileage expense).....	1,004.28
Supervisor (Expense).....	289.15
Equipment.....	2,673.94
Improvements.....	3,200.59
Miscellaneous (Publicity, reports, etc.).....	376.59

\$49,698.14

Balance January 1, 1946.....	\$2,026.80
(Expense of fire fighting, \$13,274.14)	

ORGANIZED TOWNS

Financial Statement

1946

Receipts

Balance January 1, 1946.....	\$2,026.80
1946-47 Appropriation.....	38,013.48
Transfer from Contingent Fund.....	6,982.92
Federal Cooperation.....	18,185.05
Miscellaneous.....	5,610.11

\$70,818.36

Disbursements

District Wardens (Salary).....	\$25,632.27
District Wardens (Expense).....	4,370.67
Watchmen (Salary).....	15,870.12
Watchmen (Expense).....	1,538.92
Supervisor (Salary).....	3,518.08
Supervisor (Auto mileage expense).....	1,113.16
Supervisor (Expense).....	384.68
Equipment.....	9,479.03
Improvements.....	4,173.45
Miscellaneous (Publicity, reports, etc.).....	635.19

\$66,715.57

Balance January 1, 1947.....	\$4,102.79
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FOREST COMMISSIONER'S REPORT

ORGANIZED TOWNS FIRE RECORD 1945

Location	Date	Acreage	Cause	Damage
Androscoggin County				
Webster.....	April 16	6	Brush Burning...	\$1,203.00
Turner.....	April 24	1.5	Smoking.....	3.00
Durham.....	July 13	4	Lumbering.....	25.00
Durham.....	Aug. 22	1.2	Smoking.....	105.00
Poland.....	Aug. 22	.2	Smoking.....	.....
Aroostook County				
Oakfield.....	April 7	2.5	Miscellaneous....	3.00
Oakfield.....	April 12	1	Unknown.....	2.00
Orient.....	Aug. 21	10	Unknown.....	100.00
Easton.....	Aug. 21	10	Smoking.....	.....
Caribou.....	Aug. 21	2.2	Smoking.....	100.00
Cumberland County				
Gray.....	April 7	.2	Brush Burning...	.....
Poland.....	April 12	1.2	Brush Burning...	25.00
Windham.....	April 12	250	Brush Burning...	1,025.00
Poland.....	April 15	.5	Smoking.....	.....
Poland.....	April 16	1	Brush Burning...	50.00
New Gloucester	April 19	.5	Incendiary.....	.....
Gray.....	April 19	2.5	Unknown.....	15.00
Cumberland...	April 23	20	Railroad.....	.....
Falmouth.....	April 23	10	Railroad.....	.....
Harrison.....	May 15	10	Lightning.....	220.00
New Gloucester	May 26	5	Smoking.....	130.00
Cumberland...	June 1	7	Unknown.....	14.00
Naples.....	July 9	.7	Smoking.....	85.00
Naples.....	Aug. 17	1	Unknown.....	1,805.00
Otisfield.....	Aug. 19	1.5	Brush Burning...	5.00
Freeport.....	Aug. 22	1	Smoking.....	25.00
Windham.....	Aug. 23	.2	Campfire.....	.....
Windham.....	Aug. 23	.5	Smoking.....	5.00
Franklin County				
Farmington...	April 13	15	Brush Burning...	75.00
Weld.....	April 15,	3.5	Smoking.....	4.50
Industry.....	April 20	5	Miscellaneous....	50.00
Wilton.....	May 26	60	Brush Burning...	30.00
Avon.....	July 4	1.5	Unknown.....	3.00
Wilton.....	Aug. 24	.1	Unknown.....	1.50
Hancock County				
Ellsworth-Orland	April 11	100	Miscellaneous....	.....
Surry.....	April 12	6	Brush Burning...	1.00
Trenton.....	April 14	2	Miscellaneous....	.....
Franklin.....	April 14	598	Miscellaneous....	30.00
Surry.....	April 16	18	Brush Burning...	15.00
Lamoine.....	May 27	5	Smoking.....	26.00
Bar Harbor...	Aug. 6	.....	Smoking.....	.....
Surry.....	Aug. 11	.5	Smoking.....	24.00
Bluehill.....	Aug. 13	.2	Miscellaneous....	75.00
Bar Harbor...	Aug. 19	12	Smoking.....	12.00
Bucksport...	Aug. 21	20	Lumbering.....	85.00
Tremont.....	Aug. 21	12	Miscellaneous....	4.00
Bucksport...	Aug. 21	.3	Smoking.....	15.00
Bucksport...	Aug. 21	.5	Brush Burning...	.....
Bucksport...	Aug. 23	.2	Miscellaneous....	.....
Gouldsboro...	Aug. 23	.2	Miscellaneous....	.....
Gouldsboro...	Aug. 23	.2	Miscellaneous....	.....
Bar Harbor...	Sept. 21	1.5	Smoking.....	100.00
Kennebec County				
Fayette.....	July 13	.2	Campfire.....	.....
Fayette.....	July 25	1	Unknown.....	110.00
Pittston.....	Aug. 22	1.5	Smoking.....	42.00
Knox County				
Friendship.....	Aug. 5	.2	Brush Burning...	.....

ORGANIZED TOWNS FIRE RECORD 1945

Location	Date	Acreage	Cause	Damage
Lincoln County				
Waldoboro.....	April 15	3	Smoking.....	.....
Waldoboro.....	April 16	1	Smoking.....	.....
Waldoboro.....	April 16	36	Brush Burning...	481.00
Waldoboro.....	June 14	2	Smoking.....	.....
Jefferson.....	July 31	1	Smoking.....	.....
Bristol.....	Oct. 27	2	Incendiary.....	.....
Oxford County				
Hartford.....	April 8	1.5	Brush Burning...	7.50
Gilead.....	April 11	3	Brush Burning...	3.00
Sweden.....	April 11	20	Lumbering.....	50.00
Peru.....	April 11	2	Brush Burning...	.....
Peru.....	April 11	4	Smoking.....	10.00
Peru.....	April 13	6	Unknown.....	30.00
Fryeburg.....	April 15	5	Smoking.....	610.00
Sweden.....	April 16	.5	Smoking.....	1.00
Greenwood.....	April 24	1.5	Railroad.....	15.00
Woodstock.....	April 24	12	Railroad.....	60.00
Greenwood.....	April 24	2.5	Railroad.....	30.00
Fryeburg.....	June 5	1	Lumbering.....	.50
Penobscot County				
Bradley.....	July 27	1.5	Smoking.....	322.00
Holden.....	Aug. 16	.5	Campfire.....	15.00
Clifton.....	Aug. 16	.2	Incendiary.....	51.00
Winn.....	Aug. 17	1.5	Brush Burning...	15.00
Greenfield.....	Aug. 21	1786	Lumbering.....	20,010.00
Greenbush.....	Aug. 22	.....	Lumbering.....	.....
Burlington.....	Aug. 23	25	Lumbering.....	500.00
Carmel.....	Sept. 17	.....	Brush Burning...	.....
Piscataquis County				
Monson.....	Aug. 17	.5	Unknown.....	.....
Sagadahoc County				
Topsham.....	April 15	33	Railroad.....	207.50
Topsham.....	April 17	50	Brush Burning...	12.00
Topsham.....	May 26	2	Railroad.....	10.00
Harpswell.....	Aug. 19	2	Smoking.....	181.00
Bath.....	Aug. 21	7	Smoking.....	3.50
Bowdoin.....	Aug. 21	3	Smoking.....	38.00
Bowdoin.....	Aug. 22	.2	Smoking.....	.....
Somerset County				
Athens.....	April 9	8	Miscellaneous...	3,510.00
Norridgewock.....	April 13	10	Brush Burning...	.....
Harmony.....	April 20	3	Miscellaneous...	25.00
Jackman.....	June 14	.2	Smoking.....	2.00
Palmyra.....	July 2	2	Brush Burning...	.....
Hartland.....	Aug. 21	.1	Smoking.....	.....
Waldo County				
Belfast.....	April 9	.2	Smoking.....	.....
Belfast.....	April 9	.1	Smoking.....	.....
Belfast.....	April 9	1	Smoking.....	.....
Belfast.....	April 10	1	Smoking.....	.....
Belfast.....	April 11	2.5	Smoking.....	.....
Belfast.....	April 11	.5	Smoking.....	.....
Monroe.....	April 12	200	Brush Burning...	.....
Burnham.....	July 4	248	Lumbering.....	25,500.00
Prospect.....	Aug. 20	.....	Smoking.....	.....
Palermo.....	Aug. 21	1.5	Smoking.....	4.00
Washington County				
Alexander.....	June 3	8	Smoking.....	.....
Baring.....	Aug. 16	1.5	Brush Burning...	.....
Baileyville.....	Aug. 23	.2	Smoking.....	3.00
Lubec.....	Aug. 23	6	Smoking.....	29.00
Lubec.....	Aug. 29	.3	Smoking.....	.....
Baileyville.....	Sept. 6	.5	Smoking.....	.....
Lubec.....	Sept. 9	.5	Miscellaneous...	14.00

FOREST COMMISSIONER'S REPORT

ORGANIZED TOWNS FIRE RECORD 1945

Location	Date	Acreage	Cause	Damage
York County				
Sanford	March 20	1	Brush Burning	
Old Orchard	March 30	9	Railroad	16.00
Sanford	April 1	4	Smoking	
Alfred	April 1	7	Miscellaneous	3.00
Dayton	April 12	25	Brush Burning	90.00
Hiram	April 12	34	Miscellaneous	150.00
Porter	April 12	24	Lumbering	66.00
Sanford	April 13	6	Smoking	
Porter	April 13	12	Lumbering	78.00
Parsonsfield	April 14	15	Incendiary	33.00
Parsonsfield	April 16	10	Incendiary	134.00
No. Kennebunkport	April 19	2.5	Smoking	18.00
Newfield	April 24	5	Brush Burning	
Wells	May 21	1	Brush Burning	
Sanford	May 23	35	Miscellaneous	
No. Berwick	May 26	1.5	Campfire	
Kittery	Aug. 22	.5	Smoking	2.50
Berwick	Sept. 4	1.2	Miscellaneous	
Shapleigh	Nov. 10.	150	Miscellaneous	

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Androscoggin County				
Minot	Mar. 21	.5	Smoking	
Poland	Mar. 24	6	Brush Burning	
Turner	April 14	25	Brush Burning	30.00
Turner	April 14	2.5	Smoking	97.50
Lisbon	April 14	2	Brush Burning	5.00
Durham	April 14	50	Smoking	10.000
Lisbon Falls	April 17	2	Smoking	
Minot	April 17	1	Brush Burning	
Auburn	April 17	23	Unkonwn	15.00
Webster	April 18	38	Smoking	50.00
Lisbon	April 19	2	Smoking	
Poland	April 22	1.5	Brush Burning	
Turner	April 22	112	Unknown	800.00
Livermore Falls	April 23	1	Unknown	1.50
Poland	April 23	6	Smoking	50.00
Turner	April 23	.5	Unknown	5.00
Livermore	May 2	100	Lumbering	360.00
Turner	May 4	6	Smoking	3,560.00
Poland	May 7	.5	Unknown	
Turner	May 16	5	Brush Burning	5.00
Webster	June 16	.2	Miscellaneous	
Poland	June 25	.5	Campfire	10.00
Leeds	June 30	3	Miscellaneous	15.00
Lewiston	July 7	40	Smoking	50.00
Turner	July 14	1.5	Smoking	393.00
Webster	July 14	1	Smoking	25.00
Webster	July 14	4	Smoking	5.50
Livermore	July 14	.5	Unknown	29.00
Webster	July 15	.5	Incendiary	
Leeds	July 15	100	Miscellaneous	825.00
Turner	July 18	.8	Smoking	11.00
Poland	July 20	.1	Brush Burning	
Poland	July 29	.2	Smoking	
Turner	Nov. 1	.5	Smoking	
Aroostook County				
Bancroft	July 20	.8	Campfire	3.00
Caribou	Aug. 10	3	Unknown	
Madawaska	Aug. 15	70	Unknown	150.00
Caribou	Aug. 15	5	Unknown	
Island Falls	Oct. 28	.5	Smoking	
Cumberland County				
Casco	Mar. 21	10	Lumbering	
Cape Elizabeth	Mar. 24	.5	Brush Burning	
Windham	Mar. 29	50	Unknown	125.00
Casco	Mar. 29	25	Brush Burning	
Bridgton	Mar. 29	25	Unknown	
Cape Elizabeth	Mar. 30	4	Unknown	
Bridgton	Mar. 30	15	Brush Burning	7.50
Cumberland	Mar. 30	6	Brush Burning	7.50
Cape Elizabeth	Mar. 31	5	Incendiary	10.00
North Yarmouth	April 8	8	Brush Burning	
Cumberland	April 9	1.5	Brush Burning	
Gray	April 13	30	Brush Burning	
Yarmouth	April 14	6	Unknown	25.00
New Gloucester	April 17	8	Unknown	
Cumberland	April 17	3	Brush Burning	15.00
Gray	April 18	3	Unknown	10.00
Westbrook	April 18	100	Unknown	50.00
Cumberland	April 18	25	Brush Burning	60.00
Brunswick	April 19	1	Smoking	5.00
Brunswick	April 19	3	Railroad	30.00
Westbrook	April 19	3	Unknown	35.00
North Yarmouth	April 22	2.5	Railroad	30.00
North Yarmouth	April 23	.5	Brush Burning	
Bridgton	April 23	.5	Unknown	
Brunswick	April 23	3	Smoking	15.00
Brunswick	April 23	.5	Smoking	
North Yarmouth	May 1	2.5	Unknown	10.00
Westbrook	May 2	25	Miscellaneous	575.00
Sebago	May 3	.5	Unknown	

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Cumberland County (Cont.)				
Standish.....	May 4	16	Lumbering.....	75.00
Gray.....	May 4	4	Brush Burning.....	.....
Casco.....	May 4	30	Lumbering.....	150.00
Sebago.....	May 4	.3	Unknown.....	.....
Brunswick.....	May 14	5	Smoking.....	10.00
New Gloucester.....	May 31	10	Smoking.....	30.00
Bridgton.....	June 16	12	Smoking.....	36.00
Naples.....	June 16	55	Smoking.....	.....
Harrison.....	June 20	1.5	Smoking.....	.....
Harrison.....	June 23	1	Unknown.....	.....
Bridgton.....	June 27	.....	Lightning.....	.....
Gray.....	June 28	8	Lightning.....	200.00
New Gloucester.....	July 5	.5	Miscellaneous.....	.....
Poland.....	July 5	.1	Unknown.....	25.00
Bridgton.....	July 6	9	Lumbering.....	200.00
Harpwell.....	July 6	.5	Unknown.....	.....
Pownal.....	July 9	6	Brush Burning.....	25.00
Gray.....	July 11	.....	Miscellaneous.....	.....
Bridgton.....	July 11	1	Campfire.....	.....
Freeport.....	July 13	2	Smoking.....	25.00
Bridgton.....	July 13	8	Smoking.....	200.00
New Gloucester.....	July 15	.3	Smoking.....	.....
Raymond.....	July 15	8	Campfire.....	60.00
Harpwell.....	July 15	1	Smoking.....	300.00
Bridgton.....	July 16	3	Miscellaneous.....	45.00
Bridgton.....	July 16	15	Lumbering.....	25.00
Standish.....	July 17	15	Campfire.....	75.00
Bridgton.....	July 17	6	Incendiary.....	20.00
Falmouth.....	July 17	7	Smoking.....	75.00
Brunswick.....	July 17	1.5	Smoking.....	12.00
Harrison.....	July 17	.3	Smoking.....	5.00
Harpwell.....	July 18	2.5	Smoking.....	2.50
Bridgton.....	July 18	10	Miscellaneous.....	.....
Brunswick.....	July 19	1	Smoking.....	5.00
Freeport.....	July 20	1	Smoking.....	.....
Bridgton.....	July 20	60	Smoking.....	50.00
Westbrook.....	July 28	2	Smoking.....	.....
Raymond.....	July 30	1	Smoking.....	.....
Naples.....	Aug. 19	1	Miscellaneous.....	5.00
Windham.....	Sept. 15	.1	Unknown.....	.....
Franklin County				
Jay.....	July 17	1	Lumbering.....	6.00
Madrid.....	July 31	.1	Miscellaneous.....	.....
Hancock County				
Tremont.....	April 18	.2	Smoking.....	.....
Bar Harbor.....	April 18	.3	Smoking.....	.....
Verona.....	April 19	1	Campfire.....	5.00
Ellsworth.....	April 22	8	Smoking.....	3.00
Ellsworth.....	April 23	2	Miscellaneous.....	.....
Ellsworth.....	April 23	1.5	Miscellaneous.....	.....
Ellsworth.....	April 24	.3	Miscellaneous.....	.....
Ellsworth.....	April 24	.....	Brush Burning.....	.....
Ellsworth.....	April 25	.5	Brush Burning.....	.....
Ellsworth.....	April 25	.5	Brush Burning.....	.....
Ellsworth.....	April 25	.5	Smoking.....	.....
Trenton.....	April 25	1	Miscellaneous.....	1.00
Ellsworth.....	May 2	50	Brush Burning.....	.....
Dedham.....	May 4	4	Brush Burning.....	.....
Bar Harbor.....	May 5	1	Smoking.....	.....
Ellsworth.....	May 5	.3	Brush Burning.....	2.00
Bar Harbor.....	May 10	.4	Smoking.....	1.00
Eastbrook.....	June 16	1.3	Lightning.....	12.50
Bucksport.....	June 20	2.5	Smoking.....	250.00
Ellsworth.....	June 22	.1	Miscellaneous.....	.....
Ellsworth.....	June 27	25	Miscellaneous.....	75.00
Ellsworth.....	June 28	1.5	Smoking.....	120.00
Verona.....	June 28	2	Smoking.....	27.00
Eastbrook.....	June 29	1.5	Lightning.....	15.00
Bucksport.....	June 30	2	Smoking.....	10.00
Otis.....	July 1	2	Miscellaneous.....	25.00

