# UNITED STATES DEPARTMENT OF THE INTERIOR National Park Service Washington

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# FOREST FIRE PROTECTION IN THE NATIONAL PARK SYSTEM, 1930-39

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# Introduction

Forest fires constitute one of the greatest threats to the preservation of the national park system for the enjoyment of present and future generations. Protection of its areas is recognized as one of the fundamental responsibilities of the National Park Service, and it is essential that all practical steps be taken to assure the best possible control over losses by fire.

A review of the forest fire protection activities in the national park system during the past decade has been made in order to analyze in a general way the problems, accomplishments, and needs of the Service. It is hoped that this review will suggest the need for and a possible method of approach to similar reviews by the personnel of each park having fire problems, in order that each area and the Service as a whole may develop means of further reducing fire losses.

The sources of data used in this review include the park fire atlases, individual and annual fire reports, forest protection requirements studies and recommendations made during the past 10 years. The data for 1930 are incomplete for a few areas, and for some others use of figures for a shorter period was necessitated by inclusion of the area after the beginning of the period.

### Historical

Prior to 1928 no funds were specifically appropriated to the Service for fire protection personnel, equipment, or physical improvements. Few lookout structures or other physical improvements intended primarily for fire protection had been provided and very little specialized equipment for fire use was available. Since 1928, when the first Chief Forester for the Service was appointed, the National Park Service has made rapid strides in providing specialized personnel, equipment, and facilities for more adequately meeting the fire problem.

The first step in improving protection was the analysis of the problem, review of conditions, and preparation of plans for improvement. Prior to 1930 analyses and recommendations for improvement had been completed for several of the areas having major fire problems. This work has been continued until all of the high danger areas have been studied. Many of the recommendations have been carried out with positive and practical effect on reduction of fire losses. Much still remains to be done, however, if the maximum of protection that is warranted by the high values at stake is to be attained.

### The Fire Record of the National Park Service, 1930-39, Inclusive

Appended to this report are detailed summaries of the fire record by areas and for the Service as a whole that indicate the volume of work, costs, causes, area burned, etc.

It is recognized that fires vary in the ease with which they may be started, rapidity of spread, resistance to control, resulting damage, and in many other details in the various areas. Comparisons between areas based on the relative apparent efficiency of protection as indicated by past records would be of little value since such a great variety of factors influence the local problems and potentialities. The national park system now includes areas in practically every forest fuel type, climatic condition, use problem, and fire risk zone in the country; therefore each area varies from the others in its specific problems.

The following tables briefly summarize the record of the National Park Service as a whole during the decade 1930-39.

| Class of fire   | Number<br>2           | Percent<br>of total<br>3 |
|---|-----------------------|--------------------------|
| Class A (less than $\frac{1}{4}$ acre in size)<br>Class B (between $\frac{1}{4}$ and 10 acres in size)<br>Class C (over 10 acres in size) | 2,150<br>1,179<br>559 | 56<br>30<br>14           |
| Total of all classes  | 3,888                 | 100                      |

Number of fires by classes

| Number of | fires | by | causes |
|-----------|-------|----|--------|
|-----------|-------|----|--------|

|                  |        |          |      |       |            | ,        |
|------------------|--------|----------|------|-------|------------|----------|
|                  |        |          |      |       | Percent    | Percent  |
|                  | Numbe: | r by cla | sses |       | of total   | of total |
| Cause            | A      | В        | C    | Total | man-caused | fires    |
| 1                | 2      | 3        | 4    | 5     | 6          | 7        |
|                  |        |          |      |       |            |          |
| Smoker           | 700    | 312      | 109  | 1,121 | 40.8       | 28,8     |
| Incendiary       | 109    | 373      | 214  | 696 · | 25.3       | 17,9     |
| Debris-burning   | 117    | 158      | 106  | 381   | 13,8       | 9,8      |
| Campfires        | 252    | 32       | 17   | 301   | 10.9       | 7.7      |
| Miscellaneous    | 93     | 67       | 45   | 204   | 7,4        | 5.3      |
| Railroads        | 18     | 7        | 14   | 38    | 1.4        | 1.1      |
| Lumbering        | 1      | 3        | 8    | 12    | •4         | • 3      |
|                  |        |          |      |       |            |          |
| Total man-caused | 1,289  | 952      | 513  | 2,753 | 100.0      | 70.9     |
| Lightning-caused | 862    | 224      | 49   | 1,135 | -          | 29.1     |
|                  |        |          |      |       |            |          |
| Total all fires  | 2,151  | 1,176    | 562  | 3,888 | 100.0      | 100.0    |

A steady annual increase in the total number of fires has occurred, from 160 in 1930 to 555 in 1939. This is, in part, owing to the greatly increased area and use of the national park system during the decade. One of the major problems has been the inclusion of several areas in the East where fire prevention and control have been less seriously regarded than in the West, and the resulting damage from fire has been less evident. Additional factors in intensifying the problem have been the general trend toward more dangerous fire weather and fuel condition owing to several years of drought and high lightning occurrence.

