

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
National Park Service  
Region One

*Library copy*  
*Section 37*

THE MOUNT DESERT ISLAND FIRE  
OF  
OCTOBER 17 - NOVEMBER 14, 1947  
WITH PARTICULAR REFERENCE  
TO  
ACADIA NATIONAL PARK, MAINE

*COPIED 4 JUNE 05*  
*R. HENION #4112*

A Report Prepared By:

Fred H. Arnold, Regional Forester  
Wilbur L. Savage, Forester  
Robert B. Moore, Forester

February 27, 1948

(Date of Completion)

Jesup Memorial Library  
34 Mount Desert Street  
Bar Harbor, ME 04609  
Phone: 207-288-4245

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
National Park Service  
Region One

THE MOUNT DESERT ISLAND FIRE  
OF  
OCTOBER 17 - NOVEMBER 14, 1947  
WITH PARTICULAR REFERENCE  
TO  
ACADIA NATIONAL PARK, MAINE

A Report Prepared By:

*Fred H. Arnold*

Fred H. Arnold, Regional Forester

*Wilbur L. Savage*

Wilbur L. Savage, Forester

*Robert B. Moore*

Robert B. Moore, Forester

February 27, 1948

(Date of Completion)

THE MOUNT DESERT ISLAND FIRE OF OCTOBER 17 - NOVEMBER 14, 1947  
WITH PARTICULAR REFERENCE TO ACADIA NATIONAL PARK, MAINE

TABLE OF CONTENTS AND INDEX

<u>Subject</u>	<u>Page</u>
Name of the Fire	1
Purpose and Scope of Report	1
The Island and the Park	3
Forest and Soil Conditions	3
Provisions for Fire Control in the Park	5
Forest Fire Danger Conditions	9
National Emergency	12
Origin of the Fire	12
Suppression of the Fire	13
First Stage of the Fire - October 17 to 20	13
Second Stage of the Fire - October 21 and 22	14
The Blow-up of October 23	19
The Suppression Period Following the Blow-up - October 24 to 27	21
Suppression Tactics and Use of Water	25
Mop-up Operations	27
Communications	30
Fire-Weather Reports	31
Fire Detection	31
Incendiarism	31
Subsistence and Lodging of Fire Fighters	34
Safety of Forces Engaged	35
Supporting Action in the Region One and Director's Offices	35
Cooperative Assistance	38
Suppression Costs	43
Equipment Accountability	44
Fire Damage and Rehabilitation	45
Outstanding Features of the Fire and Lessons From It	48
Individual Fire Report, Form 10-400	53

APPENDIX

Photographs	1
Comparative Record of Precipitation, Bar Harbor, Maine, 1884 - 1947	13
Fire Record, Acadia National Park, 1937 - 1946	14
Summary of Allotments for Forest Fire Control, Acadia NP, 1939 - 1948	15
Overhead Personnel From Points Outside of Acadia NP Who Assisted in	
Suppression Action on Mount Desert Island Fire	16
List of Agencies Participating on Mount Desert Island Fire	19
Fire Organization Chart - Typical Day, Mount Desert Island Fire	19
Manpower Distribution Tables, Mount Desert Island Fire:	
Table 1 - Early Stages Oct. 17 to 23	20
Table 2 - Attack, Holding and Mop-up Stages Following Blow-up	
of October 23	21

SubjectPage**(Snapower Distribution Tables, Mount Desert Island Fire (Cont'd))**

<b>Table 3 - Interior Mop-up and Patrol, Final Stages, Nov. 3 to Nov. 14</b>	<b>22</b>
<b>Mop-up Instructions, Mount Desert Island Fire</b>	<b>23</b>
<b>Length of Fire Line by Sectors, Divisions and Total Perimeter, Mount Desert Island Fire</b>	<b>24</b>
<b>Summary of Acreage Burned, Mount Desert Island Fire</b>	<b>25</b>
<b>Summary of Fire Damage, Mount Desert Island Fire</b>	<b>26</b>
<b>Major Items of Equipment Secured, Mount Desert Island Fire</b>	<b>27</b>
<b>Summary of Fire Suppression Costs, Mount Desert Island Fire:</b>	
<b>Total Participation and Costs</b>	<b>28</b>
<b>ER &amp; PFF Funds (Estimated)</b>	<b>29</b>
<b>Paid From Other MPS Funds (Actual)</b>	<b>30</b>
<b>Contributed Costs (Estimated)</b>	<b>31</b>
<b>ER &amp; PFF Deficiency Appropriation Estimate With Respect to Mount Desert Island Fire, November 20, 1947</b>	<b>32</b>
<b>Preliminary Reports on Mount Desert Island Fire</b>	
<b>Report by:</b>	
<b>W. L. Savage, Fire Boss</b>	<b>42</b>
<b>B. L. Hadley, Superintendent, undated</b>	<b>57</b>
<b>P. G. Favour, Jr., Park Ranger</b>	<b>61</b>
<b>R. C. Douglas, General Maintenance Foreman</b>	<b>65</b>
<b>L. E. Mayo, Clerk</b>	<b>68</b>
<b>J. D. Coffman, Chief Forester, Oct. 23, 1947</b>	<b>70</b>
<b>J. D. Coffman, Chief Forester, undated</b>	<b>71</b>
<b>S. L. Hadley, Superintendent, Nov. 17, 1947</b>	<b>75</b>
<b>J. D. Coffman, Chief Forester, Nov. 18, 1947</b>	<b>76</b>
<b>Log of Mount Desert Island Fire:</b>	
<b>Director's Office</b>	<b>82</b>
<b>Region One Office</b>	<b>93</b>
<b>Acadia National Park</b>	<b>100</b>
<b>USGS Map, Acadia National Park and Vicinity</b>	<b>(Pocket)</b>
<b>Fire Map, Mount Desert Island Fire</b>	<b>(Pocket)</b>

THE MOUNT DESERT ISLAND FIRE OF OCTOBER 17 - NOVEMBER 14, 1947  
WITH PARTICULAR REFERENCE TO ACADIA NATIONAL PARK, MAINE

Name of the Fire

This fire is referred to as the Mount Desert Island Fire because more than one-fourth of the total area of that island was burned by the fire and the entire island was imminently imperiled by it. The general public speaks of the fire as the "Bar Harbor Fire," and undoubtedly it will go down in history by that name. Caught suddenly in the violent onslaught of the gale-driven holocaust raging through crowds in the closely adjacent tinder-dry coniferous forest, the town of Bar Harbor became a catastrophic inferno on the evening of October 23. It narrowly missed total destruction. Nationwide headlines flashed the frightful plight of Bar Harbor as the horrifying spectacle of a town in flames wrote another page in the history of urban fire disasters. Sensational front page stories everywhere told of the mass evacuation of town inhabitants by land and water -- a "Second Dunkerque" they called it; of millions of dollars' worth of sumptuous summer homes razed to unbelievably small masses of rubble and ash. They related also how two lives were lost and how, with heroic effort and almost miraculous achievement, the major portion of the town was saved, including the business section.

Purpose and Scope of Report

This is a record of the less sensational aspects of the fire. It deals with the 17,133 acre forest fire, and more particularly with the 3,750 acre portion of it within Acadia National Park, representing nearly

one-third of the park's total area. This is the story of the origin, spread, and suppression of the fire on its far-flung fronts coursing erratically through forest and open from the rock-bound ocean shore over gentle lowlands, flat marshes and meadows, beside lake shores, and across or along roads, trails, rocky streams, rugged slopes and ridge tops to graze the summits of the two highest mountains on the island.

The suppression action described is mainly that directed to save as much as possible of the improvements and natural features in the park, which are important to its use and attractiveness for recreation, while at the same time serving to prevent further spread of the fire to villages and private property on the island. Damage, costs and other effects of the fire are similarly considered primarily in relation to the park and the Service.

The report is prepared in response to a request from the Director's Office for a comprehensive official record of the forest fire. On the basis of that request the intent has been to embody in the report a record of (1) basic or background information regarding the island, the park, and fire control; (2) conditions under which the fire started, spread and was suppressed; (3) suppression action as directed by the Service in conjunction with other agencies; (4) direct, indirect and contributed costs to the Service for suppression; (5) extent of fire damage to the park; (6) estimated cost of resulting clean-up and rehabilitation work within the park; and (7) transcripts of fire logs, preliminary reports and miscellaneous data pertinent to the fire or to fire control in the park. The report would be incomplete without setting forth some conclusive lessons to be derived from this fire -- the largest in Acadia National Park and Region One history.

### The Island and the Park

Mount Desert Island is situated on the coast of Maine about 155 miles northeast of Portland via U. S. Highway 1 and State Highway 3. Approximately 100 square miles in area, the entire island is devoted largely to recreational use. Villages are located principally along the coast, on the coves, harbors and Saco Sound which indent the rocky shore. Bar Harbor, famed as a summer resort, is the largest urban place on the island, having a year-round population of about 4,500. It is located midway along the coast of the island's eastern lobe. (See appended U.S.G.S. map).

The entire coastal perimeter of the island is readily accessible by paved roads. For a mountainous area the interior is unusually well traversed by roads and an extensive system of foot trails. This factor played an important part in the suppression action on the fire.

The headquarters of Acadia National Park is situated on the southern edge of Bar Harbor. On the map its location can be spotted as within the little area cross-hatched in red just above the abbreviation "Ak." The park area, 23,332 acres in aggregate, is composed of many disconnected and widely separated areas. With outlying portions located chiefly on Schoodic Peninsula and Isle au Haut, the major portion of the park is on Mount Desert Island. There it occupies mainly the more rugged interior portions, in unjoined tracts of irregular size and outline.

### Forest and Soil Conditions

About 90% of the island, and an even larger portion of the park is forested, as will be noted on the U.S.G.S. map. Forest cover consists

of coniferous, deciduous and mixed coniferous - deciduous types extending from sea level to the rocky subalpine or barren crests of the higher mountains -- Cadillac, Sargent, Kerr (Flying Squadron on the map), and others. (Cadillac Mtn., elevation 1,530 feet, is the highest geographic point on the Eastern seaboard). Coniferous forests contain red and white spruce, balsam fir and Eastern white pine as major species. The northern hardwoods (American beech, yellow birch and sugar maple) with gray birch, the two native aspens and Northern red oak are the predominant species in the hardwood types. Both type groups have numerous secondary tree and shrub associates and advance tree reproduction is usually plentiful.

Outcropping granite rock and exposed or concealed talus boulders are abundant. Comparatively heavy humus covers the forest floor in the coniferous types, particularly in the spruce - fir stands. This is usually intermixed with underlying granite boulders of irregular size and shape. The humus and matted tree roots have infiltrated deeply into the profuse boulders beneath, embedding them tenaciously. Knowledge of this condition is essential to a full understanding of the stubborn persistence of the fire deep in the ground, and of the great difficulties encountered in mop-up work and in attempts to dig fire lines where this condition obtained. The organic layer in the hardwood types consists of a few inches of leaf litter and duff. There the conditions affecting line construction and mop-up were less troublesome.