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Hancock County (Cont.)				
Bluehill	July 1	1	Smoking	50.00
Brooksville	July 16	.1	Smoking	
Bucksport	July 16	175	Smoking	1,520.00
Gouldsboro	July 17	5	Smoking	
Ellsworth	July 18	.7	Railroad	
Franklin	July 18	.5	Smoking	
Bar Harbor	July 18	10	Miscellaneous	10.00
Bar Harbor	July 19	40	Miscellaneous	40.00
Otis	July 19	12	Smoking	480.00
Ellsworth	July 20	1.3	Railroad	30.00
Surry	July 29	7	Smoking	914.00
Ellsworth	July 30	.2	Miscellaneous	
Tremont	Aug. 5	.5	Smoking	
Winter Harbor	Aug. 16	.2	Smoking	
Tremont	Sept. 18	.8	Smoking	5.00
Kennebec County				
West Gardiner	Mar. 24	27	Brush Burning	125.00
West Gardiner	Mar. 24	7	Brush Burning	18.00
Litchfield	April 14	60	Brush Burning	3,570.00
Litchfield	April 18	8	Miscellaneous	
Chelsea	April 23	.5	Miscellaneous	7.00
China	April 24	7	Brush Burning	
Clinton	May 2	50	Brush Burning	50.00
Litchfield	May 4	5	Smoking	
Benton	May 30	40	Unknown	
Gardiner	June 9	.3	Campfire	
Windsor	June 10	3	Brush Burning	26.00
Augusta	June 10	1	Unknown	30.00
Mt. Vernon	June 22	2	Campfire	20.00
China	June 27	1	Lumbering	
Clinton	June 29	.2	Railroad	
Mt. Vernon	July 1	.8	Smoking	31.00
Wayne	July 4	.1	Brush Burning	27.00
Wayne	July 5	.8	Unknown	
Mt. Vernon	July 5	.5	Smoking	1.00
Winslow	July 8		Smoking	
Belgrade	July 15	1	Miscellaneous	40.00
Augusta	July 15	.2	Miscellaneous	
Clinton	July 15	1.2	Railroad	
China	July 15	3	Miscellaneous	
Winthrop	July 16	1	Smoking	
Manchester	July 16	2	Smoking	25.00
Winslow	July 17		Unknown	
Fayette	July 19	3	Miscellaneous	5.00
Winslow	July 19	60	Smoking	1,520.00
West Gardiner	Oct. 24	1.5	Smoking	3.00
Knox County				
Friendship	April 16	.3	Brush Burning	
St. George	April 22	20	Brush Burning	108.00
Warren	June 10	2	Smoking	
Friendship	June 14	.5	Unknown	
Hope	June 30	2	Smoking	
Lincoln County				
Alna	April 7	10	Brush Burning	
Wiscasset	April 14	5	Unknown	
Wiscasset	April 14	6	Brush Burning	10.00
Whitefield	May 23	2	Smoking	40.00
Boothbay	June 15	30	Smoking	165.00
Jefferson	June 27	.5	Smoking	40.00
Dresden	June 28	1	Brush Burning	
Jefferson	July 12	.3	Brush Burning	
Dresden	July 13		Miscellaneous	.50
Somerville	July 15	3	Lumbering	120.00
Jefferson	July 16	3	Smoking	
Nobleboro	July 17	.5	Brush Burning	10.00
Nobleboro	July 18	1	Smoking	5.00
Jefferson	July 29	.1	Smoking	5.00

FOREST COMMISSIONER'S REPORT
ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Oxford County				
Hiram	April 18	60	Brush Burning	30.00
Sumner	April 21	1.2	Smoking	26.00
Oxford	April 23	35	Brush Burning	260.00
Dixfield	April 25	1	Unknown	
Fryeburg	May 13	30	Brush Burning	15.00
Hartford	June 9		Unknown	
Hartford	June 10	.5	Miscellaneous	
Norway	June 19	1	Lumbering	5.00
Rumford	June 19	10	Lumbering	
Fryeburg	June 22	.5	Smoking	
Dixfield	June 26	1	Lumbering	3.00
Greenwood	June 29	1	Lumbering	5.00
Rumford	July 8	1	Smoking	2.00
Dixfield	July 13	.5	Smoking	1.00
Rumford	July 15	5	Smoking	5.00
Hebron	July 16	2	Miscellaneous	2.50
Greenwood	July 17	4	Smoking	810.00
Peru	July 17	1	Lumbering	17.00
Canton	July 19	.1	Unknown	7.00
Fryeburg	July 19	.5	Railroad	
Fryeburg	July 20	1	Railroad	
Lovell	Sept. 2	2.5	Smoking	
Woodstock	Sept. 19	.5	Miscellaneous	15.00
Penobscot County				
Carmel	April 17	4	Smoking	2.00
Palmyra	April 19	.5	Smoking	.50
Garland	April 25	25	Brush Burning	
Detroit	April 25	60	Unknown	50.00
Newport	May 2	30	Brush Burning	20.00
Palmyra	May 29	.5	Railroad	.50
Newport	June 29	.2	Smoking	.50
Hudson	July 5	2	Unknown	112.00
Newburg	July 8	2	Brush Burning	
Levant	July 14	.1	Lumbering	200.00
Millinocket	July 14	.5	Campfire	
Hampden	July 15	8	Miscellaneous	25.00
Burlington	July 15	800	Campfire	16,116.00
Carmel	July 16	1	Lumbering	18.00
Levant	July 17	10	Unknown	340.00
Dismont	July 17	.1	Brush Burning	
Holden	July 17	10	Smoking	1,324.00
Lincoln	July 17	1	Miscellaneous	12.00
Lowell	July 18	1	Lumbering	125.00
East Millinocket	July 18	1.5	Unknown	
Clifton	July 18	125	Smoking	150.00
Hudson	July 20	3	Smoking	350.00
Greenfield	July 20	2	Smoking	150.00
Lincoln	Aug. 1		Brush Burning	
Bradford	Aug. 12		Lumbering	
Exeter	Aug. 13	.5	Brush Burning	.50
Corinna	Sept. 14	4	Brush Burning	2.00
Springfield	Oct. 26	10	Smoking	45.00
Piscataquis County				
Guilford	May 4	1.1	Brush Burning	15.00
Greenville	May 4	50	Brush Burning	
Sangerville	May 8	4	Miscellaneous	
Sangerville	May 24	.5	Lumbering	
Sangerville	July 13	135	Smoking	1,475.00
Wellington	July 28		Smoking	
Parkman	Sept 21	1	Incendiary	60.00
Sagadahoc County				
Topsham	Mar. 31	1	Smoking	3.00
West Bath	April 12	2	Brush Burning	5.00
Richmond	April 12	25	Brush Burning	5.00
Topsham	April 16	3.5	Smoking	1.00
Richmond	April 18	1	Lumbering	
Bowdoinham	April 21	12	Brush Burning	
Woolwich	April 23	65	Brush Burning	55.00
Richmond	April 23	7	Brush Burning	

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Sagadahoc County (Cont.)				
Topsham	May 2	2	Smoking	
Topsham	May 6	1	Brush Burning	
Arrowsic	June 10	1	Miscellaneous	
West Bath	June 12	2	Unknown	
Topsham	June 30	1.5	Smoking	150.00
Bowdoinham	July 7	5	Smoking	5.00
Topsham	July 8	.1	Miscellaneous	.50
Woolwich	July 11	3	Railroad	3.00
Bowdoinham	July 11	.2	Lumbering	
Bowdoinham	July 13	.2	Smoking	.50
Georgetown	July 13	5	Smoking	10.00
Topsham	July 14	1	Lumbering	.50
Arrowsic	July 15	40	Miscellaneous	357.00
Richmond	July 15	1	Railroad	
Bath	July 17	1	Smoking	.50
Bath	July 17	.2	Unknown	
Richmond	Sept. 15	1.5	Brush Burning	80.00
Topsham	Oct. 7	2.5	Railroad	
Somerset County				
Norridgewock	June 9	.5	Unknown	
Pittsfield	June 17	3	Miscellaneous	1.50
Mercer	June 17	.1	Lumbering	
Canaan	June 17	.5	Unknown	20.00
Canaan	June 18		Unknown	
Cornville	June 24	.5	Brush Burning	5.00
Canaan	June 26		Smoking	
Pittsfield	June 27	3	Miscellaneous	887.34
Cornville	June 27	4	Lumbering	25.00
Pittsfield	June 29	.5	Smoking	.50
Madison	June 29	.8	Smoking	50.00
Cornville	June 29	50	Lumbering	375.00
Hartland	July 4	.3	Smoking	10.00
Norridgewock	July 6	1	Unknown	
Pittsfield	July 7	1	Smoking	.50
Fairfield	July 15	.8	Smoking	20.00
Norridgewock	July 16	2	Unknown	
Smithfield	July 17	2	Miscellaneous	10.00
Smithfield	July 20	4	Miscellaneous	
Brighton	July 31	1	Unknown	
Waldo County				
Winterport	Mar. 18	1	Smoking	
Winterport	Mar. 28	1.5	Brush Burning	5.00
Winterport	Mar. 29	4	Miscellaneous	
Winterport	Mar. 31	1.3	Smoking	
Northport	April 1	.2	Smoking	1.00
Winterport	April 1	3	Brush Burning	1.00
Winterport	April 1	.8	Smoking	500.00
Prospect	April 14	1	Smoking	
Belfast	April 14	1	Brush Burning	5.00
Searsmont	April 18	4.5	Lumbering	
Belmont	April 18	8	Brush Burning	
Belfast	April 22	1	Brush Burning	
Frankfort	April 23	275	Brush Burning	10,025.00
Northport	May 3	.5	Miscellaneous	
Prospect	May 4	.2	Miscellaneous	
Northport	June 20	.1	Smoking	
Freedom	July 13	2.3	Incendiary	
Palermo	July 14	2	Miscellaneous	2.00
Waldo	July 17	.1	Miscellaneous	
Winterport	July 18	.2	Miscellaneous	
Belmont	Oct. 12	4	Smoking	1,400.00
Washington County				
Calais	June 8	.5	Campfire	
Columbia	June 10	1.5	Smoking	
Columbia Falls	June 10	1	Smoking	
Robbinston	June 16	.5	Brush Burning	
Talmadge	June 21	.3	Smoking	
Milbridge	June 25	3	Smoking	
Robbinston	June 27	2	Smoking	50.00

FOREST COMMISSIONER'S REPORT

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
Washington County (Cont.)				
Addison	June 28	.5	Smoking	
Calais	June 29	3.5	Miscellaneous	
Machiasport	June 29	2	Smoking	
Milbridge	June 29	5	Unknown	
Pembroke	June 30	1	Unknown	
Lubec	July 7	.2	Miscellaneous	
Columbia Falls	July 15	1	Smoking	50.00
Perry	July 16	1.5	Brush Burning	
Crawford	July 17	.2	Smoking	
Machias	July 17	.5	Smoking	
Jonesport	July 18	6	Smoking	
Lubec	July 18	2	Miscellaneous	
Addison	July 18	2	Smoking	
Charlotte	July 18	15	Lumbering	791.86
Machias	July 19	.5	Smoking	
East Machias	July 21	1.5	Smoking	
Lubec	July 23	.5	Smoking	
Pembroke	July 28	4	Smoking	80.00
Pembroke	July 31	10	Smoking	40.00
Perry	Aug. 2	1	Smoking	
Lubec	Aug. 2	.3	Smoking	
Lubec	Aug. 2	.5	Smoking	
Lubec	Aug. 5	.5	Smoking	
Milbridge	Aug. 12	5	Lumbering	750.00
East Machias	Sept. 3	.5	Miscellaneous	
Baileyville	Sept. 6	.5	Campfire	
Columbia	Sept. 17	1.5	Smoking	25.00
East Machias	Sept. 17	10	Miscellaneous	
Baring	Sept. 19	1.5	Miscellaneous	
Charlotte	Oct. 9	.5	Smoking	
York County				
Shapleigh	Mar. 21	70	Miscellaneous	
Hollis	Mar. 24	1	Smoking	60.00
Shapleigh	Mar. 26	7	Smoking	
Buxton	Mar. 27	.5	Smoking	
Sanford	Mar. 27	1	Smoking	
Alfred	Mar. 29	20	Smoking	160.00
Wells	Mar. 29	450	Miscellaneous	350.00
Sanford	Mar. 30	.5	Smoking	
Sanford	Mar. 30	2	Smoking	
Buxton	Mar. 30	7	Brush Burning	15.00
Sanford	Mar. 31	.5	Smoking	
Hollis	April 15	1	Brush Burning	
Wells	April 17	.2	Incendiary	
Sanford	April 17	12	Smoking	300.00
North Berwick	April 17	105	Smoking	600.00
Kennebunk	April 18	20	Unknown	80.00
Wells	April 18	4	Smoking	25.00
Biddeford	April 19	4	Smoking	25.00
Sanford	April 19	.3	Incendiary	
Lyman	April 19	15	Smoking	175.00
Saco	April 19	30	Smoking	50.00
Scarboro	April 21	3	Smoking	10.00
Shapleigh	April 21	1.5	Miscellaneous	
Sanford	April 23	1.5	Smoking	
Wells	May 2	8	Smoking	95.00
Shapleigh	May 2	50	Smoking	
Kennebunk	May 2	1.5	Brush Burning	25.00
Kennebunk	May 4	.8	Smoking	
Kennebunk	May -6	10	Smoking	
Lyman	May 25	6	Lumbering	45.00
Lebanon	June 17	2.5	Lumbering	10.00
Lebanon	June 27	3	Lightning	10.00
Limington	June 30	70	Miscellaneous	
Sanford	July 1	.2	Incendiary	
Limerick	July 6	45	Smoking	100.00
Limington	July 6	25	Lumbering	15.00
Wells	July 8	.2	Incendiary	
Acton	July 13	14.5	Lumbering	115.00
Wells	July 13	20	Lumbering	
Lebanon	July 13	23	Smoking	100.00