Point of origin of fires

| Point of origin  | Number<br>2                | Percent<br>3       |
|--|----------------------------|--------------------|
| Started on Government land Started on private land inside parks . Entered parks from the outside Confined to outside area adjacent | 2,891<br>348<br>159<br>490 | 74<br>9<br>4<br>13 |
| Total fires during the decade  | 3,888                      | 100                |

Many of the Service areas adjoin lands protected by other conservation agencies. The intensity of protection on these adjacent lands and cooperation in suppression vary materially. Some provide intensive protection whereas others have to date been unable to furnish efficient control.

The control of fires which started outside and either threatened or entered the areas has been one of the difficult problems facing the Service. Little or no control over the use of fire on these outside lands can be exerted by the Service, and dependence must be placed on the agency responsible for protection of the area. Much of the adjacent land is in relatively high fire danger zones. The intensity of the problem is indicated by the fact that 159 fires entered the park from the outside, and were generally large. It was also necessary to go outside either to suppress directly or to assist in the suppression of 490 others to prevent them from entering the parks.

This threat from outside fires must be kept in mind in fire protection planning. Cooperation and encouragement in improving adjacent area protection are essential for park protection. Assistance in education of the local people and a friendly cooperative attitude frequently have helped to reduce this threat. Special precautions have sometimes been necessary along the borders to assure the safety of park lands.

|        |   | Ar | ea |   |   |   |   | Acres  | Percent |
|--------|---|----|----|---|---|---|---|--------|---------|
|        |   |    | 1  |   |   |   |   | 2      | 3       |
| Forest | • |    |    |   |   |   |   | 57,675 | 77      |
| Brush  |   |    |    |   |   |   |   | 6,608  | 9       |
| Grass  | • | •  | •  | • | • |   |   | 10,364 | 14      |
| Tota   | ] | •  |    | • | • | • | • | 74,648 | 1.00    |

Area burned inside park boundaries

Of the total area burned it should be noted that 49,871 acres, or 67 percent of the total, were burned in 21 fires of more than 500 acres in extent that occurred in the parks during the decade. A list of the large fires tabulated by year, location, cause, and size is appended to this report. Nine of these large fires resulted from lightning and were located in the West. Lightning was also responsible for the majority of other western class B and C fires. Inaccessibility and dangerous fire weather at the time contributed largely to their size.

Incendiarism was responsible for four large fires and the majority of others of classes B and C in the East; only one large incendiary fire occurred in the West.

Smoker fires were the most frequent and general of the man-caused group. It is a threat in all areas and deserves more intensified prevention and protection effort in many areas.

Debris-burning fires in Service areas deserve real attention since most of the fires from this cause starting inside the areas were the result of our own activities or lack of control. The large areas burned by fires of this cause can be reduced by more effective supervision and observance of precautions in burning operations.

#### Seasonal distribution of fires

The problems and danger of fire occurrence in the widely scattered national park system are continuous throughout the entire year since fires have occurred on all but 15 days of the year during the decade. Large numbers at the same time plus occurrence during high fire danger periods are, of course, of much greater importance.

In the West the major season of occurrence is from June through September with the greatest concentration in July and August; however, several fires have occurred during each month of the year. In the East two seasons of concentration of fires occur, spring and fall, but occasional fires occur during each month of the year.

A review of the records of occurrence dates, causes, and size of fires reveals that several debris-burning fires of large size resulted from operations in the parks before or after the normal fire season for the area concerned. Some large fires from other causes were also noted outside the normal season. This emphasizes the need for continual vigilance regarding unseasonably high fire danger and the need for extreme caution in the use of fire. It also requires that the protection organization be always prepared for fire despite apparently safe conditions.

# Improvements in Conditions and Effectiveness of Protection

As previously stated, little or no special provision had been made prior to 1928 for fire protection. The rangers and other personnel handled fires along with their other work. Detection was delayed and fires frequently assumed large size before being discovered; travel time was slow owing to inaccessibility; control was sometimes inefficient because of lack of special or adequate equipment; and trained personnel was lacking. Little training or planning for fire protection had been done. As a result large acreages were burned.