Before the fire, accumulations of the heavier fuels were essentially light in all forest types within those portions of the park involved, due to the extensive fire hazard reduction accomplishments under the Civilian Conservation Corps program. This favorable condition unquestionably reduced rate of spread after the blow-up subsided, lessened resistance to control, and consequently, lightened the job of line clearance and mop-up.



Provisions for Fire Control in the Park

Considering the wild fire experience of the park during the decade preceding 1947 (see park fire record in appendix), physical improvements and equipment available for fire control were above normal requirements. On hand before the fire were a modern fire truck, five power pumps, hose and hand tools, in all sufficient to equip more than 200 fire fighters. The park has two fire lookout houses, one on Sargent Mtn., the other on Beech Mtn. Communication between these stations and park headquarters had been provided by telephone but service to Sargent Mtn. was inoperative at the time of the fire. Detection during fire seasons has been provided by manning one or both of the established lookout stations or one or more secondary points, depending upon degree of danger and visibility conditions.

As previously mentioned, accessibility for fire control is unusually well provided, due to the existence of an extensive system of paved roads, carriage roads, truck trails, old woods roads and foot trails. Park trucks, pick-ups and passenger-carrying vehicles were ample in number for ordinary fire control transportation needs. Commercial telephone service is available within short travel time from most parts of the island.

In addition to the extensive CCC fire hazard reduction accomplishments in the park, accumulations of logging slash and windfallen trees had been reduced as a further safeguard over a considerable acreage of private lands adjoining park boundaries. CCC forces also constructed many miles of fire-breaks along park boundaries. This work was done with respect to park tracts located mainly in the western part of the island, on Schoodic Peninsula, and along boundaries north and west of Aunt Betty Pond.

The park maintained a standard Southeastern Forest Experiment Station fire danger station. (This was destroyed by the fire, except for the rain gage which was located at park headquarters.) The station was operated during fire seasons and the observations obtained provided the basis for systematic rating and recording of fire danger conditions.

As regards personnel resources, the Acadia organization included 14 permanent and nine temporary employees at the time the fire started. These positions are listed below by number and title.

Permanent Positions

- 1 Superintendent
- 1 Assistant Superintendent
- 1 Park Naturalist
- 3 Park Rangers (one of whom served as park fire chief)
- 1 General Maintenance Foreman
- 1 Maintenance Foreman
- 1 Automotive Mechanic
- 2 Laborers
- 1 Accounting Clerk
- 1 Clerk-Typist
- 1 Clerk

Temporary Positions

- 1 Tree Climber (Elster Rust Control)
- 3 Laborers

During the summer of 1947 the park had eight seasonal employees in the following positions: six seasonal Park Rangers, one Fire Control Aid and one Elster Rust Control Checker.

Fire control training for park and CCC forces was provided once or twice each year during the period from 1938 through 1942. ERA forces also received such training in the years through 1940, that program having been discontinued in the park the following year. These training sessions were from one to three days' duration and the major subjects included fire prevention, suppression methods and techniques, use of hand tools, power pumps, hose and water. One or more Acadia supervisory personnel attended

regional or sectional fire control training meetings conducted in other areas during the years 1939, 1940 and 1942. There was no fire control training in the park during the war years, 1943 to 1945. In May 1947 a three-day fire school was conducted in Acadia with the participation of the Chief Forester and a member of the regional forestry staff. It was attended by 25 park, Service and local cooperating personnel. The program was devoted almost entirely to instruction and practice in the use of power pumps, hose and water in forest fire suppression.

Acadia fiscal year allotments 1939 to 1946 for forest fire control purposes are summarized in the appendix. This summary shows that the average annual allotment of such funds to the park during the decade was \$827. Although since fiscal year 1942 only \$143 have been allotted to the park for forest fire equipment, the park has obtained considerable war surplus equipment during the past two years under the Service's authorization to procure such equipment by transfer without exchange of funds. Items obtained in this manner include a fire truck, trailer-mounted pump, and hose.

During the years of CCC activity in the park, fire lookout and fire guard services were provided from that source. From 1942, when the park lost its last CCC camp, until fiscal year 1947 the allotments provided for two fire guard or fire control aid positions each year. The authorized periods of employment varied from 2 to 4.5 months per year for each position. The amount approved for personal services in the 1943 allotment under Forest Protection and Fire Prevention was reduced to provide but one fire control aid for 4.5 months.

The park has a written forest fire control plan but it was out of date and in need of revision before the Mount Desert Island Fire occurred.

An analytical forest protection requirements report for Acadia was approved by the Acting Director on December 13, 1944. Copies of the park fire atlas are maintained in the park, regional and Director's offices. No formal cooperative fire control agreements with other agencies have been in effect but verbal understandings between the park and the organized towns on the island provide for cooperation on a mutual assistance basis.

The Towns of Bar Harbor, Mount Desert, Southwest Harbor and Tremont (see U.S.G.S. map for location and boundaries of each) are, collectively, in charge of fire control on private lands on the island. Practically all the villages have fire departments which vary in size from several trucks and several full-time employees down to one truck and one full-time employee. The full-time employees in these fire companies form the nucleus of the organizations, most of the membership consisting of volunteers. The latter represent a large portion of the able-bodied men in their respective communities.

Acadia National Park fulfills responsibility for the protection of all lands within park boundaries. To define the zone within which the park may take initial action on fires threatening park lands from the outside a fire boundary had been established around the park. This boundary, roughly paralleling the park line at distances varying from a few feet to one mile outside the park, follows roads, trails, streams and, in so far as possible, other physical barriers to fire. Initial suppression action is taken independently or cooperatively by park forces on fires occurring within this zone, since such fires are considered as directly threatening park lands. The Mount Desert Island Fire originated more than one mile outside of the fire boundary.

During the 19-year period 1928 - 1946 smokers accounted for 63 percent, incendiary 15 percent, debris burning 7 percent, and other human causes 9 percent of the total number of reportable fires within or threatening the park. No lightning fires are recorded in that period. The park fire prevention program has been less active since the years of CCC activity.

#### Forest Fire Danger Conditions

The period of danger from forest fires on the island is recognized as normally from April 15 to September 1, with a tendency to extend to September 15 in some years. It is, therefore, essentially a late spring and summer fire season. The extremely dry conditions prevailing during the summer and fall of 1947 caused a greatly extended and severe post-fire season emergency which continued well into the month of November.

The Mount Desert Island climate is characteristically cool in summer, with long periods of high humidity. During the spring and fall seasons the island is frequently blanketed with fog. Dry nights and protracted drought conditions have been of rare occurrence there. Bar Harbor precipitation records for the past 61 years (excluding 1941 and 1942) show a mean of 3.52 inches in August, 3.90 inches in September, and 4.43 inches in October. These figures are in sharp contrast with 0.55, 2.38, and 0.08 inches, respectively, for the same months in 1947 at Bar Harbor. The park fire record for the 1937 - 1946 decade reflects the mildness of the fire conditions during the years preceding 1947. In that decade a yearly average of less than 8 reportable fires burned 6.7 acres per year within the park. (See precipitation and fire records in appendix.)

The Weather Bureau presents the following pertinent analysis of the fire weather situation in New England for the month of October 1947.

"October, 1947, was a disastrous month for New England. In the middle of the month there was an outbreak of small brush and forest fires, many of which spread rapidly in the dry leaves and woods. On the 21st, serious fires developed, aggravated by strong northwest winds which were over thirty miles an hour in Maine. Thousands of acres of timberland were destroyed, as well as farms, homes, and summer cottages. Scores of people were made homeless, and power and light service was disrupted in many places.

"What were the causes of such tragic fires throughout New England? What influence, direct or indirect, did the weather have on the situation? Certainly the weather at the time helped to spread the fires that had started, and made the task of controlling them more difficult. Perhaps it had more to do with the entire fire situation than is apparent at first.

"During the three-month period from August to October, 1947, New England received only 56% of its normal amount of precipitation. That meant that everything was exceedingly dry, including the vegetation and ground cover. As the month of October progressed, the condition became increasingly worse. This was just the season when leaves were falling from the trees, so that before the end of the month the ground was well covered with tinder-dry leaves. Since everything was so dry, the slightest carelessness with matches, cigarette butts, or any kind of fire could easily ignite whatever was at hand; and any fire once started would spread rapidly. In addition, the long dry spell reduced the water supply to a seriously low level in many places; in some communities water had to be hauled from a considerable distance. The scarcity of water made the danger more critical if any small fires broke out.

"From the early part of October on, warnings of the fire hazard were issued daily through press and radio, together with appeals for everyone to exercise extreme care in the use of fire. The fire situation became more serious each day, and an outbreak of small brush and forest fires occurred on the 16th. On the 17th, some state and national forests were closed because of the fire hazard.

"On the 18th, the Boston Weather Bureau Office warned that the forest fire danger was very critical, and that the situation would become worse before it got any better. On the 21st of October a "dry" cold front swept across New England, bringing no precipitation, and ushering in an air mass whose relative humidity was about 20%. The already existing forest fires were aggravated by the strong northwest winds behind the front. This combination of wind, low humidity, and drought resulted in "blow-up" conditions, and fires raged out of control."

A Weather Bureau telegraphic summary for the week ending October 21 reported for New England: "Forest fire danger high; woods closed; many fires raging. Water shortage becoming critical; stream flow, wells, and reservoirs at lowest level in years." Issued by

Induced by these prolonged intensely dry weather conditions fire danger persisted in Class 3, 4 or 5 during the period from mid-September to November 8. There was no appreciable rainfall on the Island over a period of 65 days, from September 4 to November 8. The fire started (October 17) and was brought under control (October 27) during that period. A light trace of rain fell on October 29. Rainfall on November 8 and 9 amounting to 0.61 inches reduced fire danger considerably and contributed to complete blackout of the fire on November 14.

### National Emergency

In recognition of this critical situation throughout the Northeast the Governors of New England's six states and the Governor of New York had, by October 22, declared a state of emergency, closing woods to the use of fire and general travel. On October 24 the President of the United States proclaimed the existence of a national emergency in the fire-distressed area. Such was the situation under which the Mount Desert Island Fire occurred, was fought and suppressed.

### Origin of the Fire

As nearly as can be determined, the Mount Desert Island Fire originated at 3:20 p.m. on October 17, 1947 in or adjacent to a trash disposal dump known locally as "Dolliver's Dump," which is located on William Dolliver's place near the edge of Fresh Meadow. This location is outside of Acadia National Park, 1 3/4 miles west of the Lake Wood section of the park, and 2 3/4 miles north of the park boundary near the Eagle Lake Road, as shown on the fire map in the appendix.