ORGANIZED TOWNS FIRE RECORD 1946

Location	Date	Acreage	Cause	Damage
York County (Cont.)				
Parsonfield.....	July 13	5	Smoking.....	75.00
York.....	July 13	35	Campfire.....	400.00
Saco.....	July 14	60	Smoking.....	2,000.00
Old Orchard Beach.....	July 14	2	Unknown.....	.....
Waterboro.....	July 15	23	Lumbering.....	40.00
Sanford.....	July 15	1.2	Lumbering.....	.....
Biddeford.....	July 15	625	Lumbering.....	3,000.00
Wells.....	July 16	10	Incendiary.....	.....
Sanford.....	July 16	.2	Unknown.....	.....
Scarboro.....	July 16	57	Smoking.....	1,000.00
Shapleigh.....	July 17	600	Smoking.....	300.00
Newfield.....	July 17	.5	Smoking.....	.....
Old Orchard Beach.....	July 18	5	Smoking.....	.....
Alfred.....	July 18	.5	Smoking.....	10.00
York.....	July 18	100	Miscellaneous.....	700.00
York.....	July 18	25	Smoking.....	25.00
Berwick.....	July 19	2.5	Smoking.....	.....
Lyman.....	July 29	.3	Lumbering.....	.....
Sanford.....	July 30	.1	Lumbering.....	.....
Wells.....	Oct. 6	.5	Smoking.....	.....
Springvale.....	Oct. 31	1.5	Brush Burning.....	.....
Buxton.....	Nov. 28	35	Smoking.....	75.00

Fire Record 1946, for Acadia National Park, Hancock County

Location	Date	Acreage	Cause	Damage
Bar Harbor.....	March 17	9.5	Brush Burning.....	—

Fire Record 1946, for White Mountain National Forest, Oxford County

Location	Date	Acreage	Cause	Damage
Gilead.....	Oct. 24	18	Campfire.....	—

**SUMMARY OF FOREST FIRES FOR 1945-1946 BY MONTHS, COUNTIES
AND CAUSES—ORGANIZED TOWNS**

	No. of Fires		Acreage		Damage	
	1945	1946	1945	1946	1945	1946
By Months:						
March.....	2	30	10.0	749.8	\$16.00	\$878.50
April.....	58	90	1,585.6	1,391.8	8,125.50	17,363.50
May.....	8	38	119.5	553.6	416.00	5,084.50
June.....	5	68	18.3	338.4	16.50	2,274.34
July.....	9	163	260.0	3,572.5	26,045.00	38,233.36
August.....	42	14	1,912.2	88.0	23,260.50	905.50
September.....	5	12	3.8	23.5	114.00	187.00
October.....	1	8	2.0	21.0	.....	1,448.00
November.....	1	2	150.0	35.5	.....	75.00
	131	425	4,061.4	6,774.1	\$57,993.50	\$66,449.70
By Counties:						
Androscoggin.....	5	34	13.0	537.3	1,336.00	6,442.50
Aroostook.....	5	5	25.8	79.3	205.00	153.00
Cumberland.....	18	69	313.0	672.6	3,404.00	2,658.00
Franklin.....	6	2	85.1	1.1	164.00	6.00
Hancock.....	17	42	776.6	363.7	387.00	3,595.50
Kennebec.....	3	30	2.8	287.1	152.00	5,498.00
Knox.....	1	5	.3	24.8	.....	108.00
Lincoln.....	6	14	45.0	62.4	481.00	395.50
Oxford.....	12	23	59.0	159.3	817.00	1,203.50
Penobscot.....	8	27	1,814.8	1,106.4	20,913.00	19,043.00
Piscataquis.....	1	7	.5	190.7	.....	1,550.00
Sagadahoc.....	7	25	97.3	184.2	457.00	676.00
Somerset.....	6	17	23.4	75.0	3,537.00	1,404.84
Waldo.....	10	21	454.9	311.7	25,504.00	11,939.00
Washington.....	7	37	17.1	87.5	46.00	1,786.86
York.....	19	62	333.0	2,631.0	590.50	9,990.00
	131	425	4,061.4	6,774.1	\$57,993.50	\$66,449.70
By Causes:						
Brush Burning.....	27	71	694.8	1,066.8	3,037.50	14,663.00
Campfires.....	4	13	2.5	865.1	15.00	16,689.00
Railroads.....	8	12	90.0	17.4	338.50	95.50
Lightning.....	1	5	10.0	13.3	220.00	237.50
Lumbering.....	9	38	2,140.0	1,005.5	46,314.50	6,476.36
Smoking.....	50	167	112.9	2,174.5	1,005.50	22,250.50
Incendiary.....	5	10	27.8	24.8	218.00	90.00
Miscellaneous.....	17	58	952.8	1,024.9	3,864.00	4,030.34
Unknown.....	10	51	30.6	581.3	2,080.50	1,919.50
	131	425	4,061.4	6,774.1	57,993.50	\$66,449.70

MAINE FOREST FIRE STATISTICS—1945

Causes	Organized Towns			Maine Forestry District			Total for State		
	No.	% No. of Fires	Acres	No.	% No. of Fires	Acres	No.	% No. of Fires	Acres
Lightning.....	1	.8	10.00	14	17	28.66	15	7.4	38.66
Railroad.....	8	6.1	90.00	4	5	23.75	12	5.6	113.75
Campers.....	4	3.0	2.50	20	24	9.58	24	11.2	12.08
Smokers.....	50	38.2	112.92	28	34	775.05	78	36.4	887.97
Debris Burning.....	27	20.6	694.75	1	1	2.00	28	13.0	696.75
Incendiary.....	5	3.8	27.75	..	..	..	5	2.3	27.75
Lumbering.....	9	6.9	2,140.00	3	4	20.00	12	5.5	2,160.00
Miscellaneous.....	17	13.0	952.75	1	1	16.50	18	8.4	969.25
Unknown.....	10	7.6	30.63	12	14	12.97	22	10.2	43.60
Total.....	131	100.0%	4,061.30	83	100%	888.51	214	100.0%	4,949.81
		.06 of 1% 6,783,000 A.			.008 of 1% 10,000,000 A.			.03 of 1% 16,783,000 A.	

MAINE FOREST FIRE STATISTICS—1946

Causes	Organized Towns			Maine Forestry District			Total for State		
	No.	% No. of Fires	Acres	No.	% No. of Fires	Acres	No.	% No. of Fires	Acres
Lightning.....	5	1	13.8	24	16	659.7	29	5.0	673.5
Railroad.....	12	3	17.4	4	3	3.0	16	2.8	20.4
Campers.....	13	3	865.1	47	31	1,851.3	60	10.4	2,716.4
Smokers.....	167	39	2,174.5	48	32	928.6	215	37.3	3,103.1
Debris Burning.....	71	17	1,066.8	7	5	5.2	78	13.6	1,072.0
Incendiary.....	10	2	24.8	2	1	.6	12	2.1	25.4
Lumbering.....	38	9	1,005.5	3	5	68.0	46	7.9	1,073.5
Miscellaneous.....	58	14	1,024.9	5	3	4.0	63	10.9	1,028.9
Unknown.....	51	12	581.3	6	4	33.0	57	10.0	614.3
Total.....	425	100%	6,774.1	151	100%	3,553.4	576	100.0%	10,327.5
		.09 of 1% 6,783,000 A.			.035 of 1% 10,000,000 A.			.06 of 1% 16,783,000 A.	

ORGANIZED TOWNS

FOREST COMMISSIONER'S REPORT

10 YEAR FOREST FIRE RECORD MAINE

Year	Maine Forestry District			Organized Towns			Total for State		
	No.	Acreage	Damage	No.	Acreage	Damage	No.	Acreage	Damage
1937	162	1,358	12,191	100	4,355	18,023	262	5,713	30,214
1938	92	5,210	7,815	81	10,929	25,706	173	16,139	33,521
1939	128	2,914	15,757	159	4,519	20,953	287	7,433	36,710
1940	120	523	3,681	120	3,588	19,255	240	4,111	22,936
1941	157	12,847	82,543	324	27,503	428,797	481	40,350	511,340
1942	97	1,785	2,853	128	3,208	8,780	225	4,993	11,633
1943	36	244	4,157	93	6,924	35,753	129	7,168	39,910
1944	147	12,162	121,773	261	12,041	157,094	408	24,203	278,867
1945	83	888	4,590	131	4,061	57,993	214	4,950	62,583
1946	151	3,553	29,482	425	6,774	66,450	576	10,327	95,982

INSECT CONTROL

H. B. Peirson, State Entomologist

The entomology work covers a great many fields in which insects play an important role. The state has endeavored to cooperate with all who have insect problems in which help is needed. The work is by no means confined to forest and shade tree insects, although the major effort is put on these. Hundreds of requests are received each year for assistance in controlling household insects and insects attacking man, animals, gardens, stored products, buildings, and lumber. It is necessary that the latest information on the control of these pests be kept up to date, so that a library, card index, and insect collection are maintained.

In a like manner, many requests to aid in the control of disease of plants are received each year. Aid is given municipalities in planning for the better care of their shade trees and in assisting licensed tree surgeons in their many problems. During the past few years there has been a constantly growing demand for assistance in mosquito control, particularly around hotels, boys' and girls' camps, and summer homes.

The department, in cooperation with others, has carried on many experiments with D.D.T., other insecticides, and aerosol bombs for the control of insects.

The major advancement during the past two years was the establishment of a more permanent forest insect detection service. The state was divided into six districts with a forest insect ranger in each district.

The state is faced with several very serious forest insect outbreaks. The Beech Scale and Nectria disease has invaded the state from New Brunswick as has also an outbreak of the Bronze Birch Borer. A severe outbreak of the Spruce Budworm is working toward Maine from Ontario, Quebec, and New York. Smaller outbreaks of other insects within the state which we have been able to locate early have either been checked or eliminated.

The department cooperates with several federal agencies such as the U. S. Bureau of Entomology and Plant Quarantine, Division

of Forest Pathology, the U. S. Forest Service, and public agencies such as Health Services, Highway, and Park Departments.

A cooperative agreement exists between this department, the U. S. Bureau of Entomology, and the National Park Service, to have a forest insect survey made of the Acadia National Park each year. This was started in 1931. In 1942 Dr. Brower was made a collaborator to make the inspections. Spray projects have been carried out against a number of forest pests such as the Beech Scale, European Spruce Sawfly, Mountain Ash Sawfly, etc. In a like manner inspection of the Reef Point Gardens at Bar Harbor is made twice each year.

Forest Insect Detection. It has long been recognized that one of the essential factors in our war against insect pests is the early detection of the presence of new insects, or of new outbreaks. In an endeavor to meet this situation Maine has used its fire warden service to make periodic forest insect collections in their districts. The state has also received splendid cooperation from its licensed tree surgeons, and from the general public. In the heavily forested sections of the state there are large areas which normally are rarely visited. There are also dangerous fire seasons when the fire wardens do not have an opportunity to make collections and reports. In order to meet these situations the state has provided for the employment of six forest insect rangers. These men are given a course of training in Augusta and in the field. Each is then given a definite territory to cover. It is their responsibility to contact all of the fire wardens, patrolmen, lookout men, and woods operators in their district, informing them on insects to be on the lookout for and methods of collecting. They also have the responsibility of covering the towns in their districts as thoroughly as possible, making collections, setting out plots, and checking on light traps. These collections, as well as those from the wardens, are sent in to the laboratory in Augusta where they are identified and recorded. A report is then sent back to the collector informing him as to what he sent in. Districts are covered on foot, by canoe, plane, and by car.

Most collections are made by spreading a sheet beneath the trees and then beating the limbs with a pole. In this way insects can be collected when present in small numbers which otherwise might not be seen. The presence of other insects is determined by examination of the different parts of the trees.

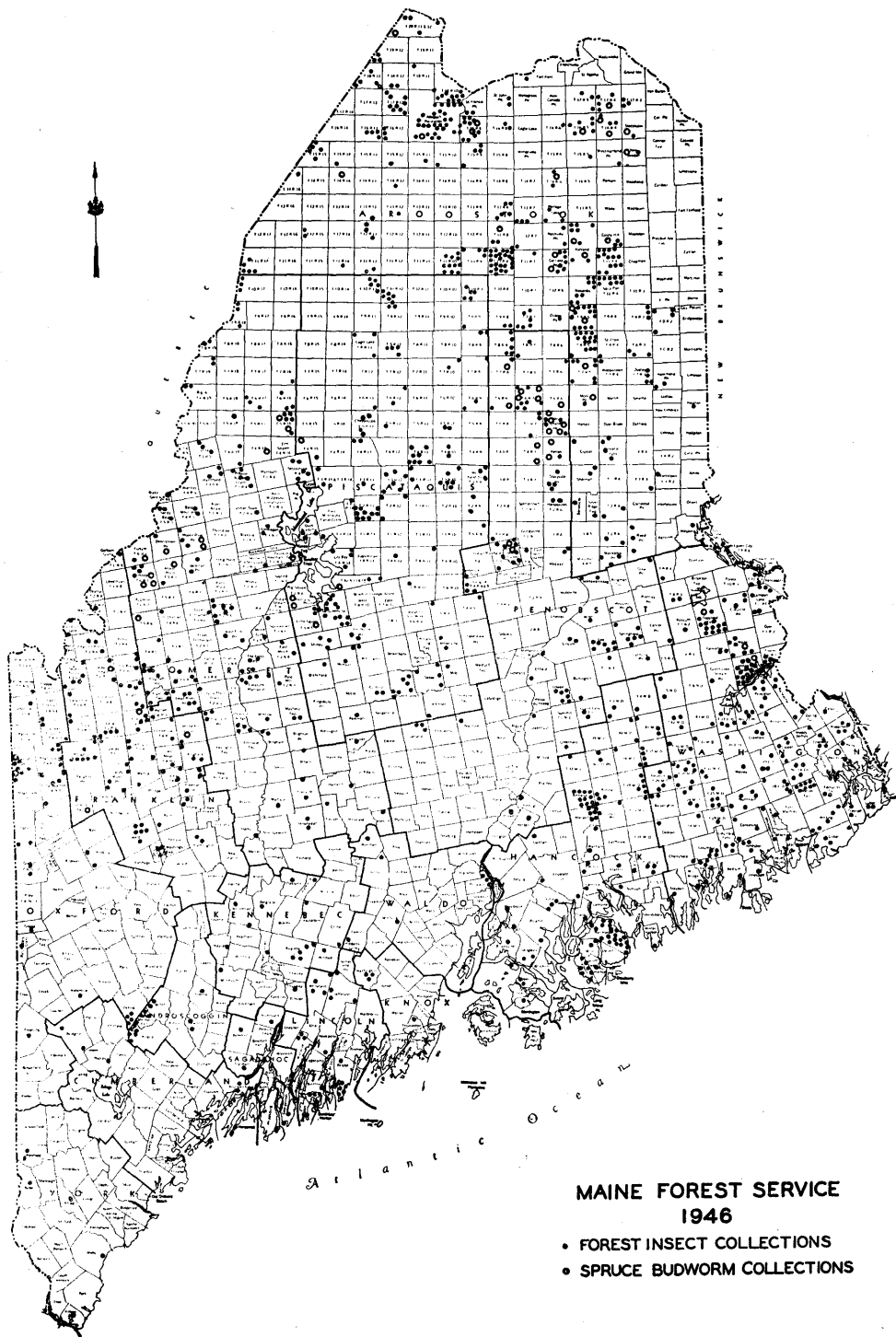
During the 1946 season 1,311 collections and reports were received—655 from the rangers, 433 from the fire wardens, and 223 from the general staff. This does not include large numbers of reports from the general public. The ranger service has already proved one of the most valuable services in insect control that the state has made, and it is hoped that it can be maintained on a permanent basis and enlarged so as to cover the large areas of timberland in the southern half of the state. The idea of using forest insect rangers is growing in popular favor and there is every indication that the Northeast, including New England, New York, and the eastern Canadian provinces, will all be working along this line on a cooperative basis interchanging reports and helping each other. Strong progress is already being made along this line through regional committees.