After a modest beginning in 1928 and 1929 the program of providing more adequate fire protection has been gradually increased by funds especially designated to provide fire protection personnel and equipment, plus funds for constructing physical improvements. With the advent of the Civilian Conservation Corps in 1933 much more rapid strides have been made in completing the most needed physical improvements for protection such as lookouts, fire guard cabins, fire tool and equipment storage structures, truck trails, fire trails, manways and water developments. Also a modest program of fire hazard reduction has been initiated.

# Fire Fighters

The CCC has provided a very effective first line of fire suppression organization since 1933 replacing the former uncertain and comparatively ineffective and unorganized temporary labor which had to be used for assisting the regular park organizations in suppression prior to 1933. The CCC enrollees must be given a large share of the credit for the improved fire suppression record attained by the Service.

#### Physical Improvements and Fire Protection Personnel

An improvement in preparedness between 1930 and 1939 is indicated by the fact that in 1930 only 17 primary fire lookouts were available in the parks, whereas in 1939 the number had been increased to 60 primary lookouts and 14 secondary structures. In 1930 only 12 lookout observers and 16 fire guards were employed; in 1939 there were 59 lookout observers, 55 fire guards, and 6 fire dispatchers employed with forest protection funds, supplementing rangers and other personnel for fire protection.

At the beginning of the decade the scanty specialized fire suppression equipment that was available consisted of small outfits of tools and a few portable pumpers in some of the major areas. Most of the dependence for fire equipment was placed on the general equipment of the park. The value of special fire equipment at that time was about \$40,000. The 1939 inventory of specialized fire equipment showed an increase in valuation to \$232,000, which represents the following equipment: hand equipment valued at \$33,000; mechanical equipment valued at \$158,000, comprising 68 portable pumps and 140,000 feet of  $l\frac{1}{2}$ -inch fire hose; 32 tank fire trucks equipped with motor-driven pumps; \$11,000 worth of fire detection equipment; \$27,000 of fire camp equipment; and specialized items valued at \$3,000.

The new lookout structures in the parks in locations accessible to the public are among the finest in the country not only from a standpoint of efficient protection service but as a fire prevention medium. Visitors are encouraged to visit the lookouts and use them as vantage points for observation. At the same time an opportunity is presented for the observer to point out the operation of our fire protoction system and to help sell fire prevention. Public response to this practice has been excellent, and real interest is shown by visitors in the methods used in protecting the areas from forest fires. Several thousand visitors register annually at some of the lookouts. More of this type of instruction and encouragement of public visits to protection structures is desirable.

The park lookouts, dispatchers' offices, and ranger stations are equipped with the best aids available for efficient detection, reporting, and location of fires, including accurate fire finders, panoramic photographs, radio, telephone, etc.

During the decade the Service has procured 32 tank fire trucks equipped with 100- to 250-gallon water tanks, motor-driven power pumps, hose, equipment, and seats for six fire fighters. The Service has concentrated on light first-aid fire equipment designed as quick-action, self-contained units rather than on the larger, heavier types of trucks since more quick-action trucks can be procured with the limited funds available and since mobility is the first consideration in attacking fires while small.

Physical improvements valued at over two million dollars have been installed since 1930 primarily for fire protection, including 754 miles of protection telephone lines, 20 guard cabins, 47 fire equipment storage buildings, 522 miles of motorways, 1,767 miles of fire trails, 502 miles of manways, 109 miles of firebreaks, and many water developments, radio installations, and other aids to fire protection.

# Protection Planning

Many technical aids to effective fire protection have been developed or improved during the decado. Among the most valuable are those devised for rating the variable factors of fire danger, developed by the forest experiment stations, whereby definite instrumental gauges of relative danger can be obtained, replacing guesses and unconfirmed estimates. Such measurements can be translated by means of simple meters into accurate calculations of the probability of fire occurrence, rapidity of spread, and resistance to control that are important in advance planning of fire protection action and needs. Practically all of our areas are now equipped with these fire danger rating stations. Many areas that have used them for some time have had signal success in handling even critical fire periods without serious losses.

Detailed plans of fire protection action, which outline the steps to be taken to prevent and control fire, have been developed and are in effect in Service areas. Standards of elapsed time have been established and responsibility defined for the various phases of suppression action. It should be pointed out in this connection that the analysis of larger fires indicates in practically every case that some weakness in discovery, report, getaway, or travel time, contributed very materially to the eventual large size of the fire. Few fires that were promptly discovered and attacked by an adequate, properly trained, and equipped crew became harge. A recent refinement in planning has been the so-called step-up plan based upon an increase of personnel and intensified preparedness as the fire danger increases. Further planning is needed along these lines in most areas.