Local residents pay the owner of the dump for the privilege of disposing of their rubbish there. The combustible material deposited in the dump is customarily destroyed by burning. However, even before the State Governor's declaration concerning the emergency, Fire Chief Sleeper of Bar Harbor Fire Department had prohibited outside burning operations within the township.

Specifically how the fire started has not been conclusively established, but except for the possibility of incendiarism the most plausible explanation is that there was some obscure fire or hot embers quietly smoldering in the dump which eventually kindled an active fire, or that perhaps burning



material was deposited there shortly before the fire broke out. The owner of the dump has assured Chief Sleeper that there had been no burning in the dump which would account for this fire. Chief Sleeper has stated that he had patrolled the vicinity by automobile one hour prior to the start of the fire and that he saw no evidence of fire in the dump then.

In a letter to the Attorney General dated December 29, 1947 the Secretary of the Interior directed attention to the great costs and damages to the Federal Government resulting from the fire and the manifest interest of the United States in recovering damages if personal responsibility for the cause of the fire can be definitely determined.

#### Suppression of the Fire

##### First Stage of the Fire - October 17 to 20

The first report of the fire was received by Chief Sleeper in Bar Harbor by telephone at 4:05 p.m. on Friday, October 17. A second report followed at 4:09 p.m. The Town of Bar Harbor Fire Department immediately sent a fire truck, portable pumper and four men. That force reached the fire at 4:13 p.m. and started direct attack with water equipment. Shortly afterward they were reinforced by the arrival of 16 additional men. The fire was travelling on the surface of the ground in the grassy flatlands of Fresh Meadow and into woods on the bordering slopes.

Chief Sleeper called upon Acadia National Park for assistance at 4:45 p.m. the same day, requesting a portable pumper, hose, and men. The park fire truck, loaded with 2½" and 1½" hose and two portable pumps, a dump truck and five men were dispatched from park headquarters at 5:45 p.m. The park crew and equipment remained at the scene of the fire all that

night and the next morning, pumping 14 hours, until the fire was considered thoroughly under control. By noon on October 18 hose had been extended and water applied entirely around the fire area, then approximately 100 acres. At about that time Chief Sleeper released all park personnel except two pump operators. The others returned to park headquarters subject to recall. The park pump operators, with relief, and the two pumpers served on the fire until the morning of October 20 when they were released by Chief Sleeper. The fire was under mop-up and patrol action from early morning on October 18 through October 20 under the direction of Chief Sleeper. It had not been declared out nor had an order to abandon it completely been issued.

#### Second Stage of the Fire - October 21 and 22

During the early morning hours of October 21 a strong northwest wind, it is believed, fanned into flame residual smoldering embers within the burn and threw fire across the established lines, causing it to break out with renewed force. The fire then advanced rapidly in a general southeasterly direction, crossing Crooked Road at approximately 7:45 a.m. Chief Sleeper sounded a general alarm at 8:00 a.m., requesting assistance from the park and neighboring fire companies on the island and mainland. He also telephoned Dow Field, Army Air Force base at Bangor, Maine, about 50 miles away, requesting immediate assistance through such men and equipment as could be supplied. Park forces were dispatched immediately, including trucks, pumpers and hose. They joined with Bar Harbor, other local fire companies and local residents in protecting buildings and in attempts to check the advance of the fire along Emery District Road. Suppression action was directed by the Bar Harbor Fire Chief.

The fire crossed Emery District Road at approximately 10:00 a.m., then struck toward Norway Drive and Old Mill Brook, a section covered with heavy coniferous logging slash.

Approximately 250 AAF officers and men arrived from Dow Field shortly after 10:00 a.m. the same day and were dispatched to various parts of the fire. They established field camp near the Eagle Lake CCC Camp site.

Several stands were attempted by the combined forces during this run of the fire; along Crooked Road, Emery District Road, Norway Drive and Old Mill Brook, also along Breakneck Road on the southeast side of the fire and Eagle Lake Road on the south. Crown fires and spot fires started up. Strong winds repeatedly swept or jumped the fire over and beyond the untenable lines. This resulted in disorganization of forces, requiring redeployment of men and equipment again and again along new lines, with consequent loss of time and of some equipment. The fire developed two main heads, one driving through the valley of Old Mill Brook and along the west slope of Youngs Mtn., the other toward Sunken Heath west of Norway Drive. At this point forces were being reformed accordingly on two main sectors; Bar Harbor, cooperating fire companies and park forces taking the Youngs Mtn. head; and Somesville, Town Hill and Northeast Harbor forces the Sunken Heath head. The Youngs Mtn. head burst over McFarland Mtn. at 4:00 p.m. on October 21 and then across Eagle Lake Road, entering the park shortly afterward about 3/4 miles west of Eagle Lake. The Sunken Heath head flashed southward toward Eagle Lake Road.

Park, town fire company and resident forces continued their repeatedly frustrated efforts to impede the progress of the fire throughout the afternoon of October 21. They attempted to hold as much of the Eagle Lake Road as possible, to establish a line along Breakneck Road, and to prevent further advance to the southeast toward Bar Harbor and Cadillac Mtn. Effort

was also directed toward the saving of farm buildings and residences located on the south end of McFarland Mtn.

Park Superintendent Hadley telephoned the Regional Director's home at about 5:00 p.m. on October 21 and in Mr. Allen's absence left with Mrs. Allen a message explaining the situation. This she promptly relayed to Associate Regional Director Cox at his home. In a telephone conversation with Forester Savage later that evening Hadley also informed him of the circumstances. He stated that sufficient equipment and manpower were available for the existing situation, but that someone from the regional office was needed to share responsibility and to assist generally in directing suppression action. Arrangements were made for Region One staff Foresters Savage and Moore to leave Richmond for Bangor, Maine by air early the following morning. On the same evening Forester Savage telephoned Regional Forester Arnold, who was at Mammoth Cave National Park on a field trip, and advised him of the situation.

Early that evening the wind shifted to the west driving the fire hard into the lines in the Breakneck Road section. The fire then crossed these lines and swept over the southern end of Brewer Mtn. During the night Bar Harbor Fire Department forces were shifted to a new line along New Eagle Lake Road. Meanwhile the head of the fire which had crossed Eagle Lake Road near McFarland Mtn. had subsided and forces there concentrated their efforts on holding the line from further advance south and southwest within the park along Eagle Lake and toward Aunt Betty Pond. The fire had covered approximately 1,000 acres that day. (See stages of fire on fire map in appendix.)

On the morning of October 22 Chief Sleeper and Park Fire Chief Campbell designated Park Ranger Paul Favour to serve as Sector Boss on the Aunt Betty Pond sector. Favour, with 40 AAF officers and enlisted men, 30 park and local men, the park and Bangor fire trucks, attempted to construct

a line in advance of the fire whose front was then roughly parallel to and  $\frac{1}{2}$  mile south of Eagle Lake Road. Fire line was constructed with hand tools and hose was laid from Aunt Betty Pond along the fire edge. Considerable progress was made until about noon when a crown fire originated within the burn. It advanced rapidly with a strong northwest wind behind it and surged across the newly constructed line. Equipment and men were then withdrawn and ordered to an assembly point at the north end of Bubble Pond. Favour returned to park headquarters to report the situation to Hadley and confer with Savage and Moore who he understood were expected to arrive about noon that day.

Savage and Moore reached Bar Harbor at 1:45 p.m. on October 22. That afternoon a conference was held at Bar Harbor Fire Department headquarters, with Superintendent Hadley, Fire Chief Sleeper, Foresters Savage and Moore, Assistant Superintendent Howack and Park Fire Chief Campbell in attendance. It was decided that (1) park forces, augmented by such help as could be secured, would direct their efforts on the Aunt Betty Pond - Southwest Valley sector; and (2) Bar Harbor Fire Department and cooperating forces would concentrate on the portions of the fire outside the park, particularly to the north and east of Eagle Lake.

Shortly after the brief meeting closed Favour joined Savage, Moore and Howack and together they proceeded to the head of the fire west of Eagle Lake. En route they stopped at the assembly point north of Bubble Pond and ordered the forces there to proceed with them.

That head of the fire, then the southernmost, was situated just west of Eagle Lake, advancing with a strong northwest wind toward Corners Bubble and Southwest Pass. After a hurried scouting of the fire, action was started with about 30 fire fighters, the Bucksport fire truck, pumps and hand equipment. Forces were increased to approximately 100 men by midnight, mostly AAF. They were deployed along a line

extending from Eagle Lake to and northward along the carriage road on the east side of Gilmore Meadow to the carriage road junction north of Gilmore Meadow. By morning on October 23 this line was burned out and successfully held. Water was pumped from Eagle Lake and Aunt Betty Pond. During the early morning hours of October 23 the line was extended westward around and south of Aunt Betty Pond and thence northwestward toward a junction with Eagle Lake Road. Considerable mop-up was being accomplished along the carriage road from Aunt Betty Pond to Eagle Lake.

Savage called Acting Regional Director Cox at 10:20 p.m. on October 22 and advised him of the situation. He requested that four additional supervisors and Assistant Chief Forester Cook be flown in as soon as possible to assist in control and mop-up of the fire. At 10:35 p.m. Savage reported conditions to Arnold at Mammoth Cave.

On the Bar Harbor Fire Department sector north and east of Eagle Lake, during the night of October 22 the wind, having shifted to the south with increased velocity, drove the fire northward across fire lines in the Brewer Mtn. section and toward Halls Cove. This strong advance continued until daybreak on October 23. The efforts of forces on that sector were then concentrated on checking the advance and saving of buildings and improvements in the vicinity of Halls Cove.

In the meantime Savage had conferred with the officer in charge of the AAF contingent and explained to him the need for a continuing supply of men. On the morning of October 23 a sector base headquarters and equipment base was established at the carriage road intersection north of Gilmore Meadow. Men and equipment were assembled at and dispatched from that point. That afternoon the telephone company made an emergency field connection from there to the nearest commercial line, thereby establishing communication service.

By noon on October 23 the Aunt Betty Pond sector was approaching control. Approximately 300 acres had been burned within the park up to that time. Considerable difficulty was being experienced in holding the lines on the sector under the direction of Chief Sleeper. At 10:36 a.m. Campbell called for more help on the front near Bulls Cove. Shortly before noon gusty southwest winds drove the fire across lines in the Lake Hood section. Advancing vigorously through that section the fire then posed a perilous threat to the village of Bulls Cove. Bar Harbor Fire Department and cooperating forces were shifted to meet this threat and Chief Sleeper requested assistance from forces on the Aunt Betty Pond sector.