The accompanying map gives an idea of the coverage of the state made by the wardens, rangers, and department entomologists.

Upon receipt of the collections from the field they are carefully checked with the report covering them. A series number is given each collection. The insects are then identified, checked for disease, and in many cases reared for life history notes, parasites, or for stages that can be identified. Considerable material must be overwintered. Unknown specimens are sent to specialists for identification. Permanent record cards and summaries are maintained. Over 2,200 field collections have been handled in the last two years by the laboratory staff.

Forest and Shade Tree Insects. The forest insect survey has brought to light many insects which in the aggregate do a great deal of damage, but which usually go unnoticed. In this brief report it is not possible to list any except those which seem to be of the greatest importance.

Beech Scale, *Cryptococcus fagi*, has continued its westward movement across the state and the severe part of the outbreak has now reached the Moosehead Lake region. Isolated spot infestations extend through to the New Hampshire border. The Nectria disease which follows this insect and does the real killing of the trees is present in nearly all heavily infested areas. Information received during 1946 from the wardens, rangers, and others would indicate that in the state as a whole 21% of the beech has been killed and 17% is dying. In eastern and central Maine the loss runs very high. Cutting of infested areas has prevented spread. Large scale spraying



**MAINE FOREST SERVICE
1946**

- FOREST INSECT COLLECTIONS
- SPRUCE BUDWORM COLLECTIONS

experiments have been carried on at the Acadia National Park in cooperation with the National Park Service to preserve valuable roadside stands. Lime sulphur has proved very effective.

Birch Casebearer, *Coleophora salmani*. This insect which was first found in 1927 at Bar Harbor and which has spread eastward along the coast was found this year at Pemaquid. It causes severe injury to birch foliage.

Birch Skeletonizer, *Bucculatrix canadensisella* caused widespread browning of birch foliage in York County in 1946. This outbreak seems to have moved down from the Waldoboro-Brunswick area where it was so prevalent in 1944.

Birch Sawfly, *Arge spp.* A local but heavy outbreak was reported in Stockholm in 1946.

Bronze Birch Borer, *Agrilus anxius*. An outbreak of this insect which came into Maine from New Brunswick in 1939 has now swept across the state leaving nearly 76% of the white and yellow birch dead and dying. This loss is a serious threat to the hardwood industries of the state, and every effort has been made through news items, radio talks, publications, and meetings, to bring the seriousness of the situation to the attention of birch owners and users. Over 6,000 circulars have been distributed to help owners save their birch. The Maine Hardwood Association is taking a very active part in starting a program to study the situation so that as much birch as possible can be saved, and to gather information so that future widespread outbreaks can be prevented, probably through forest management. The county agricultural agents and Mr. Nutting, forestry specialist from the University of Maine, have aided in this work.

Information sent in by the forest insect rangers, cooperating forest fire wardens, and observations from field trips made over much of the state by the entomology staff, indicates that the damage from this insect to both yellow and white birch has again increased during 1946. A large percentage of the merchantable birch in eastern, central, and northern Maine is already dead or in a dying condition. In the Rangeley Region the increase of the infestation has been startling and whole hillsides are now dead. In the Dead River Region the damage which has been light is now showing up quite severely. South of a line running from Gilead, through Dix-

field, Strong, Madison, and Howland, the damage is still light except in spots. In southern Maine there has been no noticeable loss. The outbreak is widespread through the Northeast. Valuable shade trees are being killed on dry sites throughout the state.

For a more detailed account of this problem, reference may be made to Bulletin No. 13 and to Circular No. 6 of the Maine Forest Service. Data received from cooperating forest fire wardens, located in birch areas of Maine, shows that there has been a marked increase in the amount of dead and dying merchantable yellow and white birch during the past two years. A comparison of this damage from 1943 through 1946 is given in percentages in the following table:

Damage from Bronze Birch Borer

	1943		1944		1945		1946	
	Dead	Dying	Dead	Dying	Dead	Dying	Dead	Dying
Yellow Birch.....	18.7%	26.6%	30.2%	25.6%	37.3%	31.1%	49.6%	26.9%
White Birch.....	19.8%	23.8%	33.8%	19.4%	41.5%	26.9%	51.5%	24.5%

Percentages and figures obtained from the birch plots show that the damage to both the yellow and white birch is increasing. With 1,157 birch trees examined this year in the 26 permanent birch plots there were 78.6% of the trees in a dead and dying condition which was a 2.9% increase over the previous year. This examination also shows that 16.5% of these trees were found to have an increased injury over 1945. Observations made in birch stands during 1946 show that in some cases the younger second growth birch are also being damaged.

As far as possible we have advised people to cut the dead and dying birch and hold the good thrifty growing birch in reserve for future utilization. In general it has been the overmature, slow growing, and thinned stands which have suffered the greatest mortality. During the coming years detailed plans are being laid to study the effects of spraying, drought, defoliation, girdling, and thinnings as they may affect the health of the birch and consequent infestation by the borer. The role of fungus, bacterial, and virus diseases is to be studied. Methods of reseeded and bringing back birch need to be studied. Detailed studies as to the habits of the Bronze Birch Borer must be carried on. The work to date is bringing forth much new knowledge.

Balsam-fir Gall Midge, *Cecidomyia balsamicola*. This insect causes a swelling at the base of the needles and in the fall they drop off. Where present in numbers it is useless to cut Christmas trees. During 1946 it was prevalent in the Bristol area.

Balsam-fir Sawfly, *Neodiprion abietis*. This defoliating insect is quite prevalent along the coast. In 1945 heavy outbreaks occurred at Pemaquid and Small Point. In 1946 it was abundant at Georgetown and at Popham. A detailed study of the life history and control of this insect has been started.

Balsam Woolly Aphid, *Adelges piceae*. In 1932 this department started an intensive study of this insect which at that time was killing enough balsam-fir to cause considerable alarm in many sections of the state. As stated in the Forest Insect Notes for November and December 1946, "The amount of fir dying annually is lower at the present time than at some past periods when serious losses occurred in many places, especially in southeastern Maine. Low winter temperatures during 1943-44 apparently destroyed the insect above the snow cover in many parts of the state. Severe winters reduce its numbers and greatly reduce the rate of dying. This insect has made good recovery in places, trees being found which appear white with the fresh looking waxy covering of living insects and will increase with more favorable conditions.

A series of fifteen fir plots scattered from Weld eastward to Princeton has given positive information on a number of points concerning the balsam woolly aphid and the rate at which it kills trees. In Washington and Hancock Counties, and in scattered areas elsewhere, spots are found where most of the fir becomes heavily attacked between the five and nine inch diameter size. Unless climatic factors check the insect heavily infected trees die in about three years. In these spots dead fir snags are conspicuous. The trees rarely reach a size where they could be used for saw timber. Unless such places are cut for pulp at short intervals the loss is considerable and it is continuous."

Elm Flea Beetle, *Haltica ulmi*. Severe browning of foliage was caused by this insect on shade trees in Oakland during 1946 and the insect has been found quite widely distributed on elms throughout the southern part of the state.

Elm Leaf Beetle, *Galerucella xanthomelaena*. The Maine Forest Service has cooperated with a number of cities and towns in central

and southern Maine in conducting spray programs to protect their elms. The outbreaks have been so severe in several cities that the trees have been completely browned in August at the time when the trees are storing up food for the coming year. These outbreaks greatly weaken our trees and make them subject to other insects and diseases which may kill them.

Fall Webworm, *Hyphantria cunea*, was very prevalent in 1946 throughout the state on elm, apple, cherry, and willow.

Spruce Budworm, *Archips fumiferana*. A severe outbreak of this insect is moving eastward from Ontario, Quebec, and New York, toward Maine. Heavy flights of moths this year were observed in Vermont and weather maps indicate that wind spread would definitely be across Maine. In the past Maine has suffered a number of Budworm outbreaks which have come in periods closely allied with the maturing of balsam fir, its primary host plant. In the 1909-1919 outbreak it was estimated that seventy percent of Maine's fir and thirty percent of the spruce was killed.

The Federal Bureau of Entomology and the Canadian Entomological Service are carrying on very extensive work in airplane spraying, parasite rearing, disease studies, and studies on the life history and habits of the insect. The U. S. Forest Service is carrying on extensive studies in control through forest management by cutting mature balsam fir. Maine is cooperating in the over-all program and is keeping in close touch with the work.

With no outbreak as yet in Maine it has been Maine's part in the program to carry on detailed detection work. With this in view funds were made available to increase the detection service, formerly handled by the forest fire wardens, by the appointment of six forest insect rangers. This progressive step in forest insect control has previously been explained. The number of spruce budworm larvae collected has increased from five in 1944 to fifty-four in 1945, and three hundred and four in 1946. In the latter year budworm were collected in forty-eight townships. It is planned to liberate parasites in the Mt. Chase, Garfield, and Cross Lake areas where there are indications of the infestation building up. Light traps are being run in twenty locations to pick up any flight of moths into the state. Twenty-five permanent spruce budworm plots have been established to study the effects of forest growth on budworm population and sixty-two permanent observation points

were completed in 1946. Most entomologists who have studied the problem believe that removal of mature balsam fir from our forests will greatly lessen the severity of attack and may even prevent outbreaks. Spraying and parasites will also play important roles, particularly in outbreaks just building up.

Hemlock Looper, *Lambdina fiscellaria*. Commonly found on spruce and fir, it seems to be on the increase in Washington and Hancock Counties where there is considerable hemlock growing.

Marlatt's Larch Sawfly, *Anoplonyx laricis*, is becoming quite common in the north-central part of the state and caused some fairly heavy defoliation. The common larch sawfly was not collected in either 1945 or 1946.

Maple Nepticula, *Nepticula sericopeza*. A heavy outbreak of this insect which tunnels in the leaf petiols of Norway maple causing the foliage to fall occurred in Pittsfield in 1946 and was reported from other towns in this section of Maine during June.

Sugar-maple Borer, *Glycobius speciosus*, is causing considerable damage in northern Maine, especially in stands which have been opened up.

Mountainash Sawfly, *Pristiphora geniculata*. The supervisor at Baxter State Park reports that practically all of the mountain-ash were completely defoliated in 1946.

Pitch Mass Borer, *Vespamima pini*. A heavy infestation of this insect was found attacking the base of large white pine in a grove at Manchester.

White-pine Weevil, *Pissodes strobi*. During the past two years this insect which is so destructive to white pine and Norway spruce is becoming very abundant in north-central Maine on native red spruce.

Forest Tent Caterpillar, *Malacosoma disstria*. Many thousands of acres of poplar and birch have been defoliated in northern Maine during the past two years. During 1946 fifteen townships were infested. The outbreak first reported across the border has moved in a southeasterly direction. Parasites are building up and should control the outbreak although the trees will be very much weakened. Moths have been collected at light traps as far south as Greenville, Millinocket, and Kellyland.

A Poplar Leaf Roller, *Sp. unknown*. Extensive browning of poplar was caused by this insect in the vicinity of Orland during June 1946.

Satin Moth, *Stilpnotia salicis*. A heavy outbreak of this European insect occurred in Derby in 1945 and a lighter outbreak in Waterville.

European Spruce Sawfly, *Diprion hercyniae*. This sawfly is being found in collections from throughout the spruce regions. In northern Maine it appears to be on the decrease but in Washington and Hancock Counties it is the heaviest it has been since the 1938-41 outbreak. In Township 28 one collection of 164 larvae from three trees was received. Very few of the first, second, and third stage larvae are received as they have a tendency to cling firmly to the branches during the beating. Careful checks on the parasites released by the department are planned to be made in 1947.

Spruce Insects. Many species of spruce insects have been received during the past two years in the collections, a number of which are of considerable importance and it is hoped that a special list of these can be published. A number of them are difficult to tell from the spruce budworm in the early stages when they feed in the buds and mine in the needles. The **Blackheaded budworm**, *Peronea variana*, is quite common and is at present much more abundant than the spruce budworm. Considerable damage is still being done by the **Yellow-headed Spruce Sawfly**, *Pikonema alaskensis*, the **Spruce Webworm**, *Epinotia nanana*, and the **Eastern Spruce Gall Aphid**, *Chermes abietis*.

American Dagger Moth, *Acronycta americana*. An unusually heavy outbreak of this insect occurred at South Harpswell in September 1945. The caterpillars fed on quite a variety of trees, particularly willow and apple, and later swarmed over buildings and gardens. Spraying quite easily controls this insect.

General Entomology

1) **Forest Products**. Each year there are many calls for assistance in protecting logs, stacked lumber, and buildings from wood borers, powder post beetles, and carpenter ants. In many cases very severe damage is done before it is noticed and strong measures have to be taken, particularly in the saving of buildings.

Many inquiries are received in regard to termites but, in every case except one, the injury has proved to be caused by carpenter ants or beetles. The one exception was infested material brought in from a southern state.

2) **Camp and Household Insects.** A large part of the inquiries each year have to do with pests destroying stored food, clothing, and products of almost all descriptions that are found in homes, stores, restaurants, hotels, and camps. The state has carried on extensive experiments with D.D.T. sprays and aerosol bombs to find the best methods of control. In this work the state cooperates with Health Departments, private individuals, and corporations.

Several unusual cases of mites invading houses and factories interfering with working and living conditions have arisen the past two years. In each case it has proved to be the Chicken Mite, *Dermanyssus gallinae*, which have migrated into the buildings from swallow and pigeon nests. The removal of the nests and spraying of the buildings has in each case quickly eliminated the trouble.

An interesting case occurred in 1946 when bags of rock wool insulating material were found to be heavily infested with full grown larvae and pupae of the Yellow Mealworm, *Tenebrio molitor*. The worms had migrated and chewed holes into the bags to pupate, having come from stored meal.

3) **Mosquito Control.** During the past two years the state has been cooperating with boys' and girls' camps in an effort to help them abate the mosquito problem, which in some cases was so severe it threatened the closing of the camps. A survey of conditions was started in 1944 and periodic collections were made by the various camps so as to determine what species of mosquitoes were most troublesome in the various regions. This information was essential in working out control and preventive measures. Thirty-two different species were collected. This work is to be continued in 1947 with additional camps cooperating. Several additional mosquito control projects are also underway. It is planned to carry on a number of research projects in control during 1947-1948.

4) **Miscellaneous Insects and Pests.** Many requests are received each year in regard to control of vegetable and flower garden insects, and insects attacking shrubs, lawns, animals, and man. A record kept of these shows some to be quite unusual and new to Maine. A heavy infestation of the Japanese Beetle, *Popillia Japonica*,

occurred at Bar Harbor in 1946 feeding on a wide variety of plants. The Moose Tick, *Dermacentor erraticus* var. *albipictus*, was found on cattle in Bowdoin. Bats are becoming quite prevalent in Maine in houses, camps, and barns. Considerable experimental work has been carried on with new products for the control of poison ivy. The European Chicken Flea, *Ceratophyllus gallinae*, found at Oakland is apparently new to Maine.

Publications

(1) A Short Report to the Cooperators of the 1944 Mosquito Survey. J. L. Bean. June 1945. Mimeograph.

(2) Report on the Status of Birch Damage in 1945. R. W. Nash. Mimeograph. Maine Hardwood Association and Maine Forest Service.

(3) The Bronze Birch Borer Problem in Maine. H. B. Peirson, Maine Forest Service, and A. D. Nutting, Univ. of Maine Extension Service. Maine Forest Service Circular No. 6.

(4) A Preliminary List of the Mosquitoes of Maine. J. L. Bean. Published in Canadian Entomologist Feb. 1946.

(5) Household and Camp Insect Leaflets. J. W. Marsh and H. B. Peirson. March 1946. (a) Black Carpenter Ant and Powder Post Beetles, (b) Common Ants and How to Control Them, (c) Fleas, (d) Silverfish, (e) Carpet Beetles, (f) Clothes Moths, (g) Cockroaches, (h) Bedbugs.

(6) Forest Insect News Letters. H. B. Peirson 1945-46. Sent out monthly or bimonthly March to December.