## Training of Protection Personnel

It must be recognized that, regardless of the quality and amount of equipment acquired and physical improvements installed, in the final analysis the effectiveness of protection depends very largely upon the accomplishments of the personnel. With this in mind training of all park personnel--regular, temporary, CCC, and other--has been intensified during recent years with a marked improvement in the effectiveness of fire protection. Fire schools are conducted and on-the-job instruction is given so that each man will be better able to perform his assignment safely and efficiently. Training must be a continuing activity to keep all personnel familiar with their duties and responsibilities.

### Fire Prevention

During the past 10 years 2,753 man-caused fires occurred in or threatened Service areas. Fire is a continuous and serious threat to the safety and conservation of the parks and is a danger that cannot be regarded lightly.

Fire prevention endeavor has varied in intensity in the different parks. Some have given much study and taken positive action in an effort to reduce the number of fires and have shown a marked reduction in fire occurrence. For the Service as a whole, however, preventable man-caused fires continue to increase in numbers. During the decade efforts directed at prevention of fires have included the posting of cautionary or warning signs; use of windshield stickers and notices bearing fire warnings; restrictions on the use of fire in dangerous areas; and public educational . ontacts and lectures.

The number of smoker and camper fires has increased annually from 75 in 1930 to 210 in 1939, or 2.8. On the other hand, the number of park visitors during the same period has increased more than five times. It is evident that despite the increase in number of fires considerable improvement has been made.

Debris burning has been the cause of many fires in the parks, although during recent years a slight improvement has been shown. The fact that 381 fires started from this cause during the decade indicates a need for more intensive supervision and control.

Incendiarism, which has been practically unknown in the western parks, became a very serious threat with the establishment of new eastern areas. This threat has, however, through increased protection and local understanding of the value of the parks, been reduced in all areas and almost eliminated in some. One of the finest examples of intelligent prevention work is that accomplished at Mammoth Cave National Park, where for generations the local people have used fire carclessly. In 1936, 209 incendiary, 38 debris-burning, and 36 smoker fires were reported at Mammoth Cave. These fires burned 2,023 acres. By 1939 this number had been reduced to 7 incendiary, 5 debris-burning, and 4 smoker fires which burned only 107 acres. The local people now recognize the problem and cooperate in preventing fires on or entering park lands.

#### Conclusions and Recommendations for the Future

1. The effectiveness and interest in the protection of the park areas is directly reflected by the attitude of the superintendent or custodian and his immediate assistants. Interested and intelligent leadership gives the protection organization the incentive to strive for the most effective protection possible. Since protection is the most important basic responsibility of the Service, it is incumbent upon each supervisory officer to assure himself personally that all necessary steps are taken in preparedness for fire protection within the limitations imposed by available funds.

2. Full advantage must be taken of all lessons that may be learned from our past experience with fire. A thorough review by local personnel of the records of fire protection action in each area will indicate weaknesses that require further planning in order to correct them. Frequent and careful consideration of local and general problems should be made by each member of the protection force as a means of eliminating risks, hazards, or controlling fires that may occur within his own area.

3. Fire protection recommendations made several years ago should be brought up to date and should be based on past experience as well as new developments. Since fire protection methods are not static but are making rapid advancements through the development of new equipment and facilities and improved techniques, we must continually keep abreast of new developments and take prompt advantage of all that will protect Service areas more effectively.

4. Annual, and even more frequent, training of fire protection personnel is essential in order to keep all who will take part in fire protection activities thoroughly familiar with their duties, responsibilities, and place in the organization and plan. In this connection, owing to the infrequency of large fires in most parks, it is very desirable that key personnel be given an opportunity to gain as much experience as possible on large fires of other parks and agencies in order that they may be prepared for large ones that may occur in their own park.

5. A problem new to many areas and one which has not been of importance for a number of years in some of the older parks is that resulting from the reduction in the number of available CCC camps and the increasing need to recruit fire fighters from other sources. Each area should plan for an attempt to gain the cooperation of local available fire fighters who may be needed to assist in fighting fire in and near the parks.

6. Many special problems of fire protection are unique in particular areas. Special studies and original or unusual methods for meeting these problems must be devised. They challenge the ingenuity, technical skill, and protection ability of the personnel of the Service.

7. Fire prevention is a field in which the Service has an enviable position among agencies responsible for fire protection in that practically all users of the parks are contacted directly by protection personnel. We have a wonderful opportunity to advance fire protection not only for the protection of our own areas but also in the general field of fire prevention. Further use of this valuable contact for fire prevention should be made.

This subject has purposely been placed last among the list of recommendations because it is the most important single way of reducing fire losses.