#### The Blow-up of October 23

Around 3:00 p.m. on October 23 the wind, shifting from southwest to northwest, suddenly increased to gale proportions with velocities reported as high as 45 miles per hour. Flash fires springing up near held lines and crown fires generating within the burn abruptly portended certain disaster and collapse of the entire suppression effort. Crews were directed to intensify their efforts and concentrate on holding the lines. At 4:00 p.m. Savage called Hadley, advising him of the critical condition and stating that he should be prepared for news at any time of serious breakovers and loss of control of the fire. In the conversation Hadley stated that in Bar Harbor it looked as though the entire town was doomed. The danger of breakovers and crown fires mounted and they became an increasing threat to the line-holding forces. Favour, directing action on the extreme northwest flank near Eagle Lake Road, reported at 4:08 p.m. that breakover fires to the north and west were outflanking the line in that location, crossing Eagle Lake Road westward from him and endangering the men. He was instructed to evacuate his men to a point of safety. Total entrapment of

all forces along the Aunt Betty Pond sector was clearly inevitable, and when it became imminent the abandonment of lines and complete evacuation of men was the only recourse. Equipment was cached quickly in as safe a location as possible. Some of it, such as hose, had to be left on the line. The retreat of forces from this sector was accomplished in as quick and orderly a manner as possible. There were no casualties.

It would appear to be a foregone conclusion that all of the hard won achievement in establishing and holding the Aunt Betty Pond - Eagle Lake line up to this point was totally lost and of no avail in view of what followed. However, there is substantial reason to believe that this action in its final effect so delayed the southward advance of the fire that it was the major factor in preventing its ultimate spread to and probably over Penstic Mtn. before the fierce onslaught subsided.

Driven wild by powerful winds the fire built up tremendous heat and violent rate of spread. With titanic force and fury it roared southward across the island on two main fronts. The Aunt Betty Pond front swept madly toward Sargent Mtn. and The Bubbles. The Halls Cove front raged like the holocaust it was to and through Bar Harbor's western suburbs, over Cadillac, Flying Squadron and Champlain Mtns. and on toward Otter Point.

The catastrophic spread and intensity of the conflagration is indicated by the fire's sudden enormous expansion from approximately 1,800 acres at 4:00 p.m. to over 16,000 acres by midnight on October 23.

The wind began to abate in the early morning hours of October 24, after an evening and night of appalling destruction, and dawn came over the island through a heavy shroud of smoke.

Assistant Chief Forester Cook and four men from Shenandoah National Park (Park Rangers Berg and P. H. Johnson, and Fire Control Aids J. R. Johnson and Benton) had arrived at Bar Harbor Airport from Washington, D. C. by Navy plane at 2:30 p.m., October 23. A State Police officer started to drive them to park headquarters but due to fire-blocked roads and evacuation confusion in Bar



Harbor and vicinity they did not reach the park office until 7:30 p.m.

The Suppression Period Following the Blow-up -- October 24 to 27

By daybreak on Friday, October 24, the gale had subsided to the extent that the vicious run of the fire was spent. Forest fire fighting forces were disorganized and equipment was scattered; some of it evidently had been removed by unauthorized persons; some had burned up; and some was lost. Hadley, Kowack, Favour, Cook, Savage and Moore conferred at park headquarters to reorganize forces and plan resumption of attack on the fire.

By general agreement among those attending, Savage was designated as Fire Boss to direct all suppression action for the park. He then designated Cook as Relief Fire Boss, Hadley as an assistant to handle all business with local agencies, and Kowack to act as a relief for Hadley. Favour was assigned to Information Service, with duties to include mapping and scouting of the fire. Douglas was assigned to collect and inventory all available equipment that could be used in fire suppression. Moore was assigned as NPS Liaison Officer on relations with the AAF, later taking on general liaison with additional agencies concerning manpower and its welfare. These other agencies included the Navy, Coast Guard, Red Cross, University of Maine, Bangor Seminary, and eventually several of the local villages other than Bar Harbor. Bowden was assigned to Communications, and Mayo to clerical work.

Following this action a conference was arranged with Chief Sleeper in Bar Harbor Fire Department headquarters. In addition to Chief Sleeper those present included one or two members of his staff, Savage, Cook, Hadley, Kowack, and Campbell who had been working closely with Bar Harbor Fire Department. Chief Sleeper was informed that Savage was NPS Fire Boss and that the park office would become forest fire headquarters. It was agreed that the Town of Bar Harbor would handle all action on the fire north of Eagle Lake Road and east of State Highway

193; that the NPS organization would direct all forest fire suppression action south of Eagle Lake Road; and that as supervision became available the NPS organization would assist the town forces. Campbell was assigned to liaison activities with the Town of Bar Harbor.

Telephone connections between Bar Harbor and the outside had been disrupted by the fire. By about 9:30 a.m. October 24, lines were repaired and service was restored for emergency business. A call was made to the Regional Director at 9:45 a.m. First reports from the scouts had been plotted and the fire edge was roughly outlined over the telephone. The need for the assistance of Regional Forester Arnold, Forester Walker and 20 additional overhead personnel was stated. A request was made to and approved by the Regional Director for \$5,000 to be used for local purchases of equipment essential to the fire suppression job. Several items of equipment were requested, including 10 portable power pumps, 20 miles of 1 1/2" hose, 100 backpack pumps, and 6 power saws. The Regional Director advised that the Director's Office would be kept informed about the fire by the Region One Office.

For organization and action on the line the fire was divided into three sectors, designated A, B and C, subject to revision upon arrival of more overhead. Sector A extended from the west shore of Eagle Lake to Jordan Pond, over Sargent Mtn. to Eagle Lake Road. (This later became Division II). Sector B extended from Otter Point over Cadillac Mtn. to the east shore of Eagle Lake. (This later became Division I). Sector C extended from Eagle Lake Road north and east through Fresh Pond and The Heath to Frenchman Bay. (This later became Division III).

At 1:25 p.m. on the 24th Berg was dispatched to Sector A as Sector Boss with one foreman and 120 AAF men. He began suppression action by direct attack between Eagle Lake and Jordan Pond, working toward Sargent Mtn. At 1:35 p.m. Benton was dispatched to Sector B as Sector Boss with one foreman and 125 AAF

men. He began suppression action by direct attack, working from Otter Cove toward Eagles Crag. Action by these forces on Sectors A and B continued with reasonably good progress through the night of October 24. Relief forces carried on during the day of the 25th.

Favour and Moore arranged with Dow Field for a reconnaissance flight over the fire, which was made by Savage, Cook and Favour on the afternoon of the 24th. Cruising over the area at varying elevations for one hour and forty minutes, they sketched the fire on maps and made useful observations concerning it.

At about 4:00 o'clock that afternoon three C-47's landed at Bar Harbor Airport with the first shipments of requested items of fire equipment, consisting of hose and Army decontamination tanks as a substitute for backpack pumps. This equipment was delivered to park headquarters shortly after 5:30 that evening.

About noon on the 25th 17 NPS and 9 U. S. Forest Service (USFS hereafter) supervisory personnel arrived, having been flown to Bar Harbor Airport from Washington, D. C. in two AAF planes. Two additional NPS personnel also arrived that day from distant points by other means. (See list in appendix). Supervision on the line was reinforced for the remainder of that day and night. The organization was expanded into three Divisions which embraced four Sectors, as indicated on the fire map and organization chart in the appendix. Fire fighters on the two NPS Divisions (Nos. I and II) consisted largely of AAF, University of Maine and Bangor Seminary men. Two experienced and capable USFS officers were assigned to Division III (the part of the fire being handled by the Town of Bar Harbor) to serve as technical advisors and to help direct action on that front.

With this expanded organization, suppression action by direct attack and mop-up tactics was continuous day and night and unrelaxed until the spread of the fire was checked and the fire edge mopped up. Extensive use was made of power pumps and hose lines. Hand tools also were employed in line construction and mop-up. The fire made no further rapid advance after the morning of the 24th and it was declared under control on October 27 at 4:40 p.m. From then

as it was a holding action, with forces concentrating on mop-up operations which were carried progressively inward from the fire line. As the width of the blacked-out strip was increased to distances considered safe the size of the crews was reduced.

Regional Director Allen and Chief Forester Coffman arrived in the park on October 27 and remained until November 2. They made observations on the fire and suppression activities and assisted in solving various problems relating to the fire. The Chief Forester obtained basic data for the preparation of a preliminary report on the fire for the Director. The Regional Director prepared preliminary estimates of fire damage in the park and of fire suppression and rehabilitation costs. He also secured a photographic record of fire damage.

When the fire reached the mop-up stage three important problems arose almost simultaneously and called for prompt solution. First was the question of the extent to which the fire line should be trenched in view of the issued instructions for complete trenching and the subsequent doubts as to the need for this and realization of the physical difficulties which it would entail. This problem was solved as explained under "Mop-up Operations." Second, withdrawal of University of Maine and Ranger Seminary students and pressure from Dow Field to reduce its forces on the fire threatened to reduce manpower dangerously below the needs. This problem was solved by the hiring of fire fighters from the neighboring towns. Third, in transporting its shifts of men to and from the fire morning and night Dow Field's transportation problem had become acute. This difficulty was overcome by changing to a 24-hour interval for each shift, sleeping accommodations having been arranged for the men in Bar Harbor so that they could spend one rest period there before being taken back to base.

The first outside supervisory personnel were released from the fire on November 1. The others were released gradually from then on as rapidly as

conditions safely permitted, until by November 8 only Arnold and Savage remained. (List of supervisory personnel in appendix indicates order of release). On Friday, November 7, at 8:00 a.m. park personnel took full charge of the fire and Favour was designated Fire Boss. On November 8 the security of the fire line was well tested by a 25 to 30 mile per hour wind from about 3:30 p.m. until 9:00 p.m. when the first significant rain came. During the night of the 8th and early morning of the 9th 0.61 inches of rain fell. Arnold and Savage left on Sunday evening, November 9. Patrol and mop-up action on the fire was continued by park forces until it was pronounced out by Favour, with the concurrence of Chief Slocum, at 4:00 p.m. on November 14.

#### Suppression Tactics and Use of Water

It is a fortunate circumstance that fresh water in lakes and streams, abundant throughout the interior of the island, and salt water entirely surrounds it. The possibilities with respect to use of water in forest fire suppression have, therefore, been well recognized at Acadia in the past. Fire control techniques in the park have centered around its use. Acadia's pre-fire suppression equipment included four Pacific Marine portable power pumps, one trailer-mounted Chrysler driven 500 gallon per minute pump, and one serviceable fire truck equipped with a 500 gallon per minute Hale pump. Approximately 5,000 feet of  $1\frac{1}{2}$ " hose and several hundred feet of  $2\frac{1}{2}$ " hose were on hand when the fire started.