DISEASE CONTROL

Many tree diseases are received each year for identification and methods of control. Some of the most important of these are as follows:

False Mistletoe has been found killing spruce along the coast in a number of places from Rockland to Bath, and in some areas, both near the coast and on the islands, large amounts of spruce have been killed. It was also found moderately heavy on plantations near Bingham.

Verticillium Wilt of Maple. A great deal of maple is dying in the state, particularly in the southern part, and a careful study needs to be made of this.

Verticillium Wilt of Elm. Although no Dutch Elm Disease has as yet been found in Maine, there is a need of a careful survey. Reports of dying elm which were received were checked but were found to be wilt disease.

Beech Nectria. This disease which follows the beech scale has killed about 21% of the beech. It has been found in isolated spots as far west in Maine as Albany. If funds become available, a concerted effort will be made this coming year to check the spread through locating infested areas and having them cut.

Needle Blights. A number of needle rusts and blights were very heavy on Scotch, white, and pitch pines in various sections of the state during the past two years.

Leaf Blight of Oak. A severe outbreak occurred at Sorrento in 1946.

White Pine Blister Rust Control—W. O. Frost, Federal Agent in charge.

The white pine tree is legally designated as the official tree of the state, and the pine cone and tassel is the state flower. The state was blessed with an abundance of white pine which for centuries has played an important role in its history and welfare.

In the early days, Maine white pine was carried by sailing ships far and wide, even to the present large lumber ports on our West

coast, long before that part of the country was developed, and now, after three hundred years of cutting, ranks high among the three foremost white pine producing states in the Union. In spite of war demands, fire, insects, and diseases, Maine led the Nation in 1944 by producing 295,723,000 board feet of white pine lumber, or nearly 24.4 percent of the Nation's cut. This does not represent the entire cut of pine, as these figures do not include thousands of cords of pine pulpwood and fuelwood.

The logging, milling, and manufacturing of white pine furnishes employment to many thousands of workers. Its uses are many, being especially suitable in the manufacture of sash, doors, blinds, screens, matches, pails, toys, furniture, wood heels, boats, buildings, fences, interior finish, crating, boxes, pulp, etc., and more recently for the making of fabricated building materials.

Since "Pearl Harbor", the demand for white pine has been insatiable—the demand is apparently greater than the supply. Although the war is over, green lumber is trucked away as fast as sawed. Only a comparatively small amount of old growth pine remains, but there is a large acreage of younger growth, which if given proper and adequate protection, will allow Maine to maintain its position among the top ranking white pine producing states. As stated in previous reports, our future supply of white pine depends largely upon the application of forestry practices, which include control of the blister rust; i.e., the removal of all species of *Ribes* plants within infection distance of white pine trees.

The blister rust disease was first discovered in Maine in 1916 at Kittery Point, and within a comparatively few years its presence was noted in every pine town throughout the state wherever white pines and *Ribes* plants were closely associated. *Blister rust can be controlled: it will never be entirely eliminated, but it is being checked to the extent that a future supply of white pine lumber is assured on hundreds of thousands of acres of pine bearing lands protected during our present blister rust control program.* However, there are thousands of acres in many towns still needing examination for the presence of the disease-spreading *Ribes* plants.

Blister rust control is conducted under a cooperative agreement between the Forest Commissioner and the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture, in which they cooperate with towns and pine owners, in addition to fur-

nishing the necessary supervision. The present federal supervisory force is: W. O. Frost, Pathologist, with headquarters at the office of the Forest Commissioner, State House, Augusta, acting as State Leader, and four Plant Pathological Inspectors, acting as District Leaders, viz., H. G. Bradbury, P. O. Bldg., Belfast; D. S. Curtis, Bridgton; J. B. Pike, Jr., Waterville; and M. G. Calderara, Auburn.

During the past several years, additional federal funds have been allotted to Maine under the Lea Act, to be used for cooperative Ribes eradication purposes. These funds were instrumental in matching town appropriations on a liberal basis.

Town Cooperative Funds for Blister Rust Control

In 1945, 50 towns made \$9,135.32 available
 In 1946, 51 " " " 8,950.00 "

During the 1945-46 control seasons, due to the acute labor shortage, no work was performed in a number of cooperating towns. When this happens, the money is either held over for the next year or re-appropriated. In 1945, no work was performed in 10 towns having \$1,663.00 available, and in 1946, no work was performed in 11 towns having \$1,750.00 available. During the Ribes eradication seasons, control work was conducted by 59 cooperating towns in 13 counties, the towns expending \$13,586.66. The following table shows appropriations and expenditures by towns:

County and Towns	1945		1946	
	Appropriated	Expended	Appropriated	Expended
Androscoggin				
Lisbon.....	.....	.....	\$300.00	.....
Livermore.....	.....	.....	200.00	.....
Mechanic Falls.....	200.00	.....	200.00*	\$198.79
Webster.....	200.00	199.36	.....	.....
Cumberland				
Brunswick.....	200.00	199.64	200.00	134.40
Casco.....	.....	.....	300.00	299.88
Freeport.....	300.00	299.77	300.00	281.44
Gray.....	150.00	150.04	200.00	133.43
Harpwell.....	.....	.....	200.00	199.24
North Yarmouth.....	200.00	104.00	100.00	99.98
Raymond.....	200.00	199.76	200.00	109.02
Franklin				
Avon.....	.....	.....	25.00	22.40
Strong.....	100.00	99.14	.....	.....
Hancock				
Bucksport.....	100.00	99.82	100.00	99.40
Ellsworth.....	400.00	398.45	.....	.....
Orland.....	200.00	199.33	.....	.....
Surry.....	200.00	199.11	.....	.....

*Held over from 1945.

FOREST COMMISSIONER'S REPORT

County and Town	1945		1946	
	Appropriated	Expended	Appropriated	Expended
Kennebec				
Farmingdale	100.00	24.34	75.00	25.60
Litchfield	200.00	115.05	200.00	104.37
Manchester	100.00	.....	100.00*	.....
Readfield	150.00	60.22	50.00	.....
Rome	200.00	199.64	200.00	.....
Sidney	200.00	199.64	.....	.....
West Gardiner	100.00	99.82	100.00	99.40
Winslow	100.00	98.80	.....	.....
Winthrop	263.32	.....	300.00	248.00
Knox				
Rockport	200.00	.....	200.00*	61.60
Union	200.00	199.95	200.00	199.98
Lincoln				
Bristol	200.00	.....	200.00*	199.73
Dresden .....	.....	.....	100.00	99.75
Wiscasset	200.00	199.57	200.00	.....
Oxford				
Buckfield .....	.....	.....	100.00	.....
Brownfield .....	.....	.....	200.00	193.20
Denmark	172.00	171.60	100.00	95.20
Paris .....	.....	.....	200.00	.....
Sumner	100.00	99.20	.....	.....
Woodstock	100.00	99.00	.....	.....
Penobscot				
Bradley	200.00	199.32	.....	.....
Carmel	100.00	.....	100.00*	99.40
Greenbush	100.00	.....	100.00*	99.40
Lee	200.00	196.45	.....	.....
Lincoln .....	.....	.....	200.00	198.20
Mattawamkeag .....	.....	.....	200.00	184.80
Sagadahoc				
Topsham	100.00	99.82	.....	.....
Somerset				
Fairfield	200.00	199.64	.....	.....
Waldo				
Burnham	200.00	199.52	.....	.....
Freedom	200.00	197.47	200.00	199.85
Lincolnville	200.00	198.00	200.00	.....
Monroe .....	.....	.....	100.00	99.75
Montville	200.00	198.00	200.00	199.50
Northport	200.00	.....	200.00*	199.85
Searsport	200.00	191.52	200.00	195.36
Troy	200.00	.....	200.00*	199.85
Winterport .....	.....	.....	200.00	199.70
Washington				
Cherryfield	100.00	.....	100.00*	.....
York				
Acton	200.00	195.92	200.00	199.50
Berwick .....	.....	.....	200.00	190.40
Buxton	100.00	99.82	100.00	62.35
Eliot .....	.....	.....	100.00	98.00
Hollis	200.00	199.73	200.00	198.41
Kittery	300.00	296.48	300.00	298.90
Lebanon .....	.....	.....	100.00	.....
North Berwick	300.00	284.89	300.00	299.86
Shapleigh	200.00	198.90	.....	.....
South Berwick	200.00	197.44	200.00	193.20
York	200.00	198.60	200.00	198.80
Totals	\$9,135.32	\$7,066.77	\$8,950.00	\$6,519.89

*Held over from 1945.

During the biennium, blister rust control work was conducted in 78 towns; 1,519,527 Ribes plants were destroyed from 257,240 acres, thereby rendering protection to 96,355 acres of pine lands.

**Summary of Ribes Eradication Work During the
Calendar Years 1945 and 1946**

	1945	1946
No. towns worked in.....	44	63
“ acres worked.....	95,251	161,989
“ “ pine protected.....	39,306	57,049
“ ribes destroyed.....	562,790	956,737
Labor cost to Federal Government.....	\$16,763.41	\$43,122.36
“ “ “ towns.....	7,066.77	6,517.09
“ “ “ state.....	2,928.61	3,410.25
Total ribes eradication cost.....	26,758.79	53,049.70
Per acre cost.....	0.28	0.33
Ribes per acre.....	6	5.9

**Federal, State, and Town Expenditures For
Calendar Years 1945-1946 (Supervision Included)**

Year	Federal	Town	State	Total
1945.....	\$36,369.54	\$7,066.77	\$5,655.02	\$49,091.33
1946.....	68,576.31	6,519.89	6,857.20	81,953.40
Totals....	*\$104,945.85	\$13,586.66	\$12,512.22	\$131,044.73

*Includes \$37,931.55 Regular Appropriation
“ 67,014.30 Lea Act

Treatment of Infected Ornamental Pines. White pine trees infected with the blister rust may be saved if given the proper treatment at the right time. Treatment consists of removing infected branches and cutting out affected bark on the trunks. Such treatment is recommended for ornamental pines only. Treatment is not practical unless all Ribes plants within infection range have been destroyed. During the war period, very little canker removal work was performed under our supervision, although considerable advice and demonstrations were given. The Federal Government conducted canker removal work on the Acadia National Park land on Munto Desert Island in the fall and winter of 1946.

Pine Infection Conditions. Blister rust infection on white pines is found throughout the length and breadth of the state; in fact, wherever white pines grow. Young trees, especially, have been hard hit. This is due to the abundance of wild currant and gooseberry plants (*Ribes*) throughout the pine growing towns. Wherever *Ribes* and white pines are closely associated, and certain moisture and temperature conditions prevail, blister rust damage will surely result. Damage to the larger sized pines is very pronounced throughout the state. Many sample plots, strip lines, and other studies have been made, showing pine infection varying from very light to nearly one hundred percent. The amount of infection varies in different localities, and is influenced by the number of infection centers, the distribution, age, and amount of pine, association of pine and *Ribes*, climatic conditions, and the application of adequate control practices. In areas where *Ribes* have been eradicated, very few or no recent pine infections are found. This condition exists in many pine areas in many towns, and is conclusive evidence that the disease is under control in such areas.

A study showing blister rust damage to merchantable sized pines was conducted by Dr. P. L. Rusden, of the U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine, Division of Plant Disease Control, on the Harris Hathaway property, Bryant Pond, in the town of Woodstock. The area comprised about 20 acres of merchantable pine in more or less of a pure stand. About one-third of the trees were infected with trunk cankers, and many of the trees were in a dead or dying condition. Dr. Rusden made a detailed examination of all merchantable pines on 9.5 acres of the stand to determine the damage. 1,122 pines over six inches D.B.H. were examined. 430, or 38.3 percent, had trunk cankers, with a volume of 48,528 board feet. The 692 healthy pines had a volume of 108,316 board feet, or an average of 156.6 board feet per tree. From this study, one readily recognizes the loss to commercial size trees from the blister rust, also the necessity of removing *Ribes* bushes before heavy pine infection takes place.

Blister rust infection conditions in Maine, and for the North-eastern states, are summed up in a statement issued on November 28, 1945 by the Federal Regional Office at Cambridge, Mass. The following excerpts are quoted:

"In protected areas blister rust cankers of recent origin are scarce except in some sections where reworkings for *Ribes* have been too

long delayed, or where pine and *Ribes* regeneration occurred following the hurricane and/or logging operations.

“What the blister rust situation might have been without the efforts that have been made since 1918 to control it, we are not prepared to say. There is no question in our minds, however, that the loss to the pine crop would have been tremendous and the growing of this species would have been abandoned over numerous areas that today yield a high volume of pine timber.

“At the present time, the white pine blister rust is under control over most of the pine area in the region. Where control has been established, it can be maintained at a fraction of the initial cost.”

For the Nation as a whole, the control of white pine blister rust is now considered to be well established on about 37 percent of the approximately 28,000,000 acres of control area.

White Pine Type Mapping. On December 31, 1946, the blister rust control area in Maine comprised 958,200 acres of pine lands, with a pine plus protective zone of 2,473,948 acres, in 306 towns in 15 counties.

In order to properly conduct blister rust control work, we must have maps showing pine areas meeting with control requirements. To date, 259 towns have been entirely mapped for pine, 18 partly mapped, and 29 unmapped. All mapping has been conducted with federal funds. At present, six men are employed to map all unmapped towns, and to make corrections in towns where the pine types have drastically changed. Aerial photographic prints 4 inches to the mile are used as base maps. Work was performed in Belfast, Bridgton, Harrison, Dresden, Bowdoinham, Gray, West Gardiner, Litchfield, and Richmond.

Present Status of Blister Rust Control Work. Maine's net blister rust control area (pine plus protective zone) comprises 2,473,948 acres, of which 958,200 acres is pine land, in 306 towns in 15 counties. (Aroostook County is not included, and only one town in Washington County). Initial control work has been completed on 89 percent of this area, and 41.5 percent has been reworked once. Over 443,000 acres have been placed on a maintenance basis; i.e., the *Ribes* plants have become so limited in numbers through eradication that they are no longer a menace, and further control work is unnecessary for an indefinite period of time.

There are three objectives in our blister rust control work: (1) to establish control on 273,046 acres which have not been initially examined for Ribes; (2) to reexamine 1,017,607 acres initially worked prior to 1940, to see if Ribes plants have staged a come-back, and to destroy them if found in menacing numbers; and (3) to increase the acreage on maintenance as rapidly as possible.

MISCELLANEOUS

Portable Sawmills

Wood was declared a critical material during the war period. Heavy cutting operations throughout the state stimulated sawmill activity to meet war demands, but lumber operations were limited somewhat because of labor shortages. With the cessation of war activities, heavy cutting has continued and increased to meet the needs of the civilian population in construction and reconstruction projects. Cumulative cutting operations of the war and immediate postwar period result in slash conditions which create a high fire hazard. Income from portable sawmill licenses, \$25.00 per mill, is accredited to the general forestry account which is expended largely on fire protection. 109 licenses were issued in 1945, making an income of \$2,725.00, and 201 licenses in 1946 for an income of \$5,025.00. At present there are over 300 active licensed portable sawmills in the state.

Public Lots

The 92nd legislature, by Chapter 112, Public Laws of 1945, created a special joint committee to study the public reserved lots in Maine. The committee, consisting of Senators Good and Dow, and Representatives Rollins, Ela, and Ward, were empowered to investigate and study all reserved public lots in the state, giving particular attention to the titles of such lots, and make a report with any corrective recommendations.

The four classes under which the towns of the state are divided are as follows:

1. Organized Towns
2. Organized Plantations
3. Unorganized Towns
4. Deorganized Towns (temporary)

The outright state-owned public lots are only in unorganized townships. All others are in either unorganized townships (on which the timber and grass rights have been sold) or in organized plantations. From the first two categories it is possible that the state may regain title, by the deorganization of a town provided land was not sold during organized status of town or plantation, or from forfeiture of the timber and grass rights through delinquency in taxes.