A great deal has been said and much effort has been expended on prevention endeavor. Some of it has been misdirected because it did not apply directly to the specific source of risk or did not provide a practical solution of the problem. The Service and other conservation agencies as well have taught, warned, and encouraged, perhaps even threatened, the public in the prevention of fires. Most people today are at least familiar with the subject and the majority when asked or reminded are conversant with the general rules and needs for care. Nevertheless, preventable fires still occur in increasing numbers. More than generalities and warnings are required to reduce this threat effectively.

Before prevention endeavor can be really effective an analysis of the basic factors responsible for our man-caused fires is necessary. The answers to the following questions may provide an approach to the local problem and indicate where emphasis may be needed:

- 1. Who causes the fires (by specific groups)?
- 2. When do they occur?
- 3. Why do they start?
- 4. How are they started?
- 5. Where may they be expected?

Despite the fact that the public (and our local personnel as well) already know in a general way that care with fire is needed, most persons do not seem to appreciate that a specific act of theirs may be responsible for a fire. We must remember that a rather large proportion of both the local people and the visitors actually do not know how to be careful with fire. For this group general warnings to be careful with fire are of little value, and for an equally large group who "think" that they are handling fire safely, more specific warnings or definite restrictions on the use of fire in dangerous areas are necessary.

The specific restrictions and warnings against smoking while traveling or discarding smoking materials from moving vehicles are illustrations of a prevention effort which when enforced has been effective in many areas and is needed in others. Restriction and detailing of qualified supervision over debris-burning activities can effectively reduce the prevalence of this type of fire. Development of camp sites with established fireplaces, particularly in the back country, and restriction of campfires to these sites materially reduces the danger of escape of camper fires.

It is important that restrictions be held to a minimum consistent with the danger and that adequate provision be made for safer substitutes. The public generally is well aware of the serious consequences of fire and is willing to cooperate if the restrictions appear to be logical and reasonable and are readily understood. It is, however, necessary to provide by means of reminders, education, and example the details required for care with fire since the majority of fires are caused by well meaning but thoughtless or careless people.

Fortunately, only a small number of park users may be classed as incendiarists or are willfully negligent with fire. Education is sometimes effective in changing the attitude of some of this group, but generally positive law enforcement is the only successful deterrent.

Local residents and employees have been responsible for a considerable proportion of park fires during the past decade and deserve special attention and definite control. It must be recognized that the instruction, facilities, and controls designed for prevention of visitor fires do not always apply to fires caused by the local employee or resident. Different approaches must be made to the problems of the camper, smoker, land clearer, and debris burner. One approach, however, applies to all, especially to those working in Service areas, i.e., setting a good example in what is desired for prevention and protection. Too many fires in the past have been caused by our own carelessness or disregard of safety precautions. Mutilated, inadequate, or leaning fire warning signs; dirty or inadequate camp sites; leaning or debris-filled fireplaces and trash cans; inefficient or unenforced regulations; and poor examples of the use of fire do not contribute to prevention endeavor by others. Much greater prevention effort is warrented during the next decade.

#### Conclusion

Much has been accomplished in the reduction of fire losses in National Park Service areas during the past decade. The Service may well be proud of its accomplishment. Much still remains to be done, however, to make and keep the areas safe from fire.

The Service, perhaps, cannot expect 100 percent elimination of man-caused fires despite all that we can do, although our efforts should be pointed in that direction. Any park can well be more proud of a record of reduction of preventable man-caused fires than in a reduction of area barned. The problem of the unpreventable fire, particularly those caused by lightning, must be met.

The maintenance of a better trained and efficiently equipped fire organization with a high morale and the development of more efficient physical improvements for the prompt detection and control of fires is necessary for adequate protection of the parks.

The objective of the National Park Service in fire protection continues to be as stated in the "Manual of the Branch of Forestry":

"To make the park fire protection organizations the best trained and equipped and most efficient forest fire protection organizations in the Nation because of the high scenic and recreational values at stake." Large fires inside National Fark Service areas, 1930-39 (over 500 acres)