Several factors, including the compact admixture of organic soil with boulders and tree roots, unusual depth of humus, the very rough rocky talus slopes, and the extreme dryness of all soil and other fuels made it practically impossible to extinguish the fire in many places except by the use of water with its penetrating qualities. After the big run on October 23 and to a large

extent preceding it, water was used as the major weapon in both direct attack and mop-up action. Except for stretches of fire line on West Ridge south of Cadillac Mtn. summit and on the slopes of Sargent Mtn., water was pumped to all sections of the line in Divisions I and II. (See fire map). On sections where water was not pumped backpack pumps, fire rakes, shovels and mattocks were the principal tools used in direct extinguishment, line construction and mop-up. In limited locations where fuel and burning conditions were unfavorable the fire had smoldered out of its own accord.

As many as five gasoline-driven pumps were used in relay. One hose line contained approximately 10 miles of hose. Eight types of power pumps were used, as listed below:

Hale, driven by Chevrolet and Chrysler motors  
 Navy P-500  
 Barton, front-end mounted on Willys Jeep and GMC fire trucks  
 Pacific Marine, Types I, II, N, and Z  
 Edwards.

Three sizes of hose were employed; 2 $\frac{1}{2}$ " c.j.r.l., 1 $\frac{3}{4}$ " c.j.r.l. and linen, and  $\frac{3}{4}$ " rubber garden hose. Despite the huge quantities of hose procured, at no time between October 24 and 28 was there a sufficient reserve on hand in the warehouse with which to meet a possible additional emergency. After that date, with the arrival of further hose shipments and the release of surplus quantities from points on the line, an adequate reserve supply could be maintained.

Whether backfiring was used in efforts to check the fire's spread before the blow-up is not recorded or known. If employed at all, it was confined to isolated cases and on short sections of line. After the blow-up backfires were used to a limited extent in a few places, and these were held successfully. Burning out tactics were, of course, employed where relatively narrow unburned strips intervened between control lines and the burning edge.

In a number of locations, particularly near villages, dwellings or other valuable property, local residents constructed firebreaks during the fire by the use of bulldozers or plogs or by opening swaths through wooded areas so as to provide a barrier across the path of the approaching fire or a line on which to make a defensive stand. A major example of such operations is the bulldozed strip along the Boyd Road which follows Hunters Brook, about a mile west of Otter Creek village. There for a distance of about one mile through forest growth bordering the narrow woods road the trees, roots and organic soil were torn up and shoved aside to a width of 50 or 60 feet. This strip extended northward from a point just north of Otter Creek Road for about half the distance to Bubble Pond.

#### Mop-up Operations

All experienced supervisory personnel on the fire considered the mop-up job on this fire as one of the most difficult tasks, if not the most difficult, that they had ever encountered. Persistently burning or smoldering with deep and tenacious foothold in humus among rocks and roots, it presented unusually stubborn resistance to mop-up. Admittedly this extremely onerous phase of the suppression action challenged the utmost perseverance, skill and knowledge of fire fighting on the part of those engaged. Another remarkable but unusually favorable condition affecting mop-up in Divisions I and II was the almost complete absence of snags requiring felling or other treatment within the mop-up strip. As stated before, this condition is mainly a result of the extensive CCC fire hazard reduction accomplishments in the park.

The original instructions concerning mop-up, as posted on October 26, established as a standard a strip 100 feet wide inside the fire line to be blacked out. On October 29 it appeared advisable to issue more complete instructions as a guide in directing mop-up work. Accordingly such instruc-

tions were prepared, mimeographed and issued on that date to all supervisory personnel. (See copy in appendix). These prescribed the conventional forest fire fighting practice of trenching the entire control line to mineral soil, unless exceptions were approved by the Fire Boss. By October 31, however, it became apparent that this trenching requirement needed reconsideration as there were indications that it was impracticable in application and unnecessary as a universal requirement on the fire at that time. The fire was out cold along long sections of untrenched or watered-out line and the profusion of large boulders deeply embedded in humus and roots in many locations made it physically impossible or extremely difficult to reach mineral soil by the use of hand tools and back power. Also, despite the absence of rain, relative humidity had increased to such an extent that burning conditions had become noticeably less favorable for the spread of fire.

In recognition of these circumstances it was then decided to adopt a holding action, by intensifying mop-up and constant mauling of all lines until assuredly safe, as a more applicable alternative to complete trenching. In following this out efforts were to be concentrated on making maximum use of all pumping equipment and water in blacking out the fire. These tactics and the "holding action until rain" strategy were considered further justified by past local weather records which characterized the fall season on the island as one of abundant precipitation. It was reasoned that the protracted drought, then of nearly 60 days duration, must end sometime. As executed, this plan proved effective and successful, and it unquestionably resulted in considerable savings in manpower and total cost of suppressing the fire.

During the mop-up period there was recurrent danger and apprehension that tangled masses of windthrown trees near some of the lines might become ignited



and, with favorable conditions, cause a return of sufficient intensity to carry the fire across them. Fortunately this did not develop beyond a threat on any park sector.

The extremity of the main fire on Otter Point, the isolated fire near the tip of Otter Point, and spruce pockets at the heads of draws east of Cadillac Mtn. summit presented particularly stubborn and troublesome resistance both to control and mop-up efforts. Also, during the last stages of mop-up action there were two locations where deeply embedded fire held out long, nearly to the day when the fire was finally declared out. One was the south top of The Bubbles and the other was a turn-out on the carriage road where it crosses Deer Brook, near the north end of Jordan Pond. The former consisted of smoldering spots in heavy accumulations of humus and windthrown trees in what had been one of the finest virgin spruce stands in the park. These spots were ultimately extinguished by the use of water carried up in and applied from backpack pumps, supplemented with hand tool work.

The trouble at the turn-out area resulted from smoldering wood debris which evidently had been dumped in mixture with fill material at the time the turn-out was built. The carriage road formed the fire line running north from this point and, unless thoroughly mopped up, the smoldering fire underneath the turn-out posed a threat of carrying the fire across to the unburned west side of the road. Repeated efforts to quench it by superficial treatment had failed. The upper rim of the turn-out fill was then partly excavated and, using a fire truck, water was forced horizontally and downward into the loose rock, soil and debris by direct nozzle pressure. Within a day smoke again issued from vents in the fill. Finally two converging trenches were dug two feet deep across the turn-out, as chords of its semicircular outline. Over a period of three days four or five 150-gallon tank loads of water, including five gallons of

"Drench" (water) in mixture, were shot into the trenches by inserting the nozzle into openings between rocks on the bottom. By these sundry tactics the obstinate trouble at "Tumbledown" was finally subdued.

During the latter days of mop-up operations fire trucks were used to effective advantage for extinguishing smoldering spots in many locations accessible by road in the interior of the burned area.

### Communications

Excellent emergency telephone communication facilities were installed and maintained on the fire by the AAF Communications Division. The extent of this system is indicated on the fire map. It included two circuits, one of nine 'phones and one of four, all connected with Fire Boss headquarters. Except for one line, part of which was laid in water, telephone service thus provided was consistently dependable. In addition to telephone, limited use was also made of walkie-talkie radios. These were helpful in relaying messages between pump operators and hose crews and between line forces and telephone stations. Communications were exceptionally effective on this fire and their contribution to the suppression job was an indispensable and invaluable one.

Long-distance telephone service between Bar Harbor and outside points was restored in amazingly short time following the blow-up, especially considering the extensive fire damage to the lines. This service was efficient and clear both before and after the blow-up. Installation of a temporary field connection to outside commercial lines at the Aunt Betty Pond sector boss headquarters has already been mentioned.

Officers of the Maine State Police force, equipped with radio patrol cars, cooperated helpfully at times by transmitting and relaying messages to and from various points within the fire area and Fire Boss headquarters.

### Fire-Weather Reports

Another of the many excellent cooperative services rendered by Dow Field was the provision of current weather reports and forecasts. These were received by radio from Dow Field at intervals varying from four hours to twice daily. The service was started on October 25, when the AAF unit was moved to park headquarters, and was continuous until the radio truck returned to Dow Field, on November 1.

Weather reports and forecasts were also obtained through the Coast Guard and over commercial radio broadcasts.

### Fire Detection

To provide for prompt discovery of additional fires or breakovers which might occur during action on the main fire, lookouts were stationed on Largent Mtn. and Beech Mtn. on October 30. Upon the occurrence on November 8 of a small fire on park land near State Highway 3 between Otter Creek and Seal Harbor villages, and its origin being suspected as incendiary, a third lookout was posted at that time, on Day Mtn. No additional fires or breakovers were detected by these observers but they were helpful in reporting conditions with respect to residual hot spots within the burned area. Lookout service at all three points was discontinued at the close of November 11.

### Incendiarism

As common to most sensational happenings, the usual variety and number of rumors were abroad during the fire. They flashed among the forces engaged with speed as incredible as some of the rumors themselves. Others appeared reasonably well founded by circumstances but were not confirmed. One rumor had it that 26 deer had drowned in Eagle Lake in their frantic dash to escape the flames. Another was to the effect that dry ice had actually been seen

above the island by planes in an effort to bring rain on the fire. There was considerable talk and publicity concerning the feasibility and possible effectiveness of such measures but the actual seeding of dry ice over Mount Desert Island during the fire seems to have no basis in fact. Still another rumor that went around was that the three or four town men left to guard the fire at Fresh Meadow on the night it broke away had gone off and left the fire unattended before the break-over occurred or threatened. Probably the most persistent rumor was that of incendiaries, and circumstantial evidence seems to substantiate beyond reasonable doubt that incendiarism did occur in four specific instances.

Near the first parking area south of the extremity of the main fire on Otter Point, along East Ocean Drive, two smoldering spot fires were found on the night of October 27. One was located a few feet from the north side of the parking area, with a diameter of about 10 feet when suppressed; the other was located a few feet off the south side of the parking area, with a diameter of about 15 feet when suppressed. Farther down East Ocean Drive, just north of the isolated fire shown on the fire map is another parking area. The second morning after the above spots were discovered another small smoldering fire, about three feet in diameter, was found a few feet from the south side of that parking area.

All three fires were burning in the same type of fuel -- spruce humus, with equivalent dryness and exposure. The consistent similarity and mechanical regularity of pattern exhibited by these three spots in relation to the respective parking areas logically opposes a theory that they were haphazard spot fires -- chance sets by wind-blown embers from the main fire. That theory seems the more untenable when it is considered that the first two spots were not discovered until four days after the blow-up; that no wind capable of setting spot fires at these distances from the nearest main fire had occurred since the

blow-up; and that the last of the three spots to be detected was found two days later than the first two, yet it was considerably smaller in size. The seven-acre isolated fire near the tip of Otter Point could reasonably have been set as a spot fire from the main fire during the blow-up and it has been accepted as such. However, the most credible cause of the three small fires is incendiarianism, the motive for which is purely conjectural. No substantiating tangible evidence was found.