ANALYSIS OF THE RECORDS IN THE LAND OFFICE

County	Wild Land Towns	PT. & G. Sold		State-Owned		Plantations		Total Acreage
		Located	Not Located	Located	Not Located	Located	Not Located	
Aroostook.....	105	35,494	64,760	2,948	564	16,721	2,750	123,237
Franklin.....	27	8,869	7,609	3,520	500	3,274	.....	23,772
Hancock.....	15	9,723	860	1,600	.....	1,906	.....	14,089
Oxford.....	18	7,855	2,522	1,440	.....	1,960	.....	13,777
Penobscot.....	35	20,188	6,462	211	490	6,578	.....	33,929
Piscataquis.....	86	32,008	47,114	2,264	525	1,431	.....	83,342
Somerset.....	80	34,605	26,609	2,743	97	8,506	.....	72,560
Washington.....	32	14,614	4,231	3,206	1,984	4,190	.....	28,225
Totals.....	398	163,356	160,167	17,932	4,160	44,566	2,750	392,931
		323,523		22,092		47,316		

PTimber and Grass Rights.

Income from the sale of stumps, gravel, and leases on public lots was \$36,551.71 in 1945 and \$21,774.20 in 1946.

Management plans are being formulated for all state-owned public lots reserved for school purposes in the unorganized towns.

The lots comprise a total area of 22,092 acres, of which 17,932 acres have been located in the field and 4,160 acres have not been located. Those lots that have been located in the field are being worked at the present time. For convenience in doing the necessary field work to secure data for drawing up the plans, the lots have been divided into three groups. One group is located in southern Aroostook County, a second group in Washington and Hancock Counties, and the third group in the western part of the state.

Field work was started by Lyman C. Poole, Forester, on the lots in southern Aroostook County in September of 1945. This group has a combined acreage of 2,359 acres. Included are lots in T. A, R. 5 (Molunkus), with an area of 960 acres; T. 3, R. 2 (Forkstown), with an area of 1,370 acres; and the east one-half of T.2, R. 5 (Silver Ridge), with an area of 529 acres.

After the corners had been located in the field, all exterior lines were swamped out and respotting. They were then traversed with a staff compass and measured with a steel tape. Control points were marked at suitable intervals for tying in cruise lines. The lots were then plotted on paper for making up type maps.

All lots were cruised, getting a five percent estimate of hardwoods and mixed growth and a ten percent estimate of softwood stands.

Enough other silvicultural data was secured in the field for use in drawing up the management plans. Stormy days were utilized inside, working on maps, volumes, and other necessary office work. Field work was completed in this area in September of 1946.

Management plans and type maps for the southern Aroostook County area are being worked up. T. A, R. 5 (Molunkus) has been completed at the present time. On this township, no stands were found to be mature and in need of immediate cutting operations. The better grade mature hardwoods have been salvaged from the mixed growth stands. Plans call for cutting the poplar within the next five years. The mixed hardwood stands are too young for other than improvement cuttings to remove undesirable growth. The percentage of spruce in the stocking of softwood stands will be increased by cutting controls as the stands mature. White cedar swamps were found to contain very little good grade cedar. Only about three percent of the total acreage was found to be waste land. This included alder swamp and black spruce bog land.

In October of 1946, field work was started on the lots in the Washington and Hancock County area. This area has a total of 4,806 acres in lots that have been located in the field. The lots are distributed over eight townships in two counties.

The lots in the western part of the state are located in ten townships of the four counties of Oxford, Franklin, Piscataquis, and Somerset. They comprise a total of 9,967 acres in lots that have been located in the field. Field work in this area will be started after finish of work in the Washington-Hancock County area.

Benjamin C. Jordan Fund

The Benjamin C. Jordan Fund of one thousand dollars was accepted by legislative resolve in 1909. The late B. C. Jordan, of Alfred, donor, was an operating lumberman, owner of pine timberland and active conservationist. He improved many acres of forest growth by thinnings, weeding, and pruning and pioneered in planting of idle land. His gift was made to encourage others to follow his practices.

Money at that time would double itself in 18 years, invested at 6% interest. Prizes were to be offered once in 18 years forever thereafter: 1st prize, \$500, 2nd prize, \$250; 3rd prize, \$125; 4th prize, \$100; 5th prize \$25.

There were only three contestants during the first period ending December 31, 1926, to whom the first three prizes were awarded. Although the original provisions stated that entries should be filed ten or more years before each award, no contestants had entered for the second period beginning in 1927. It was felt that there should be more public interest and the good effect from the contest on forest land improvement would be increased if the period was shortened to five years.

Mr. Jordan's two daughters, Nellie B. and Dora, who had inherited considerable timberland and were vitally interested in forest conservation, approved the change in conditions for administration of the fund.

Chapter 157, Public Laws of 1929, legalized the change in the original rules and conditions of the gift by modification of rules and shortening the period to five years. The first period under the new resolve ended December 31, 1931. Subsequent awards have been made for years ending December 31, 1936 and December 31, 1941. The last period ended December 31, 1946.

A committee consisting of Austin H. Wilkins, Forest Supervisor, and Robert E. Pendleton, Forester, both of the Maine Forest Service, together with W. Robert Dinneen, Farm Forester, U. S. Forest Service, viewed lands of nine contestants and report as follows:

Under the eligibility rules there were nine properly registered entries for the 1946 prize awards. Upon completion of the field work the merits of each lot were weighed according to the rules drawn up under the fund. In this process of elimination the judges were unanimous in their recommendation of the following prize awards:

1st Prize—\$125.00—Milton Lot—owned by Fred A. Milton, Andover. This is a pure white pine plantation established 16-18 years ago. The stand had been carefully pruned periodically with a saw and thinnings made. In the last thinning about 25 cords had been removed and sold in Rumford for pulpwood, 10 cords of which were peeled. The knots in the first pruning are now almost completely healed over. The general healthiness of the trees was very good. There was little or no evidence of weevil damage or blister rust. Any trees so affected were removed during the thinning.

The source of the nursery stock is most interesting. The young trees were dug up in an old pasture which had seeded in naturally

and replanted on the site just inspected. Young boys and girls assisted in the planting. The lot as a whole reflected the special initiative efforts of the owner.

2nd Prize—\$75.00—Johnston Lot in Sebec—owned by G. S. Johnston of Dover-Foxcroft. This was a pure white pine plantation covering an area of about 11 acres. The plantings were not all done at the same time, but rather in successive years. The stand is being carefully nursed along in pruning and thinning practices recommended by specially trained farm foresters. The owner has spent many long and hard hours in his plantation. All pruning was done with a saw. He had had to fight both the weevil and blister rust. A release cutting has been completed on some old poplar, gray birch, and apple trees.

Of interest is the fact that the future crop trees have already been marked by bands of yellow paint. Another interesting feature was a section where the owner ploughed furrows and planted seed he had collected. Thinking he had a seed failure, he made a planting in between the ploughed rows. Eventually all came through and there was for a time quite a dense growth. The general vigor and health of the stand is good.

3rd Prize—\$50.00—Scammon Lot—owned by Mrs. Henry Norton Scammon, Strong. This was a pure white pine plantation set out approximately 8-10 years ago. The trees appeared to be free of weevil and blister rust. Excellent height growth was put on a year ago while last year's was considerably less due to the drought. There has been a change of ownership. The lot was formerly known as the Anna Norton Lot.

Applications for the next contest period should be made to the office of the Forest Commissioner on or before December 31, 1947.

Stands growing from natural or artificial reproduction will receive equal consideration. Care and attention of the stand to conform with good forestry practices are important.

Prizes shall be \$125.00, first prize; \$75.00, second prize; and \$50.00, third prize.

Rules

1. Each lot shall consist of one parcel of not less than ten * acres in somewhat regular shape and shall be accurately surveyed and plotted.

2. The majority of said trees shall not be less than five feet nor more than thirty feet high and not less than five nor more than thirty years old when the prize is awarded.

3. Said forest may consist of any of the following kinds of trees, but other circumstances and conditions being equal, preference shall be given in the following order: White Pine, White Oak, Hickory, Chestnut, Hackmatack, White Ash, Yellow Oak, Red Oak, Bass, Hemlock, Spruce, Norway Pine, Pitch Pine, Cedar, Fir, Poplar, Birch, Maple, Beech, and Elm.

4. All competitors for the prizes shall file in the office of the State Forest Commissioner, their intention to compete, together with a correct and definite survey and plan of the lot and when such notice has been filed, said lot shall be eligible although the ownership may have been changed. During the period from January first, nineteen hundred and twenty-seven to December thirty-first, nineteen hundred and thirty-one, all entries shall be made on or before June thirtieth, nineteen hundred and twenty-nine. Entries in contest periods on and after January first, nineteen hundred and thirty-two shall be made during the first year of the period.

5. Myself and heirs shall have the same right as others to compete for the prizes. The same lot cannot be entered in more than one ** contest.

6. In awarding prizes, other circumstances being equal, the *** following conditions shall be considered in the order named: (a) Right number of trees per acre. (b) Even distribution over whole lot. (c) Health and thriftiness of trees. (d) Adaptation of the varieties of trees to the soil in which they stand. (e) Uniformity of size of trees. (f) Size of trees. (g) Size of lot.

Interpretations

* The phrase "accurately surveyed and plotted" is interpreted to be equivalent to a plan or sketch of the area which will show the boundaries and can be easily identified. No expense need be involved.

** "The same lot cannot be entered in more than one contest" shall apply to any and all contestants.

*** The phrase "other circumstances being equal" means that variation in age of stands will cause a, b, c, and f to vary accordingly.

State Parks

The State Park Commission has made the following improvements during the past biennium:

At Aroostook County State Park, a bathing beach with kiddies pool, and a log siding ranger station with an attractive public room have been completed.

The huge riprap wall at Fort Knox State Park has been repaired so there is no longer any danger to the huge fort. The road around the fort has been improved. A parking area, flush toilets, and a checking station have been constructed. Money was obtained for the cost from the income from stumpage cut on the park area.

The headquarters at Mt. Blue State Park has been provided with spring water and a ranger station has been erected on the campground at Sebago Lake State Park.

During the biennium, the State Park Commission was the recipient of two gifts:

1. Salmon Falls State Park, Buxton, 84 acres on the Salmon Falls of the Saco River, from the Appalachian Mountain Club, of Boston, Mass.
2. Reid State Park, Georgetown, 250 acres of seashore property, containing two beaches, from Walter E. Reid, of Georgetown.

Public Use	Number of Visitors	
	1944-45	1945-46
Aroostook County State Park.....	1,560	4,157
Salmon Falls State Park.....	—	1,762
Bradbury Mt. State Park.....	1,166	2,094
Lake St. George State Park.....	1,490	2,791
Mt. Blue State Park.....	1,247	3,568
Sebago Lake State Park.....	10,013	24,334
Fort Edgecomb Memorial.....	—	6,471
Fort Knox Memorial.....	1,500	10,577
Fort McClary Memorial.....	—	1,200
Fort William Henry Memorial.....	2,253	5,613
Total.....	19,229	62,567

The Baxter State Park comprises all or parts of six townships in the Katahdin Mt. area, purchased by former Governor Percival P. Baxter and deeded to the state from time to time since 1931. These lands are held in trust for state forest, public park, and public recreational purposes. 10,740 acres are to be presented for acceptance by the 1947 legislature. This will make the present size of the park 127,426 acres.

RECORDS OF ACREAGE PERTAINING TO BAXTER STATE PARK

Date of States Acceptance by Statute	Statute Reference	Location	Acreage by Statute	Acreage by Deed	Acreage Calculated from Deed (D) or State Tax Assessors' Report (T)	P. & S. Laws Chap. 1, 1947	Restrictions
Mar. 4, 1931	P.L. 1931 Ch. 23	T 3, R 9	3/8 Undivided in W. 2/3 of N. 2/3 of Twp.	Same as Statute	Included with P.L. 1933, Ch. 3		
Feb. 9, 1933	P.L. 1933, Ch. 3	T 3, R 9	9 Square Miles (5760 A.)	Described by Bounds	5,760 (D)	5,960	
Jan. 19, 1939	P.L. 1939 Ch. 1	T 5, R 9	12,000 and 1/2 of Timber and Grass Rights on P.L.	Same as Statute	11,008 (T) 500 P.L.	11,508	
July 26, 1940	P.L. 1939, Ch. 122	T 3, R 10	4,174	Described by Bounds	3,772 (D)	4,174	
Jan. 15, 1941	P.L. 1941, Ch. 1	T 4, R 9	12,000 and 1/2 of Timber and Grass Rights on P.L.	1/2 of Town and 1/2 of P.L. Rights	10,941 (T) 500 P.L.	11,441	
April 3, 1942	P.L. 1941, Ch. 95	T 4, R 9	12,000 and 1/2 of Timber and Grass Rights on P.L.	1/2 of Town and 1/2 of P.L. Rights	10,941 (T) 500 P.L.	11,441	
July 9, 1943	P.L. 1943, Ch. 1	T 5, R 9	12,000 and 1/2 of Timber and Grass Rights on P.L.	Same as Statute	11,008 (T) 500 P.L.	11,508	
July 19, 1944	P.L. 1945, Ch. 91	T 5, R 10	24,682 and Timber and Grass Rights on P.L.	Town Less 20 Acres and P.L. Rights	23,702 (T) 1,000 P.L.	24,702	Cutting Rights until Aug. 7, 1965
July 21, 1945	P.L. 1945 Ch. 1	T 3, R 9	9,280 and Timber and Grass Rights on P.L.	Same as Statute	9,280 (D) 1,000 P.L.	9,280	Cutting Rights on 1,920A to Dec. 28, 1954
		T 3, R 10	6,355	Same as Statute	6,355 (D)		
			8,299 and 3/4 Undivided in P.L. Rights, being 750 A.	7,549 and 3/4 Undivided in P.L. Rights	7,549 (D) 750 P.L.	14,654	7,549 A and Public Lot are Undivided
		T4, R 10	11,620	Same as Statute	11,620 (D)	11,620	Cutting Rights on 6,108A to Dec. 28, 1969
1947	P.L. 1947, Ch. 1	T 4, R 10	10,740 and Timber and Grass Rights on P.L.	Described by Bounds and P.L. Rights	9,740 (D) 1,000 P.L.	10,740	Cutting Rights until Oct. 15, 1951

	125,660		
	5,750 P.L.		
Totals	131,410	127,426	127,028

Extension Forestry

Extension work in forestry is part of the University of Maine Agricultural Extension program, of which A. D. Nutting is the state leader. The program endeavors to improve woodland management practices and aid small woodland owners with their forest products marketing, closely cooperating with the Maine Forest Service.

The Extension Service quarterly publication "Forestry Facts," containing information on markets and good cutting practices, has been sent to over 3,000 woodland owners. This publication carried ceiling prices during the time O.P.A. was in effect, and during the war period owners were encouraged to cut all mature timber possible.

Power chain saw demonstrations were held in most of the farm sections of the state, giving an excellent opportunity to discuss woodland owners' problems and markets with large groups. The object of the demonstrations was to get greater care in obtaining a quality of forest products and to obtain better cutting practices.

A number of towns were given assistance in establishing and managing their town forests. The biggest development in the town forest movement has been in Waldo County where five towns have established sizable forests.

The Extension Service sponsored annual maple products meetings and assisted growers in organizing the Maine Maple Producers Association in March of 1946.

Extension Forester Nutting served as a member and secretary of the Interim Legislative Commission to study methods of increasing the productivity of Maine forests. A report was prepared for the 93rd legislature.

Bulletins on farm forestry are available through the Extension Service: "Management of the Maine Farm Woods" and "Forest Planting in Maine."

Indian Township

Indian Township is held in trust for the Passamaquoddy Tribe of Indians. Income from the sale of timber stumpage is added to a fund administered by the Department of Health and Welfare. In 1945, 237,720 board feet of logs and 2,300 cords of hard and soft-

wood were cut, yielding \$7,369.49. In 1946, 176,408 board feet of logs and 1,610 cords of hard and softwood were cut, yielding \$5,140.47.

Management policy has been to cut spruce and fir on a sustained yield basis. Every attempt is made to increase these species, keeping spruce in dominance as a budworm control measure. Hardwoods are in general cut heavy to liberate the spruce and to salvage yellow and white birch which is being killed by the bronze birch borer. The same is true of the beech being killed by a scale and nectria fungus. Cutting is limited to small areas so that reseedling may take place more quickly.