|      |                             |  |  | Acres             | burned         |
|------|-----------------------------|--|--|-------------------|----------------|
| Year | Area                        | Name of fire                             | Cause                                      | Inside            | Outside        |
| 1930 | Mount Rainier N. P.         |  |  | 3,200             | -              |
| 1931 | Yellowstone N. P            | Heart Lake<br>Chipmunk Creek             | Lightning<br>Lightning                     | 18,756<br>1,250   | -              |
|      | Pinnacles N. M.             | Pinnacles                                | Debris burning (en-<br>tered from cutside) | 2,440             | -              |
|      | Yosemite N. P.              | Mawona                                   | Incendiary                                 | 980               | 320            |
|      | Great Smoky Mts. N. P.      | Riding Creck                             | Incendiary                                 | 750               | -              |
| 1932 | Yellowstone                 | Mirror Plateau                           | Lightning                                  | 2,020             | -              |
|      | Great Smoky Mts. N. P.      | Hyatt Mt.                                | Debris burning                             | $\frac{1}{1,100}$ | -              |
| 1933 | Yellowstone                 | Fern Lake (2)<br>Pitchstone<br>Plateau   | Lightning<br>Lightning                     | 1,050<br>800      |                |
|      | Great Smoky Mts. N. P.      | Rabbit Creek<br>Goat Creek<br>Dalton Gap | Incendiary<br>Incendiary                   | 800<br>800<br>640 |                |
| 1934 | Mesa Verde N. P.            | Wild Horse Mesa                          | Lightning                                  | 2,229             | -              |
|      | Mount Rainier N. P.         | Shriner Peak                             | Smoker                                     | 633               |                |
| 1935 | Glacier II. P.              | Chief Mountain<br>Boundary Creek         | Camper<br>Lightning                        | 555<br>988        | 2,645<br>1,244 |
| 1936 | Glacier N. P.               | Heavens Peak                             | Lightning                                  | 7,640             | -              |
|      | Lava Beds N. M.             | Golddigger<br>Fern Cave                  | Smolter<br>Smolter                         | 1,306<br>750      | 1,793          |
| 1937 | No fires over<br>500 acres. |  |  |                   |                |
| 1938 | No fires over<br>500 acres. |  |  |                   |                |
| 1939 | Yellowstone                 | Astringent<br>Creek                      | Lightning                                  | 1,561             | -              |

1/ On private land.