Upon discovery of the third fire, one of the WPA overhead experienced in apprehending incendiarists and in law enforcement action with respect to them was secretly assigned to investigate the circumstances and maintain vigilance at Otter Point. With some assistance from Maine State Police officers he remained on this assignment for two nights, but nothing conclusive of incendiary action happened or was observed during that time. No other fires are known to have occurred on Otter Point from that time through the remaining period of the fire.

The fourth instance referred to is in regard to a small fire on park land, about three-fourths of a mile southwest of Otter Creek village and about a mile away from the nearest part of the main fire, on Eagles Crag. This fire occurred on November 6 when mop-up action on the main fire was nearing completion. It was located in dense woods about 30 feet south of State Highway 3 and was detected and suppressed before exceeding 0.02 acres. No trail passed through the area, and the distance from the road to the fire was too far for it to have originated from a "smoke" carelessly discarded by a traveler on the highway. There was no known human activity in that area at the time which would account for the origin of such a fire. Accordingly, incendiarianism is also considered the most probable cause of this fire and it is so recorded in the official report of the fire. No material clues were found, and here also the motive is unknown.

### Subsistence and Lodging of Fire Fighters

The military maxim "An army travels on its stomach" applies with equal import to forces engaged in forest fire fighting. Most of the overhead on the Mount Desert Island Fire were of the opinion that fire fighters have rarely been fed better than they were on that fire. Red Cross canteens were established and operated in all villages on the island which were within or near the fire area. Before the blow-up one of these was located at the field base in the Aunt Betty Pond sector. On October 25 the AAF set up a complete field kitchen at park headquarters and it was operated continuously until November 13. Hot meals were served at this mess to all fire fighters and overhead engaged on the park sectors of the fire. An abundance of well cooked food was readily available there and in the Red Cross canteens when the men went out to the line and when they returned from it. For those in the field at noon and midnight, hot or cold lunches were brought to designated feeding points on or near the fire line by the canteens or the mess. These excellent provisions for feeding the men contributed inestimably to the effectiveness of the attack on the fire and to its ultimate success. Hot food and coffee were particularly important on this fire due to the cold nights and cool days, often with sharp wind on the mountains, combined with wet clothes from the use of water and water equipment.

Lodging accommodations for all nonresident NPS and USFS overhead personnel were provided in a tourist home and annex in Bar Harbor. Local civilian fire fighters slept at home. Lodging for the University of Maine and Sanger Seminary boys was provided in town halls and other civic buildings. The Bow Field boys were first transported to and from their base after each shift on the fire. Later on each trip away from Bow Field was for one work shift and one rest period, for which bunks were provided in Bar Harbor civic buildings.

Twelve-hour work shifts were the general rule on the fire after the blow-up. Some of the overhead personnel frequently remained on duty for periods far in excess of that time.

#### Safety of Forces Engaged

The safety record achieved in the suppression of this fire is outstanding and worthy of special note. Only two minor injuries were reported as occurring on the sectors for which the EFS was responsible. Injury to one of the supervisory personnel from another park was caused by wearing stiff new shoes. It resulted in blistered feet which became slightly infected, but no time was lost from fire fighting duty. The other injury was sustained by one of the hired local fire fighters who strained his back while lifting and carrying fire hose. He stopped work at 8:00 p.m. on the date of the injury, well along in the mop-up period, and did not resume work.

This exceptional safety record must be considered in recognition of such factors as the almost explosive rate of spread and terrific intensity of the fire during its vicious runs, physical difficulties encountered in suppression action, extensive use of water under relatively cold weather conditions, the large size of the fire, long duration of the action and high percentage of inexperienced fire fighters engaged. Undoubtedly the dangers due to exposure resulting from handling water and water equipment in cold temperatures were offset somewhat by the fact that comparatively less use was made of bladed hand tools such as axes, fire rakes, mattocks, etc. Throughout most of the suppression period the AAF had an ambulance and medical attendants standing by at Fire Base headquarters.

#### Supporting Action in the Region One and Director's Offices

Throughout the suppression period and particularly during the emergency stages the Region One and Director's Offices were busily and effectively engaged

in action to support the forces on the fire. The Regional Office had been informed by Foster at 1:00 a.m. on the 24th that the fire was out of control, that it was being driven by a 40 mile per hour wind, that parts of Bar Harbor were burned or still burning, and that the whole situation was out of hand. Shortly after 8:00 a.m. the Regional Office began to alert several parks in Region One to be prepared to dispatch aid to Acadia. Unsuccessful attempts were made to communicate with Acadia. The regional office was organized so as to act with dispatch upon requests which were expected to be forthcoming from the fire.

Immediately after receipt of the 9:45 a.m. telephone call from the park referred to on page 22, all efforts were directed toward obtaining the overhead and equipment requested. At approximately 10:00 a.m., the Regional Director reported to Director Drury, with Chief Forester Coffman and Chief of Lands Birth on the line. The Director's Office agreed to arrange for transportation of overhead and equipment to the fire by Army Air Force or Navy planes, and to help in locating equipment.

By 6:00 a.m. on the 25th overhead from points in the East and South had been assembled in Washington, D. C. or at airports nearby. (See list in appendix). The first AAF plane left Andrews Field at 6:24 a.m. with eleven NPS personnel and a quantity of fire equipment. The second AAF plane left Bolling Field at 7:02 a.m. with nine USFS and six NPS overhead, and two Washington Times-Herald reporters.

As reports and requests were received in Richmond and Washington they were either acted upon directly or relayed for action by appropriate cooperating agencies. The following is an example of one of the many requests from the fire and the expeditious manner in which it was handled.



At 8:30 a.m. on the 28th the regional office was requested to furnish three pick-up trucks and one dump truck. At 9:30 a.m. the message was relayed to Wirth in Washington. By 11:00 a.m. Wirth had located three pick-ups and one stake body truck on an assembly line at Somerville, Massachusetts which could be ready for delivery on the 30th. By 2:00 p.m. on the same day Cox had four used vehicles of the required types standing by for immediate departure from EMS areas in Hyde Park, New York and Salem, Massachusetts. In a telephone conversation at that time between the regional office and the park it was decided to await the new trucks because of the possibility of breakdowns and repair problems with the used ones, and since the AAF had agreed to fill in the transportation deficiency until the new trucks arrived. By 4:45 p.m. on the 28th the new trucks had been purchased and arrangements made with Superintendent Small of Salem Maritime National Historic Site for employees to take the trucks from the assembly line on the 30th and drive them to Acadia. The three pickups reached Bar Harbor at 8:30 p.m. October 30 and the truck on the following morning.

All other equipment procurement, except such small purchases as it was possible to make locally, was handled by the Region One and Director's Offices, which also arranged for air delivery. By such efficient fulfillment of the needs for overhead, equipment and transportation a vitally important part of the suppression job was accomplished many miles from the fire and with amazing promptness.

Three additional supervisory personnel in Great Smoky Mountains National Park, and six each in Yellowstone and Glacier National Parks were alerted and stood by ready to leave their headquarters on call, with air transportation arranged. None of these were subsequently called to the fire.

### Cooperative Assistance

During the height of the emergency, on October 23 and 24, most of the physically fit local men were seeing to the welfare of their own properties and families, assisting the fire companies in suppression work, or helping in the evacuation and care of the homeless. As the emergency situation gradually eased, more and more of these men became available to assist in forest fire suppression activities. During the period of heaviest action on the fire, however, in numbers most of the suppression forces were provided from outside sources, including the AAF, University of Maine and Bangor Seminary.

The first outside forces to appear on the fire in organized groups were AAF officers and men from Dow Field, on the morning of October 21. These men had been dispatched in response to Chief Sleeper's telephonic request earlier the same morning. They encamped near the Eagle Lake CCC Camp site until the blow-up. Liaison was established and maintained through Lt. Short on October 23. Liaison was reestablished early on the morning of October 24 while the AAF detachment was moving field camp to Otter Creek. AAF Lts. Payne and Abbott, and later Capt. McQueen, served successively at Fire Boss headquarters on October 24 and 25 on liaison work in connection with the dispatching of men, equipment and supplies to fire sectors.

AAF General Webster and staff visited Fire Boss headquarters at midnight October 24. The fire situation was reviewed in some detail, particularly the fire-fighting organization and the important part AAF officers and men were playing in control of the fire. As a result of this meeting and a trip by HPS Liaison Officer Moore to Dow Field early the next morning the following arrangements were made with Col. Stetson, Post Commander:

1. Dow Field would maintain an uninterrupted flow of men during the fire emergency, to consist of not less than 230 for day and 100 for night detail.

2. A higher ranking officer would be assigned as AAF Liaison Officer and stationed at Fire Boss headquarters to expedite all cooperative assistance on the fire. Lt. Cols. Smith and Levan were assigned to alternate for each other on this detail. (They continued in this capacity, one or the other being on duty day and night until mop-up action was nearly complete.)
3. The AAF field camp would be moved from Otter Creek to the ball park opposite Fire Boss headquarters. This included a motor pool of equipment available for emergency use, a supply of small tools and equipment, and mess facilities.
4. The AAF would transport from Dow Field to Bar Harbor men and equipment secured from outside sources.
5. A communications squad would be assigned to the fire, with tools and equipment for installation and servicing of emergency field telephones as needed.
6. Fire Boss headquarters would be furnished current weather data during the fire emergency.
7. The AAF would make two reconnaissance flights over the fire area each day carrying an NPS observer to map fire changes and hot spots for information of the Fire Boss.

With the approach of control on October 27 NPS Liaison Officer Moore made another trip to Dow Field to advise the Post Commander of the continuing hazard from hot spots near the line and the undiminished need for men and equipment. He was assured of continued use of AAF personnel but was requested to reduce labor forces as rapidly as possible so that normal operations at Dow Field could be resumed without undue delay.

General Van Fleet and staff, accompanied by Major Pooler of the Maine National Guard, visited Fire Boss headquarters on October 27. They were briefed on fire conditions and status of control action as well as the indispensable part AAF forces were playing on the fire.

During the critical periods from October 22 to October 27 the AAF men and equipment furnished the bulk of assistance on the forest fire. In large measure the control of the fire by October 27 is due to the great help rendered by Dow Field. The AAF contribution of an estimated 25,058 man hours on fire suppression represents the largest labor contribution by any one agency or group on the entire fire.

University of Maine forestry students appeared on the fire in small unorganized groups on October 22. Without prior arrangement with Fire Boss headquarters these boys presented themselves singly or in groups at various points on the line and were utilized through October 26. On October 27 the first organized group of 40 Maine forestry students arrived on the fire under the supervision of Mr. A. Randall, Instructor. They were organized in 10-man crews with a student in charge of each. The maximum number of these students on the line at any one time was 150. They were willing workers and rendered valuable service on the fire.