A so-called reserve area is set off for the Indians south of the Grand Lake Stream road, where they alone are permitted to cut.

Forestry students at the University of Maine perform field work on Indian Township in connection with management plans and for education in application of classroom theory.

State Forest Nursery

The State Forest Nursery is maintained for educational purposes and is located at the University of Maine. Costs of operation are covered by state appropriation, federal funds, and income from sale of field planting stock.

Farmers and woodland owners can take advantage of reforestation projects sponsored by the U. S. Forest Service and the Soil Conservation Service. Sales are made to these and other citizens of Maine at cost of production.

The nursery also serves as a laboratory for the forestry students at the University who are also employed to some extent in transplanting and cultivating plants.

Farm Forestry

The U. S. Forest Service established a farm forestry project on June 30, 1944 in the Saco River Valley. Headquarters are at Bridgton, with W. Robert Dinneen, Forester in charge. Although this project is financed with federal funds, close cooperation is enjoyed with the Forest Commissioner and Extension Forester. Mr. Dinneen reports that his program made steady progress in 1945.

The number of requests for assistance received exceeded the number received the year before.

Thirteen of the requests for assistance were repeat requests from farmers to whom previous assistance had been rendered. It is believed that this is an indication of satisfaction with the assistance offered in the past by the project in this area. The remaining requests were from farmers and landowners to whom work of this sort was a new thing. With those that it has been possible to assist and who were genuinely interested in the future of their woodlands, there has been expressed complete satisfaction with the benefits received and the need of such a program.

Twenty-nine of the requests were listed as "no action taken". Of these, twelve requests were for assistance in selling their woodlot, either timber alone or both land and timber. Work of this nature only, where no forestry was involved, was not pushed as hard as the regular work of farm forestry. However, a list of such lots for sale, acreage, volume of timber, etc. were kept on hand and brought to the attention of timber buyers as it was felt that the channeling of this timber to the sawmill was a contribution to the war effort.

Towns have been very cooperative, and in cases where meetings have been arranged, have gladly loaned equipment and facilities. Information and help from the selectmen has been readily available in aiding with contact work.

Close contact has been maintained with the three county agents in whose territory the project is located. Field trips have been made with the county agents to contact farmers interested in obtaining assistance on their woodlands.

The extension Forester fostered meetings and participated in them and aided greatly with concrete suggestions and information. Valuable contacts were made and examples of good forestry practices promoted by him were discussed.

This area needs a profitable market for pine thinnings. Stand after stand of young white pine has been visited, the owners of which have been interested in doing some improvement work, but lack of a market for the product forestalls this work being done. A pine pulpwood or some other type of market would assist in aiding these woodland owners.

A short course in farm forestry was given at the Gorham High School, to the agricultural students, through the cooperation of Mr. Linwood Brofee, agricultural teacher, and Mr. Appleton, school superintendent. It is believed that this is a lucrative field for endeavor for it is these agricultural students who plan on making farming a life's work.

During 1946, a substantial increase in the requests for assistance was received over any of the previous years that the project has been in existence.

Quite a few of the requests for assistance were repeat requests from persons who had received assistance in previous years, and are an indication of satisfaction with the services rendered. The remaining requests were from farmers and landowners to whom the service was new and who had heard of the work through publicity to some extent, but mainly through word of mouth contact with others who had experience of dealing with the farm forester or through the county agents and other agencies that have been contacted by the farm forester in promoting the work.

On many timber lots that are integral parts of the farm, it has been possible to have them cut with regard to future productivity.

During the past year, work has continued with the selectmen of the various towns with regard to handling of the town farm forests in accordance with good forestry practice.

Power saw demonstrations were held quite often during part of the year. The power saw was used only on those projects where the owners were definitely interested in forestry and who were practicing forestry on their lands. Wherever possible the men on whose land the demonstration was being held took care of notifying their neighbors of the meeting, and in this way those interested knew of the event and attended. By keeping the demonstration small and neighborly, it is believed that it was possible to put across the effectiveness of the saw and the need for cutting according to forestry practices much better than if large meetings were held.

Some ground work has been laid for cooperation with the Veterans Administration in assisting on GI loans on farm property. As far as can be ascertained from questioning, the value of the woodlot and timberland on the farms is not considered in making an appraisal of the property. It is possible to help the GI a great deal by showing

him the advantages to the woodlot if it is well cared for and properly managed.

A great deal of time has been spent during the last year with veterans and others who are interested in going into the lumber business. Everyone seems to think that the lumber business is the place to make money and they want to go into it. For that reason the requests for information, to look over timber lots with the idea of setting up a mill, etc., is a new phase of the work that has come in recently. In addition to this type of request, there have been a great many from lumber companies, especially retail yards, for assistance on buying lumber, in locating mills from whom they can buy, and from retail yards that are going or thinking of going into the sawmill business. While it is realized that this is undoubtedly not farm forestry, nevertheless, it is hard to turn these requests down without assistance. For the most part, it has been possible to give most of the answers from the office, but even at that, it has taken at least five percent of the time to take care of this sort of work the past year.

Approximately ten percent of the farm forester's time is spent on general extension work necessary to develop the program.

Requests for assistance in teaching a short course in forestry to agricultural students came from three schools in the project area during the past year.

Aid has been given in the establishment of three new wood-using plants in the project area. These plants while not large, are short bolt mills that use poor quality pine. Because these mills use short bolts, it is possible for them to utilize a great deal of wood that would ordinarily be wasted in the woods. These mills have been cutting on their own woodlots or those of their neighbors, making thinnings in young stands of pine, and by so doing improving the woodlots.

The U. S. Forest Service took over the farm forestry project in Piscataquis County from the Soil Conservation Service in July of 1945, but the position of farm forester was vacant until November 1 when C. W. Hutchinson became forester in charge. Mr. Hutchinson reports that farmers in his area have been very responsive to the program and more interest seems to be developing from month to month. More than fifty cases have been initiated and several of the old cooperators have continued to request assistance of one kind or another.

The community as a whole has accepted the program with enthusiasm as is indicated by numerous requests for the farm forester to put on programs at the meetings of civic groups within the project area. The newspapers have also been very helpful with publicity. The County Agent assisted in holding a series of power saw demonstrations that were well attended.

Twenty-five percent of time has been spent in general extension work to develop interest in farm forestry. During the summer, assistance was given in the establishment of study plots in connection with the insect control program.

The main problem in this locality that makes it difficult to obtain good cutting practices is that this is primarily a pulpwood section, and in view of the fact that the mills will take wood of small diameters it is difficult to halt the cutting of small trees. Through a program of education, however, some progress has been made along these lines. An attempt is being made to show the farmers and cutters that there is no money made in these small diameter classes as the cost of cutting is so much greater than in the larger diameter classes.

Some difficulty resulted from windfall on stands of fir that had been cut selectively on an individual tree basis on soils that proved to be very shallow. Many times, in order to get enough material to make any profit from an operation, it is necessary to mark trees that would open up the stand too much and leave it in shape that would subject other trees to wind throw. The condition has been remedied by a change in the general procedure of management of fir and spruce on shallow soils. On soils of this type, clear cutting in small groups, leaving good buffer strips and groups to break the wind and supply the seed, will help to regenerate the area cut.

Regulation

The past biennium was, without a doubt, a transition period. Prior to World War I, forest protection was administered for the control of fires, insects, and diseases. National consciousness was not aroused to the need of a protection to insure conservation of our forest resources by proper cutting practices until 1938. At this time, Congress set up a committee to make a nation-wide study of our forestry needs. A report was made in 1941 and bills were introduced providing for regulation of forest management. No action was taken, and from 1942 to 1946 all attention was given

to timber products demand for the prosecution of World War II. The Forest Commissioner's report of 1942 refers to our study of the need for forest regulation in Maine and the preference for state control rather than federal control. The report of 1944 outlines suggested projects for forestry in our postwar planning.

It is obvious that any one forest protection is only lasting if other protection measures are equally emphasized and fire, of course, can obliterate all insect and disease control benefits as well as destroy all timber growing stock including seedlings being protected under proper cutting practices.

Maine has specialized on fire protection since 1909 in the Maine Forestry District, which for many years has had adequate fire protection. We have given attention to disease control since 1916 and expanded our insect control program since 1921. It is timely and essential that we should now put into effect an action program to insure a perpetuation of our forest growth; not because of the threat of federal control of our forest cutting practices but because it is good business to care for our forest resources. Our industries, recreational, and agricultural interests are dependent upon our forests. Without a doubt, overcutting of our timber and woodlands to meet war demands brought about a public and state consciousness of a need for serious and concerted action in meeting our forestry problems.

The Committee on Interstate Cooperation of the 92nd legislature, of 1945, charged the State Tax Assessor with a study of the forest tax structure and the Forest Commissioner to continue his studies of forest policy.

In January of 1946 the Governor and Council authorized an aerial survey of Hancock County, an area of approximately 1,000,000 acres, to obtain basic information for timber and tax studies. This survey was completed during the year. Following the survey, U. S. Forest Service personnel were engaged in interpretation of the forest type and stand-size class on photo plots to supplement observations on the ground. Data will be compiled to obtain figures for area and volume, from which intelligent planning can be made for recommended forest management practices. A preliminary report on forest taxation has been presented to the State Tax Assessor based on study made in the towns of Eastbrook, Amherst, and Franklin. Information obtained from the Hancock County survey should prove the value of extending such a survey over the entire

state. Maine can anticipate federal cooperation in making studies and recommendations if the state will furnish aerial maps, which will require about one-third the total cost.

This same legislature passed a resolve creating an Interim Commission to study methods to assure greater productivity from the forest lands of Maine. This Commission has had the advantage of all studies made by the Forest Commissioner with recommendations on proper cutting practice regulation and basic needs in postwar planning. It is hoped that some constructive measures may result so that tax burdens in organized towns will not be a reason for improper management of timber lands.

This is not a new thought. An act for the preservation, perpetuation, and increase of the forests was approved March 30, 1921 (Chapter 78, P.L. 1921). This law gave the Forest Commissioner the power to regulate cutting of state forests and provided for the establishment of auxiliary state forests. Such forests, listed at the option of the landowner, became auxiliary state forests and were exempt from taxation. The law provided that assessors should appraise and assess land only, not to exceed a value of \$5.00 per acre, and collect a 5% tax on stumpage value of trees cut. The law also provided certain rules for cutting practices and the leaving of seed trees. The Forest Commissioner's report for 1922 stated that three owners had listed 10,646 acres which, in fact, was ignored by the local assessors. This action was not contested so it was doubtful "how effective the Act will be in accomplishing its purpose of encouraging reforestation and the practice of forestry." The report of 1928 showed twelve owners listed less than 5,000 acres.

The 1921 law was repealed by the enactment of Chapter 306, P.L. 1929, which defined auxiliary state forests. Application to have lands listed as auxiliary state forests was to be made to municipal assessors. The law provided that only land should be appraised on a value of \$2.00 per acre. A 5% tax on the stumpage value or stumpage price received during the year ending April 1 was also included. Records show that 22 towns accepted forest areas for taxing under this law from 33 landowners of 14,142 acres. There were 33,807 acres approved for acceptance by the Forest Commissioner. The 1932 report shows 358,693 acres listed in 184 towns and 64,489 acres accepted by 54 towns. There were, however, many towns who refused to recognize the legality of the law and no one seemed sufficiently interested to bear the expense of a test case in

court. There was no opposition, therefore, to the repeal as enacted by Chapter 139, P.L. 1933.

An ideal tax on timber would be based on annual growth. Determining the value of such growth, however, is too technical to have practical application. A yield or severance tax is the nearest approach to the ideal. During the time of a change from the ad valorem base to a yield tax, towns would lose some revenue which would constitute a hardship. Such loss should be underwritten during the transition period and returned to the towns.

In January 1946, the Forest Commissioner and the Extension Forester, together with the State Forester and Extension Forester of each New England state, formulated a forestry program for New England. These officials functioned as a conference group under the sponsorship of the New England Council. The program dealt with the importance of forestry in New England with reference to land ownership and use, fire protection, forest pests, forest taxation, cutting practices, wood utilization, and forest roads.

State Foresters Meeting

The Association of State Foresters met for its 24th annual meeting at Centre Lovell, October 2-4, 1946. Thirty-four states out of the forty-three having active forestry agencies were represented. This was the first meeting to be held in Maine since the organization of the Association in 1920. Previous meetings in New England were held in Connecticut in 1927 and in Vermont in 1935.

It was an honor for Maine to act as host for such an outstanding meeting. Harold E. Severance, manager of Severance Lodge on beautiful Lake Kezar, accommodated and served meals during the three-day session to all in attendance. The group was much impressed by the uniqueness of gathering in the woods of Maine but still enjoying every convenience of hotel facilities.

After the first day's business session, Everett F. Greaton, Executive Secretary of the Development Commission, gave a talk on Maine and showed colored moving pictures of our forests, streams, and coast. Appreciation is expressed for Mr. Greaton's cooperation, and for the attendance and address of welcome by the Governor.

A feature dinner was served consisting of Maine apples stuffed with Gulf of Maine shrimp, Maine clam stew, Maine lobster with

Maine country butter, Maine corn, Maine potato chips, Maine garden salad, and bombes of Maine ice cream completed what was called the "Maine-U." This novel Maine banquet was made possible by the cooperation of the following manufacturers of forest products:

Atlas Plywood Corp.
 B. F. D. Company
 Brown Company
 Eastern Corporation
 Great Northern Paper Co.
 Hollingsworth & Whitney Co.
 International Paper Co.

L. L. Clark Lumber Co.
 Maine Seaboard Paper Co.
 Oxford Paper Co.
 Penobscot Chemical Fibre Co.
 St. Croix Paper Co.
 S. D. Warren Co.
 Stowell-MacGregor Corp.

Wood product favors were also furnished for our guests by Goodall-Sanford, Inc., Bates Manufacturing Co., and the wood-turning industries.

Our guests were privileged to visit the manufacturing plants of Penley Brothers, Paris Manufacturing Co., and Snocraft, Inc., during a field trip which culminated with a bean-hole luncheon with "beans and all the fixin's."

On the program every phase of forestry and forest protection was presented by representatives of the U. S. Forest Service, U. S. Soil Conservation Service, Society of American Foresters, The American Forestry Association, and the American Forest Products Industries, Inc. The Maine Forest Service gave its guests the opportunity of inspecting forest fire equipment including the new amphibian "Seabee" airplane and portable radios. Types of material used for fair exhibits depicting fire, insect, and disease control and forest education were on display.

A policy statement was promulgated on the field of work of state forestry agencies. It is submitted, herewith, in part, with the recommendation that it be a guide for Maine forest policy:

"1. The State Forestry Agency is the legally constituted authority for the conduct of forestry work in the state.

"2. **Pattern for State-Federal Cooperation.** Cooperative programs in protection (fire, insects, and disease), management, and conservation of our forest resources must be developed on a sound basis of understanding and recognition of each agency's responsibilities, authorities, and channels of organization.

It is recommended that the following pattern be followed in state and federal cooperative programs:

1. Personnel for the office of state and private forestry should be comprised largely of foresters with records of broad experience and sympathetic attitudes toward, and if possible, actual employment in state forestry work.

2. All programs or policies dealing with state or private forest lands shall be developed in consultation with and approved by the State Foresters concerned before initiation.

3. Policies to govern cooperative activities with the State Foresters should be worked out between the representative of the federal agency and the State Foresters by groups if possible, but with individual State Foresters if necessary.

4. The Chiefs of the federal agency should provide the State Foresters with budgets covering proposed federal expenditures along with plans for work accomplishment studies and reviews. The State Foresters should provide the Chief of the federal agency with budgets of proposed expenditures and plans for work programs.

5. Insofar as legislation will permit, all regular and normal cooperative activities should follow the procedures established by the Clarke-McNary Act which provides for state expenditure of funds and federal reimbursement for same.