# NATIONAL PARK SERVICE 10-Year Fire Report

January 1, 1930, to December 31, 1939

|  |            |                        | CLASSIF                        | ICATION                |                         |                            | POINT OF             | ORIGIN          |                                |  |  |  |  |
|--|------------|------------------------|--------------------------------|------------------------|-------------------------|----------------------------|----------------------|-----------------|--------------------------------|--|--|--|--|
|  |            | A                      | В                              | C                      | TOTAL                   | INSIDE                     | PARKS                | OUTSI           | DE PARES                       |  |  |  |  |
|  | No.        | 1/4 acre<br>or<br>less | Between<br>1/4 and<br>10 acres | 10 scres<br>or<br>over | All<br>classes<br>A-B-C | On Govern-<br>ment<br>land | On pri-<br>vate land | Entered<br>park | L Confined to<br>outside areas |  |  |  |  |
| Name   | of<br>Yrs. | Number                 | Number                         | Number                 | Number                  | Number                     | Number               | Number          | Number                         |  |  |  |  |
| Region I   |            |                        |                                |                        |                         |                            |                      |                 |                                |  |  |  |  |
| Acadia N.P.  | 10         | 8                      | 25                             | 5                      | 38                      | 17                         | 5                    | -               | 16                             |  |  |  |  |
| Great Smoky Mountains N.P.                               | 9          | 38<br>98               | 135<br>358                     | 159<br>114             | 332<br>570              | 129<br>315                 | 57<br>219            | 33<br>10        | ≤⁄ 113<br>26                   |  |  |  |  |
| Shenandoah N.P.  | 7          | 12                     | 51                             | 46                     | 109                     | 73                         |                      | 11              | 25                             |  |  |  |  |
| Colonial N.H.P.  | 8          | 10                     | 23                             | 11                     | 44                      | 19                         | 9                    | 1               | 15                             |  |  |  |  |
| Chick Chatt. N.M.P.                                      | 6          | 12                     | 2<br>34                        | 12                     | 88                      | 78                         | 1                    | 6               | 3                              |  |  |  |  |
| Fredericksburg N.M.P.                                    | 6          | 5                      | 5                              | 2                      | 12                      | 6                          | ī                    | ĩ               | Ĺ.                             |  |  |  |  |
| Gettysburg N.M.P.  | 6          | 4                      | 1                              | -                      | 17                      | 5                          | 7                    | -               | -                              |  |  |  |  |
| Shiloh N.M.P.  | 6          | 20                     | 23                             | 5                      | 48                      | 33                         | 2                    | 3               | 10                             |  |  |  |  |
| Vicksburg N.M.P.   | 6          | 59                     | 37                             | 3                      | 99                      | 67                         | 1                    | 25              | 6                              |  |  |  |  |
| Ocmilgee N.M.  | 3          | -                      | 2                              | -                      | 2                       | 2                          | -                    | -               | 1                              |  |  |  |  |
| National Capital Parks                                   | 4          | 1                      | 8                              | 1                      | 10                      | 8                          | -                    | 1               | 1                              |  |  |  |  |
| Blue Ridge Parkway                                       | 2          | 5                      | 12                             | 10                     | 27                      | 12                         | -                    | 19              | 10                             |  |  |  |  |
| Totals Region I  |            | 311                    | 747                            | 393                    | 1,451                   | 793                        | 297                  | 118             | 243                            |  |  |  |  |
| Region II  | -          |                        |                                |                        |                         |                            |                      |                 |                                |  |  |  |  |
| Grand Toton N.P.   | 10         | 63                     | 3                              | 6•                     | 72                      | 54                         | -                    | -               | 18                             |  |  |  |  |
| Rocky Mountain N.P.                                      | 10         | 73                     | 10                             | 3                      | 86                      | 49                         | 9                    | -               | 28                             |  |  |  |  |
| Wind Cave N.P.   | 10         | 4                      | 2                              | 4                      | 10                      | 10                         | -                    | -               | 11.                            |  |  |  |  |
| Devils Towar N.M.  | 10         | 9                      | 1                              | 1                      | 11                      | 9                          | -                    | -               | 2                              |  |  |  |  |
| Fossil Cycad N.M.  | 10         | -                      | 1                              | -                      | 1                       | 1                          | -                    | -               | -                              |  |  |  |  |
| Scotts Bluff N.M.  | 10         | 1                      | ,                              | 2                      | 0                       | 4                          | -                    | 2               | -                              |  |  |  |  |
| Totals Region II   |            | 482                    | 77                             | 49                     | 608                     | 532                        | 9                    | 5               | 62                             |  |  |  |  |
| Region III<br>Carlsbad Caverns N.P.<br>Grand Canyon N.P. | 10<br>10   | 1<br>127               | 50                             | ī,                     | 1<br>181                | 1<br>164                   | - 2                  | -               | 15                             |  |  |  |  |
| Hot Springs N.P.   | 10         | 27                     | 47                             | 4                      | 78                      | 67                         | -                    | 7               | 4                              |  |  |  |  |
| Platt N.P.   | 10         | 25                     | 13                             | 6                      | Í.L                     | 40                         | -                    | <u> </u>        | -                              |  |  |  |  |
| Bandelier N.M.   | 10         | 22                     | 5                              | 1                      | 28                      | 22                         | -                    | -               | 6                              |  |  |  |  |
| Other S.W. N.M.'s (6)                                    | 10         |                        | ů                              | -                      | 11                      | 5                          | 1                    | -               | 5                              |  |  |  |  |
| Totals Region III  | 1          | 252                    | 128                            | 18                     | 398                     | 31,44                      | 3                    | 13              | 38                             |  |  |  |  |
| Region IV  |            |                        |                                |                        |                         |                            |                      |                 |                                |  |  |  |  |
| Bryce Canyon N.P.  | 10         | 10                     | 5                              | 1                      | 16                      | 10                         | -                    | 1               | 5                              |  |  |  |  |
| Crater Lake N.P.   | 10         | 108                    | হা                             | -                      | 132                     | 126                        | -                    | -               | 6                              |  |  |  |  |
| General Grant N.P.<br>Glacier N.P.                       | 10         | 17                     | 38                             | 23                     | 384                     | 318                        | 1<br>21              | - 9             | 33                             |  |  |  |  |
| Hawaii N.P.  | 10         | 6                      | -                              | 3                      | 9                       | 7                          |                      | í               | í                              |  |  |  |  |
| Lassen Volcanio N.P.                                     | 10         | 61                     | 15                             | . 6                    | 82                      | 64                         | 2                    | 2               | 14                             |  |  |  |  |
| Olympic N.P.& N.M.                                       | 6          | 45                     | -                              | -                      | 6                       | 3                          | 3                    | -               | -                              |  |  |  |  |
| Sequoia N.P.   | 10         | 213                    | 33                             | 28                     | 274                     | 227                        | -                    | -               | 47                             |  |  |  |  |
| Yosemite N.P.  | 10         | 287                    | 95                             | 12                     | 13                      | 570<br>11                  | 9                    | 5               | 2                              |  |  |  |  |
| Death Valley N.M.  | 6          | 6                      | í                              | -                      | 7                       | 7                          | -                    | -               | -                              |  |  |  |  |
| Lava Beds N.M.   | 6          | 13                     | 5                              | 12                     | 30                      | 15                         | -                    | 3               | 12                             |  |  |  |  |
| Muir Hoods N.M.<br>Pinnacles N.M.                        | 10         | 2                      | 2                              | 2                      | 6                       | 3                          | 1 -                  | i               | 2                              |  |  |  |  |
| Oregon Caves N.M.  | 6          | i                      | -                              | -                      | ĩ                       | l í                        | -                    | -               | -                              |  |  |  |  |
| Totals Region IV   |            | 1,105                  | 227                            | 99                     | 1,431                   | 1,222                      | 39                   | 23              | 147                            |  |  |  |  |
| Grand Total  |            | 2,150                  | 1,179                          | 55 <del>9</del>        | 3,888                   | 2,891                      | 348                  | 159             | 1490                           |  |  |  |  |