This group came equipped with a mobile ROTC radio unit including walkie-talkies and limited portable telephone facilities. Radio contact was made with the University of Maine on October 28 and arrangements were made to secure a continuing supply of student fire fighters, 100 for day shift and 50 for night duty, until the end of that week or termination of the emergency. The arrangement called for feeding the students at the AAF mess or Red Cross canteens and lodging in Bar Harbor. Mr. Giddings, Forestry Instructor, was assigned as University Liaison Officer attached to Fire Boss headquarters. The last of these students were released early on the morning of November 1 upon request of the University.

Under arrangements made with Bangor Theological Seminary 40 student fire fighters were made available on October 28. This organized group worked faithfully and hard under the able leadership of Mr. Craig Richards, Instructor, until they were released on October 30 upon the urgent request of the Seminary.

By loaning pumps and hose and providing the services of experienced pump operators the Coast Guard and the Navy made greatly needed contributions to the suppression of the fire.

As the fire developed and threatened or appeared to threaten the villages it seemed as though the concern of each village organization was centered too narrowly on that portion of the fire front which might endanger its village

and not enough on the fire as a whole. Some went so far as to collect equipment not belonging to them, putting it to use or saving it in case of another blow-up. During the first days after the gale and again later when equipment was being withdrawn from the fire this problem was very trying, time consuming, and undoubtedly it was a major cause of the park's heavy equipment shortages incurred during the fire.

The NPS objective in directing action for which it was responsible on the fire was to coordinate the efforts of all participating agencies and local groups in a unified and concerted attack. The Seal Harbor Fire Department worked closely with Fire Boss headquarters in this endeavor throughout the action from beginning to end. Gradually the other local fire organizations recognized the soundness of such an over-all plan of action and lined up with it. This was first evidenced on October 25 at 4:30 p.m. when Mr. Albert Dodge, Fire Chief of Seal Harbor, sent a message to Fire Boss headquarters by Mr. Jerry O'Day and requested supervision for fire fighters from Seal Harbor.

More complete recognition and participation was brought about as a result of a meeting with selectmen from the island villages at Fire Boss headquarters on the evening of October 31. This meeting was called by the NPS in an effort to meet a threatened manpower shortage occasioned by urgent appeals from the AAF to reduce forces on the fire, and by withdrawal of the University of Maine and Bangor Seminary assistance. At the suggestion of the NPS, village representatives agreed to furnish, collectively, a total of up to 100 local fire fighters for the remainder of the fire, the numbers and locations to be specified by the Fire Boss as needed. The men were to be hired by the NPS at established standard fire fighters' wage rates. This assistance was subsequently provided as agreed to, thereby settling the manpower problem satisfactorily. The local men were organized in 10-man units with designated leaders and worked under the direction of NPS overhead personnel.

In addition to furnishing food, as previously explained, the Red Cross distributed cigarettes, candy and chewing gum to the fire fighters, and as colder weather developed that agency supplied many essential items of warm clothing. These included jackets, sweaters, gloves, shoes and socks.

As listed in the appendix, the War Assets Administration transferred to WFS without exchange of funds a total of \$30,200 worth of fire equipment items, including 114,000 feet of  $1\frac{1}{2}$ " hose, five Chrysler trailer-mounted pumps, four gasoline powered chain saws, and 100 backpack pumps.

The air arms of the Army and Navy gave highly efficient and helpful services in transporting supervisory personnel, equipment and supplies from distant points to the fire by plane, and in flying personnel on reconnaissance missions over the fire.

The Civil Air Patrol transported a shipment of equipment from Laconia, New Hampshire to Bar Harbor Airport.

Officers of the Maine State Police organization maintained patrol of roads within the fire area and cooperated with the suppression forces in regard to protection of property, provision of limited radio communication service, and in keeping on the lookout for possible incendiaries.

High praise is due the 11 USFS personnel (10 from the Southeast and one from the Northwest) and the 24 WFS personnel from other Service areas for the diligent and effective manner in which they carried out their assignments. These were often difficult and fraught with trying circumstances. Without the skill and experience of these men in forest fire control work the task would have been infinitely more prodigious and the ultimate acreage burned would certainly have been greater.

Suppression Costs

All actual or estimated costs to the National Park Service for suppression of the fire, including direct, indirect and contributed amounts, are itemized in the appendix. The totals of these are presented below:

Direct costs, chargeable to ER & FFF appropriation	\$ 45,502.39*
Indirect costs, chargeable to other EPB appropriations	7,501.24
Contributed costs	<u>155,512.00</u>
Total	\$209,515.63

\*This represents a reduction of \$37,939.61 under the \$84,442 estimate submitted by the Region One Office to the Director's Office on November 20, 1947, and \$3,439.61 below the final estimate of \$49,942 subsequently submitted to and approved by the Bureau of the Budget. The major portion of the first difference mentioned above, or \$39,200 of it, is attributable to the transfer of fire equipment by WAA to the Service without exchange of funds, under P. L. 233. Arrangements for settlement in this manner were not concluded until after the November 20 estimate was submitted.

Equipment Accountability

Mention has already been made of the difficulty encountered with respect to the disappearance of fire equipment. When the developing blow-up on the afternoon of October 23 drove from the woods the forces engaged on the Aunt Betty Pond sector, as much of their equipment as could be hurriedly removed was cached at the carriage road intersection north of Gilmore Meadow. On returning to that point the following morning to pick up equipment needed to resume the attack it was found that all items had been removed, including one Pacific Marine pumper. There was no evidence that the fire had destroyed them. The only items from that cache which are known to have been recovered before the fire was out were the pumper and three empty tool boxes. The pumper was found at Northeast Harbor fire house, in unserviceable condition. The three boxes were located in Otter Creek village.

A total of 124,000 feet of  $1\frac{1}{2}$ " hose was ordered by the Service for air shipment to the fire, but one shipment of 57,000 feet is still unaccounted for. Indications are that this shipment left Newark Airport for Dow Field. Although its actual arrival at that destination has not been confirmed as yet, that is considered quite certain. Similarly, the whereabouts of an entire order of 500 Pulaski tools, air-shipped by the USFS from Spokane, Wash., were unknown until February 10, 1948 when they were found in storage at Dow Field.

The search continues for quantities of hand tools, about 60,000 feet of  $1\frac{1}{2}$ " hose, two Pacific Marine pumpers, and nearly 100 backpack pumps, all NPS property which remains to be accounted for.



### Fire Damage and Rehabilitation

The extent of fire damage within the park is explained in the copy of the itemized estimate of costs of suppression, replacement or repair of physical improvements, forest cleanup, and reforestation which is included in the appendix. In all, 15\* park buildings and the Bear Brook Campground Amphitheater were razed to the ground. These ranged in estimated replacement value from \$350 for each of two latrines in the Lake Wood Beach development to \$41,500 for the Hermann House. The final estimate, which is now pending approval in Congress under an Emergency Reconstruction and Fighting Forest Fires deficiency appropriation measure, includes a total amount of \$91,400 to provide for reconstruction of all structures listed except the Hermann House. This figure includes the cost of cleanup of the sites.

Damage to park roads and trails as a result of the fire was extensive. The amount of \$22,000 is requested in the deficiency appropriation to cover repair of this damage. As a result of anticipated further damage to roads and trails from heavy wear and tear during the contemplated timber salvage, cleanup and fire hazard reduction operations an additional sum of \$82,000 is included to provide for rehabilitation of these improvements afterward.

Numerous minor park structures and facilities were also destroyed or damaged. These included signs, markers, gates, guard rails, foot bridges and deer traps. The sum of \$2,000 is requested for replacement or repair of these items.

---

\*Since the final estimate was submitted it has been learned that the Bear Brook Campground Ranger Quarters was not burned, as originally understood.

Within the park the fire extended over 8,750 acres of land, 8,542 acres of which were forested, 184 acres consisted of grass land and 24 acres supported brush growth. The commercial value of timber destroyed inside the park is estimated conservatively at \$37,125. Fire damage to Acadia's forests varies greatly on different areas from slight to total destruction. Examinations made subsequent to the fire indicate that the forest cover was completely destroyed on about 3,455 acres, or 40% of the park forest area burned. Areas only slightly affected aggregate about 670 acres, and those with intermediate damage ranging from low to heavy aggregate approximately 4,625 acres, or 54% of the forest area burned in the park.

These differences in the degree of damage are due mainly to type and density of stand, wind velocity and class of fire (crown, surface, or ground) when it burned through the area, and proximity of the area to areas struck by the blow-up and previous powerful advances of the fire. Some areas burned over twice where a crown fire was followed by a surface or ground fire, or vice-versa.

In general the coniferous and mixed conifer - hardwood types suffered to the severest extent. Most stands of these types within the burned area of the park were either totally or largely destroyed and the organic and mineral soil was consumed or reduced and impoverished. Destruction of these stands resulted either from intense crown fires or from ground fires followed by complete or extensive windthrow. Where the latter occurred, as in the old-growth spruce stands on Otter Point, fire damage to the trees was confined principally to their root systems, the above-ground portions showing surprisingly little evidence of fire. With the supporting soil burned away and the root systems reduced to short stubs most of the trees were soon thrown down by subsequent winds, the trees crashing like jack-straws in tangled masses as each falling tree or group knocked others down with it.

Generally speaking, windthrow in the white pine stands seems to be somewhat less so far, whether because of deeper mineral soil and deeper root systems or because most of these stands were swept by crown fires which consumed all foliage and at least the smaller branches, thereby greatly reducing wind resistance. Probably all of these factors account for the difference.

In the hardwood stands fire-killing of trees, soil depletion, and subsequent windthrow all appear to be generally less severe or less extensive than in the coniferous stands, although some of these effects seem to vary more widely in degree than in the latter stands. Where the burn in hardwood stands was light, as toward the southern limits of the fire in the valley of Otter Creek, relatively little damage is obvious now, even in the understory. Where the fire was extremely intense, as in the beech stands near Bliss Field, the reproduction, shrubs and organic soil were almost entirely consumed; possibly 40% of the remaining trees were killed or will soon die as a result of the fire; but one month following the fire it was also noted that few instances of windthrow were observed there. Where fire of moderate intensity occurred in hardwood stands most of the trees which shortly after the fire appeared for certain to be fire-killed were those smaller than six inches in diameter breast high. In all hardwood stands, however, the full extent of fire-kill will not be evident until the trees leaf out next spring or a year from then. Some trees may remain alive through the first growing season but may gradually decline and succumb by the second summer.