"3. Management of Privately Owned Forest Lands. Each of the several State Foresters shall act as rapidly as possible in developing a program for the use of all the correlated existing agencies which will furnish information to private owners of forest lands on the management of their holdings for timber production on an economically sound basis. And, to develop a further program, if the state law permits, which will make available the services of competent foresters to work in the field with the owners of timberlands in order that help may be given in setting up management plans, and if present laws do not permit such action, efforts should be made to have enabling legislation passed.

"4. Suggested Principles of Federal Legislation to Provide Aid in Forest Management to Private Forest Owners. The Association of State Foresters believes that a program of cooperative technical forestry assistance is necessary as the next step in solving the nation's forest problem. To implement this program the Asso-

ciation recommends that federal legislation be enacted embracing the following principles:

1. That the cooperative work on a state level be handled on the Clarke-McNary pattern.
2. That no direct action projects be established in a state until that state is ready to finance its share and to administer the project.
3. That the U.S.F.S. provide experts for field assistance on major projects and provide research facilities and technicians.
4. That the federal expenditure for point 3 shall not require matching by the states.
5. That the field work shall cover technical forestry services.
6. The Executive Committee is hereby instructed to draft and introduce federal legislation to accomplish this end.

"5. The Association's Policy on Federal Acquisition. The objective of public acquisition of forest lands should be threefold: (a) to place and keep in a maximum state of forest production those lands economically fitted for such purpose which will not be so maintained under private ownership, (b) to consolidate holdings in economic units so the forest resources will contribute their maximum benefit in stabilizing and perpetuating industry, and (c) to demonstrate methods and principles of good forest management.

The present practice of not entering a state for the purpose of acquiring forest lands until invited by the state's forestry department, and unless the state passes an enabling act permitting it, is satisfactory.

The enabling act should define the section or sections of the state in which federal acquisition shall be permitted, and which shall be in harmony with the state forestry program.

In states which have already passed enabling acts and there is no limit on areas that may be acquired, there should be a definite understanding with the state forestry governing body as to the particular section or sections of the state in which purchase areas or units may be established. These sectional areas, once established, must be held inviolate and respected by the Federal Government to the extent that no attempt shall be made to extend them without first securing the approval of the state forestry governing body.

Furthermore, the Federal Government shall let it be known that it will not consider the acquisition of land outside of the restricted area.

"6. Taxation of Forest Lands. Recognizing that taxation of commercial timberlands at a rate in excess of that which can be paid from their crop production prevents the proper management of forest lands, the following policy statement is adopted:

That all commercial forest lands should be valued for assessment purposes in accordance with their productive capacity.

"7. Policy Statement on Legislation to Reimburse Local Government for Loss of Taxes Due to Large Federal Ownerships. Provision should be made for a reasonable return in lieu of taxes to local governmental units from publicly-owned forest lands.

"8. Policy Statement on Regulation. The Association of State Foresters, recognizing that public regulation of privately-owned timberlands may be necessary in some states, believes that when considered necessary by a state, such regulation should be applied by the state alone and not by the Federal Government.

"9. Reaffirmation of 1945 Policy on Postwar Forestry Program. WHEREAS, the U. S. Forest Service has inquired as to the wishes of the state foresters regarding federal aid in postwar forestry projects, now therefore

BE IT RESOLVED, that if and when a public works or relief program becomes necessary, the Association of State Foresters in convention assembled at St. Louis, Missouri, this 11th day of October, 1945, favors federal aid to the states in their postwar forestry projects and recommends the following features in any such program of federal aid:

1. That, if possible, federal aid be in the form of grants of money to be expended by the states.

2. That in each state the statutory state forestry agency be the authority to initiate and supervise all forestry projects for which federal aid is furnished for use on state and private lands.

3. That there be no resumption of the C.C.C. program as formerly constituted.

4. That if federal aid be furnished in the form of men and supplies the following principles be observed:

a. That there be no army participation in the operation of work camps.

b. That opportunities for the employment of local men living near work projects be provided.

c. That where camps need to be set up, fifty men form a desirable unit, with additional provision for side camps.

d. That workers should be paid the going rate of wages in the locality where they are employed and should be required to work full time.

"10. Approval of F.C.C.A. The Association endorses the work already performed by the Forestry Conservation Communications Association and resolves to support the continuance of the negotiations with the Federal Communications Commission.

"11. Forest Insects and Diseases. WHEREAS, forest insects and diseases annually take heavy toll of our forest resources, and

WHEREAS, the magnitude of the control job on state and private lands is often greater than can be handled with state and private funds, and

WHEREAS, effective disease and insect control must be conducted simultaneously on intermingled state, private, and federal lands,

NOW THEREFORE BE IT RESOLVED by the Association of State Foresters sitting in regular session at Centre Lovell, Maine, October 3, 1946, goes on record requesting the passage of a bill providing for the protection of forests against destructive insects and diseases."

Tree Surgery

During the war there were only fifty-eight licensed tree men as many had gone into the armed services or into war work. Shade and ornamental trees throughout the state were largely neglected so that today the trees in many cities and towns are in poor shape. During 1946 many tree men came back and again obtained their licenses. In addition, quite a number of new men, many of whom

had received training in C.C.C. camps, took the state examination. In order to assist men in getting back into civilian life the Tree Surgery Board gave special examinations whenever requests were received.

No court cases have been necessary as all cases in which infringements were made were due to oversight or misunderstanding and it has been the custom of the Board to settle such cases through hearings. The quality of work has been continually getting better and infringements have not been so severe. It is, therefore, evident that the law is doing a great deal of good. There are at present ninety-eight licensed tree men in Maine with every prospect of a considerable increase next year.

LICENSED TREE SURGEONS
MAINE FOREST SERVICE, STATE HOUSE, AUGUSTA, MAINE

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Abbot, Chester	Cape Neddick	115	x	x	x	July 1, 1947
Abbot, Wm. F.	Box 138, Wells	95	x	x	x	Dec. 1, 1947
Abbott, Wallace E.	Rumford	205		x		July 1, 1947
Aborn, Willard G.	51 Upland Way, Barrington, R. I.	77	x	x	x	April 1, 1947
Albee, Earl E.	RFD No. 1, Gardiner	193		x	x	April 1, 1947
Aldrich, Leon F.	25 Eastern Ave., Dedham, Mass.	130		x	x	April 1, 1947
Amalia, Karl	Manchester, Mass.	75	x	x	x	April 1, 1947
Aycock, Thomas W.	105 Lowell St., Peabody, Mass.	96	x	x	x	April 1, 1947
Babb, George W.	New Gloucester, P.O., Intervale	168		x		April 1, 1947
Barnes, Carl S.	Box 516, Holliston, Mass.	97	x	x	x	April 1, 1947
*Bartlett, F. A. Tree Expert Co.	Cambridge, Mass.					
Benner, Alfred L.	2 Main St., Rockland	98	x	x	x	July 1, 1947
Billings, Ralph E.	Falmouth Foreside, RFD 4, Portland	2	x	x	x	July 1, 1947
Bissler, C. H.	436 Park Sq. Bldg., Boston, Mass.	91	x	x	x	April 1, 1947
Boothby, Earl C.	Limerick	100	x	x	x	April 1, 1947
Bowden, Adelbert	Castine	180	x	x	x	July 1, 1947
Brown, Arthur E.	Bar Harbor	179	x	x	x	April 1, 1947
Brown, Harry	35 Winter St., Lewiston	145	x	x	x	April 1, 1947
Brown, Norman R.	96 Conant St., Danvers, Mass.	207	x	x	x	Nov. 1, 1947
Capen, Roland	Pride Road, Auburn	194			x	April 1, 1947
Chase, Russell	60½ Elm St., Auburn	209		x		Nov. 1, 1947
Conley, Ervin G.	178 Maple St., Danvers, Mass.	206	x	x	x	Nov. 1, 1947
Connell, Erlwein	798 Stevens Ave., Portland	203		x	x	April 1, 1947
Cooper, Delbert	46 Winthrop St., Hallowell	204		x	x	April 1, 1947
*Davey Tree Expert Co.	436 Park Sq. Bldg., Boston, Mass.					

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Dodge, Albert W.....	Arbor St., Wenham, Mass.....	5	x	x	x	July 1, 1947
Dow, Clarence E.....	Bar Harbor.....	171	x	x		April 1, 1947
Edney, Louis C.....	9 Court St., Belfast.....	7		x	x	July 1, 1947
Franke, Wm. A.....	30 Cameron St., Brookline, Mass.....	66	x	x	x	April 1, 1947
*Frost & Higgins Co.....	20 Mill St., Arlington, Mass.....					
Furrow, D. E.....	River Road, Bucksport.....	172		x	x	April 1, 1947
Gleason, Carlton.....	795 Memorial Drive, Cambridge, Mass.....	150	x	x	x	April 1, 1947
Goodall, George W.....	100 Brentwood St., Portland.....	32	x	x	x	July 1, 1947
*Goodall Tree Expert Co.....	100 Brentwood St., Portland.....					
Goodridge, Harry A.....	Box 328, Rockport.....	186	x	x	x	Jan. 1, 1947
Goodwin, Albion.....	17 Columbia St., Augusta.....	185	x			Sept. 16, 1947
Goodwin, John B.....	9 Pleasant St., Waldoboro.....	8		x		July 1, 1947
Gray, Harold.....	141 South St., Milltown.....	158		x	x	April 1, 1947
Griffiths, Stephen L.....	Leighton Road, Augusta.....	67	x	x	x	April 1, 1947
Grover, Walter H.....	Bethel.....	151		x	x	Dec. 1, 1947
Hamel, Lewis.....	100 Brentwood St., Portland.....	33	x	x	x	July 1, 1947
Harmon, Walter L.....	Fall River, Mass.....	40	x	x	x	July 1, 1947
Higgins, E. W.....	20 Mill St., Arlington, Mass.....	135	x	x	x	April 1, 1947
Hills, Raymond E.....	Belmont Ave., Belfast.....	190	x	x	x	Feb. 1, 1947
Jameson, John H.....	779 Hammond St., Bangor.....	12	x	x	x	July 1, 1947
Kearns, James A.....	238 Palm St., Bangor.....	199		x		April 1, 1947
Keene, Roy D.....	20 Mill St., Arlington, Mass.....	56	x	x	x	April 1, 1947
King, Roland L.....	32 French St., Skowhegan.....	14		x	x	Sept. 1, 1947
Linnell, Rodney S.....	Peru.....	125		x	x	July 1, 1947
Lord, Daniel B.....	Parsonsfield, P.O. Kezar Falls.....	165	x			April 1, 1947

MISCELLANEOUS

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
*Lucas, John, Tree Expert Co..	179 Sheridan St., Portland.....					
Lyden, James.....	179 Sheridan St., Portland.....	80				April 1, 1947
Madden, James E.....	1014 Valley St., Manchester, N. H....	183	x	x	x	Nov. 1, 1947
Maddocks, Royden K.....	49 Morning St., Portland.....	46	x	x	x	July 1, 1947
Maddox, Elmer L.....	E. Monmouth, Route 1, Winthrop....	19		x	x	July 1, 1947
Maddox, Wesley.....	91 Brown St., Kennebunk.....	153		x	x	April 1, 1947
Marois, Philip L.....	c/o 45 Walnut St., Lewiston.....	140		x	x	Nov. 20, 1947
McCarthy, Charles.....	186 Blake St., Lewiston.....	20		x		Sept. 1, 1947
McClain, E. L.....	RFD No. 1, Box 122F, Rockland....	105	x	x	x	April 1, 1947
McInnis, James V.....	70B State St., Brewer.....	71		x	x	April 1, 1947
McSherry, Thomas E.....	Fryeburg.....	52	x	x	x	April 1, 1947
Messer, Albert R.....	12 Washburn St., Houlton.....	47		x	x	July 1, 1947
Meaney, Ralph B.....	R.D. No. 2, Cumberland Ctr.....	154	x	x	x	April 1, 1947
Miller, Chas. D.....	Main St., Seal Harbor.....	198	x	x	x	April 1, 1947
Mores, Carl D.....	RFD No. 5, Portland.....	48	x	x		July 1, 1947
Nealley, Charles H.....	4 Bell St., Belfast.....	70	x	x	x	July 1, 1947
*N. E. Forest Service, Inc.....	20 Kilby St., Boston, Mass.....					
*N. E. Tree Expert Co., Inc.....	586 Pawtucket Ave., Pawtucket, R. I.					
Oatway, Hubert I.....	17 Weston St., Augusta.....	141	x	x		April 1, 1947
Parker, Ralph J.....	60½ Elm St., Auburn.....	191		x	x	Feb. 1, 1947
Peterson, William.....	60½ Elm St., Auburn.....	208		x	x	Nov. 1, 1947
Quinn, Albert.....	RFD, Rockville.....	74	x	x	x	April 1, 1947
Rainey, Isaac W.....	Phippsburg.....	181		x	x	April 1, 1947
Ralston, F. R.....	19 Rector Rd., Boston 26, Mass....	108		x	x	Feb. 1, 1947
Reynolds, Merton I.....	13 S. Goff St., Auburn.....	197	x	x	x	April 1, 1947

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Robarts, Myron F.	Belfast Road, Camden	50	x	x	x	July 1, 1947
Rodick, Kenneth	16 Newton Way, Bar Harbor	26	x	x	x	Nov. 1, 1947
Rush, Philip S.	RFD No. 2, Waterville	187	x	x	x	April 1, 1947
Safstrom, Alfred J.	169 State St., Augusta	44	x	x	x	April 1, 1947
Samuells, Sam.	No. Berwick Road, Sanford	210		x	x	Nov. 1, 1947
Scribner, Daniel	303 Essex St., Bangor	189		x	x	Feb. 1, 1947
Shand, Charles L.	4 Ash St., Bar Harbor	58		x	x	April 1, 1947
Sherman, Robert C.	48 Harpswell St., Brunswick	27		x	x	July 1, 1947
Sirois, Arnold	South Gardiner	163		x	x	Jan. 1, 1947
Skillin, Alexander	Falmouth Foreside	28	x	x	x	July 1, 1947
Smith, Clarence L.	RFD No. 1, Cumberland Center	81	x	x	x	April 1, 1947
Soucier, Bennie	91 Dyer St., Presque Isle	184	x	x	x	April 1, 1947
Staples, Victor M.	Coburn Ave., Dixfield	196		x		April 1, 1947
Stevens, John H.	No. Berwick Rd., Sanford	177	x	x	x	April 1, 1947
Stratton, R. M.	Eastern Ave., East Millinocket	195		x	x	April 1, 1947
Tamke, H. J.	586 Pawtucket Ave., Pawtucket, R. I.	73	x	x	x	April 1, 1947
Tozier, G. M.	Fourth St., Mexico	201		x		April 1, 1947
Tozier, Stanley, Jr.	Fourth St., Mexico	202		x		April 1, 1947
Turcotte, R. E.	RFD No. 2, Sabattus	200			x	April 1, 1947
Thorne, Charles	RFD No. 5, Augusta	182		x		April 1, 1947
Vigue, Forest P.	100 Stone St., Augusta	192		x		April 1, 1947
Warren, Robert J.	179 Sheridan St., Portland	113		x	x	April 1, 1947
Watson, Myles S.	Newington, N. H.	69	x	x	x	April 1, 1947
West, Harry V.	63 Longfellow Drive, So. Portland	76	x	x	x	Dec. 1, 1947
Wheaton, Archie J.	RFD No. 1, Wiscasset	143		x	x	April 1, 1947
*White & Franke, Inc.	30 Cameron St., Brookline, Mass.					
White, Hayes E.	No. Berwick Rd., Sanford	211		x	x	Nov. 1, 1947
White, Howard M.	Box 664, Augusta	29	x	x	x	April 1, 1947
White, J. Cooke	20 Mill St., Arlington, Mass.	53	x	x	x	Oct. 1, 1947
Woodworth, K. H.	South Gouldsboro	128		x	x	April 1, 1947
Wright, Byron M.	100 Brentwood St., Portland	83		x	x	April 1, 1947
Young, Ernest J.	Otter Creek	188		x	x	Jan. 1, 1947

*Companies having licensed representatives.

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