The final estimate includes an item of \$196,000 for forest cleanup and fire hazard reduction along 22 miles of park roadsides, to a width of 200 feet on each side, and over an additional 3,800 acres within the park. The purposes of this work are to lessen the possibility of fires starting, to reduce their rate of spread and intensity if they should start, and to improve or relieve the present fire-ravaged appearances. It is estimated that a minimum of 30,000 man-days

of labor will be required to accomplish this work, some of which will be provided without cost to the Service under cleanup and timber salvage contracts already affected with private agencies.

For reforestation of 1,000 acres of burned park forests the amount of \$50,000 has been requested in the final estimate. This represents the aggregate acreage where early reestablishment of forest growth is important for aesthetic and scenic effect, where natural regeneration is likely to occur slowly, and where enough unspent soil remains to support planted seedlings.

The total amount included for Acadia in the final ER & FFF deficiency appropriation estimate is \$435,342, as summarized below:

<u>Item</u>	<u>Final Estimate</u>
Fire suppression	\$ 49,942
Forest cleanup and fire hazard reduction	196,000
Repair and reconstruction of physical improvements	197,400
Reforestation	50,000
<b>Total</b>	<b>\$435,342</b>

Total damage sustained by the park as a result of the fire is estimated at \$986,125, not including suppression costs. No attempt has been made to appraise in monetary terms the loss in intangible recreational values, but, assuredly, such an evaluation would increase the assessment of Acadia's fire damage to a seven-digit total.

Outside the park the fire burned 8,435 acres and inflicted total property damage estimated at \$11,212,566, including timber.

#### Outstanding Features of the Fire and Lessons From It

Some impressions and reflections with respect to outstanding features of the fire and lessons to be derived from it are summarized below. (The latter are set forth not to reflect criticism on the Acadia organization but for their constructive value to the Service as a whole).

1. The calamitous destructiveness of the fire, particularly in view of the park's mild fire experience during recent years. (A total of 57 acres of park land was burned during the decade 1937 - 1946, with slight damage and total suppression costs of \$500). In achieving an excellent fire control record, which must always be a basic objective in protecting Service areas, park fire control organizations must be constantly on guard to prevent a false sense of security from developing as a result. An "It can't happen here" attitude may lead to relaxation of vigilance and reduced efficiency to such an extent as to leave the area vulnerable when fire danger becomes extraordinarily high.

2. The fire's stubborn resistance to control and the exceptional difficulties confronted in mop-up. Where unusual problems of this kind might occur the organization concerned should be appropriately equipped and trained to cope with them.

3. The extensive use made of water equipment and water in both direct attack and mop-up operations. This was made possible by the abundant sources of fresh and salt water readily at hand on most sectors, and by the large amount of water equipment and number of pump operators provided during the fire. The fire reemphasized the need for more thorough training of pump operators, and for the training of more pump operators in parks where water can be used advantageously in fire suppression.

4. The capable coordination and direction of suppression action on the fire by Fire Boss Savage and Relief Fire Boss Cook. The outstanding generalship exhibited by both men may well be regarded as exemplary of what is expected and needed of those in charge of large fires in Service areas.

5. The effective, diligent and cooperative manner in which the National Park Service and United States Forest Service overhead personnel carried out their assignments. Previous training and experience of these men paid big dividends and their contribution attests the imperativeness and soundness of the fire control training policies of both Services.

6. The great value of the fire as a training opportunity for those engaged. Some of the conditions affecting control were different from those that might be encountered in any other Service area in Region One.

7. The indispensable assistance furnished by the Army Air Force from Dow Field, including manpower on the line, excellent telephone communication service, equipment and mess facilities. Service areas with major protection problems, if located near Army, Navy, Marines, Coast Guard, etc. bases, would do well to have advance arrangements worked out with them covering details of the assistance which they will provide during fire emergencies or other disasters.

8. The great number of agencies participating in the action or contributing to it in some way. Eight different agencies were engaged to a major extent at the scene of the fire, not including the several village fire departments and many local people acting independently. Although extreme emergencies happen infrequently in any one area, coordination of the actions of many agencies in such unpredictable situations can be accomplished with less confusion, lost time and wasted effort if understandings and arrangements with the prospective participants can be made in advance, even though only informal and tentative.

9. The abundance of good food provided on the fire by the AAF mess and Red Cross canteens. Effectiveness and strength of attack have lagged on some fires due to poor or insufficient food. This factor bears careful consideration and proper attention especially on fires of long duration.

10. With more than 51,000 man-hours of labor and supervision engaged on the NPS Divisions, the record of only two minor injuries is an outstanding achievement. It speaks well for the previous training in safety of all individuals engaged and for the quality of supervision on the fire.

11. The unusual degree of access to all parts of the fire made possible by the extensive system of roads and foot trails on the island. This should not be construed as advocating expanded development of such improvements in Service areas in anticipation of extraordinary emergencies.

12. Constructively critical analysis of the fire and circumstances leading up to it stress the importance of being alert to severe fire danger conditions and more so if they are protracted; of stepping up the strength and preparedness of the protection organization accordingly; of intensifying vigilance at points of known fire risk (if they cannot be eliminated); of recognizing that under extreme fire danger conditions an outside fire threat to a park might be an imminent one, whereas under more moderate conditions it might be rightly regarded as remote; and of calling for outside assistance before the situation becomes too emergent.

13. The trash disposal dump from which the Mount Desert Island Fire undoubtedly started is not on park land. So it was also with respect to the largest fire in Shenandoah National Park's history, which originated from the Waynesboro, Virginia city dump. These two dump-caused fires represent, respectively, the first and second largest fires as regards park acreage burned in Region One areas since the region was established. Within some of its own areas the Service maintains open dumps. It seems fitting to recommend that: (1) all existing open rubbish dumps in Service areas be discontinued; (2) establishment of any new open rubbish dumps in Service areas be prohibited. (So long as the operation of such nuisances is tolerated on park lands the Service's position in suggesting elimination of or urging fire risk reduction in dumps located elsewhere will be inconsistent and indefensible. Where permanent

type incinerators are not provided as a substitute, consideration might be given to use of the "land-fill" method of rubbish disposal); and (3) where open dumps on lands outside of park boundaries are a present or potential fire threat to the park, field officers should direct this fact in writing to the attention of the responsible people, suggesting elimination of the dump or specific practicable means whereby the risk to the park may be reduced.

11. Finally, the fire demonstrated and pointedly emphasized again the soundness and importance of the paramount rules in fire fighting: "Get 'em while they're small!" and "Stick with 'em 'till they're black out!"



## INDIVIDUAL FIRE REPORT

All classes of forest, brush, and grass fires

## A. IDENTIFICATION

## 1. Map record

Map Attached

Scale: inches = 1 mile

2. Park **Acadia** 3. Region **One**  
4. Date fire started **October 17, 1947** 5. Fire No. **5**  
6. Name of fire **Mount Desert Island**  
7. Ranger district **-**  
8. Location **Bar Harbor Township - east and south of State Route 198**  
9. Class of fire (A, B, C, D, or E) **E**  
10. Reportable **X** Nonreportable  
11. Reportable for NPS Clarke-McNary: Yes **X** No  
12. Point of origin (check one):  
a. On park land  
b. On lands inside park: State Private  
c. On lands outside park but entering park **X**  
d. On lands outside park but not entering park  
13. Cause of fire (use prescribed terms):  
a. General **Debris burning**  
b. Specific **Refuse burning**  
c. Class of people **Resident**

## B. PHYSICAL CONDITIONS (Class B and larger fires)

1. Visibility distance (at time of discovery) **15** miles 2. Discovery distance **0.2** miles  
3. Class of fire danger day (1, 2, 3, 4, 5, 6, 7) **Class 3 + (Fire Danger Oct. 21 - Class 4; Oct. 23 - Class 5)**  
4. Character of fire on arrival **Burning**  
5. Fuel rating at point of origin (check one in both a and b):  
a. Rate of spread: Low Medium High Very high **X**  
b. Resistance to control: Low Medium High Very high **X**  
6. Wind at time of first attack: Direction **SW** Velocity **8 mph**  
7. Wind at time of greatest run: Direction **NW** Velocity **50 mph**  
a. Area of fire when discovered **1.0 acres** On arrival **4.0 acres** When controlled **17,186 acres**

## C. TIME RECORD

Time elements	Date	Hour and Minute	A. M. P. M.	Elapsed time		
				Instructions	Hour	Minute
1. Origin: { Guess (X) Known ( )	<b>10/17</b>	<b>3.20 PM</b>				
2. Discovered	"	<b>4.00 PM</b>		2 minus 1	<b>0</b>	<b>40</b>
3. Reported	"	<b>4.05 PM</b>		3 minus 2	<b>0</b>	<b>05</b>
4. Getaway	"	<b>4.06 PM</b>		4 minus 3	<b>0</b>	<b>01</b>
5. Hunting for fire	"	<b>XXXX</b>		Actual		
6. First attack	"	<b>4.18 PM</b>		6 minus 3	<b>0</b>	<b>13</b>
7. First reinforcements	"	<b>5.02 PM</b>		7 minus 6	<b>0</b>	<b>44</b>
8. Second reinforcements	"	<b>6.00 PM</b>		8 minus 7	<b>0</b>	<b>58</b>
9. Maximum number of men on fire	<b>10/27</b>	<b>6.00 AM</b>		9 minus 3	<b>229</b>	<b>55</b>
10. Fire controlled	"	<b>4.40 PM</b>		10 minus 6	<b>240</b>	<b>22</b>
11. Fire out	<b>11/14</b>	<b>4.00 PM</b>		11 minus 1	<b>672</b>	<b>40</b>

## D. ACTION RECORD

1. Regular action ( ) Independent action (X)  
2. Discovered by **Cooperator**  
(Class of discoverer)  
**Crooked Road near DOLLIVER'S Dump on Fresh Meadow**  
(Location)  
3. Reported to **Driver Allison Spratt**  
(Name man going to fire)  
**Bar Harbor Fire House**  
(Location)  
4. Number of men in first attack **4**  
5. Number of men in first reinforcements **16**  
6. Number of men in second reinforcements **5**  
7. Maximum number of men on fire **444**  
8. Miles traveled by initial attack force:  
a. By road **6.0**  
b. By trail **-**  
c. Cross country **0.1**  
d. By boat **-**

## 72-32843

G-772 (2)

1. PAID FROM FIGHTING FOREST FIRES FUNDS

1. Law enforcement and fire prevention action. The Secretary of the Interior has informed the Attorney General of the United States concerning this fire and has requested him to take such action to protect the interests of the United States as he considers necessary and justifiable from the facts presented or subsequently ascertained.

Prepared by Paul H. Arnold Regional Forester

U. S. GOVERNMENT PRINTING OFFICE: 1968 O - 332-242

February 27 1948  
(Month) (Day) (Year)

(Month) (Day) (Year)