1/ Only those fires are included which threatened park lands, and on which action by NPS personnel was required to prevent the fire from entering the park.
2/ Includes 1A, 42B, 70C fires adjacent to the park.
• Confined outside park area.

#### NATIONAL PARK SERVICE 10-Year Fire Report

#### January 1, 1930, to December 31, 1939

#### CAUSES OF FIRES

|   | No.  |  | Ligh                                     | taing         | ;  |   | Campf | ires |                       | Smokers                        |                     |                        | Smokers  |                  |                                 |   | Debris burning  |             |                              | Incondiary     |   |   | 1   | umber             | ing  | Τ  | F   | ailr | oads       |  | Miscellaneous  |      |                  | Total man-caused   |  |                              |  | sed   | Grand total  |  |   | 1 |
|---|--|--|--|---------------|--|---|-------|------|-----------------------|--------------------------------|---------------------|------------------------|--|------------------|---------------------------------|---|---|-------------|------------------------------|----------------|---|---|-----|-------------------|------|----|-----|------|------------|--|--|------|------------------|--|--|------------------------------|--|---|--|--|---|---|
| Name  | of<br>Yrs.   |  | B  | C 1           | otal   |   | в     | C To | tal                   | *                              | в                   | C To                   | tal  |                  | B                               | CIT                                     | tal   |             | B                            | C 10           | ta 1  | A | вс  | Tot               | al l |    | в   | C T. | tal        |  | вс   | Tota | 1                |  | в  | C T                          | otal   |   | в  | c  | Total   |   |
| Region I  |  |  |  |               |  | 1   |       |      |                       |                                |                     |                        |  |                  |                                 |   |   |             |                              |                |   |   | _   | _                 | -    |    |     |      |            |  |  |      | +                |  |  | _                            | -  | ·   |  |  |   |   |
| Acadia N.P.<br>Great Smoky Mountains N.P.<br>Mamnoth Cave N.P.<br>Shenandoah N.P.<br>Colondal N.H.P.<br>Colondal N.H.P.<br>ChickChatt. N.M.P.<br>ChickChatt. N.M.P.<br>Frederickaburg N.M.P.<br>Gettysburg N.M.P.<br>Stiloh N.K.P.<br>Yicksburg N.M.P.<br>Stones River N.K.P.<br>Stones River N.K.P.<br>Blue Ridge Farkway<br>Natohes Trace Parkway | 1097786666666663432  |  | 3 2 1                                    | 1             | 1<br>1<br>5<br>1<br>   |   | 62    |      | 195231141             | 5102731051622-113922           | 2302817574-49222423 | 212149-51-2335         | 30<br>52<br>53<br>15<br>30<br>38<br>7<br>2<br>6<br>26<br>0<br>2<br>2<br>4<br>7<br>10 |                  | - 1766 10 3 - 3 - 1 1 7 3 1 3 9 | 25352-31-32224                          | 2<br>53<br>99<br>17<br>5<br>7<br>1<br>3<br>4<br>12<br>3<br>-<br>1<br>5<br>3 | 1754-143-14 | 2<br>70<br>21<br>1<br>10<br> | B57726 L 1 L - | 3<br>162<br>51<br>1<br>28<br>3<br>5<br>11<br>1<br>-<br>7<br>- | 1 |     | 1.                |      |    | 1   | 4.3  | -5-492-914 | 22                                     | - 1<br>7 12<br>10 -<br>3 -<br>1 -<br>3 - |      | 121241131-156436 | 7 28 9 10 6 22 5 4 - 20 59 1 4 3   | 2511<br>1325<br>1325<br>1325<br>102<br>5<br>1<br>8<br>237<br>3<br>2<br>6<br>12<br>17 | 58451 - 122 - 9531 - 105     | 37<br>118<br>570<br>104<br>43<br>11<br>88<br>12<br>5<br>17<br>48<br>9<br>4<br>2<br>0<br>26<br>35 | 8<br>38<br>98<br>12<br>10<br>6<br>12<br>5<br>1<br>-<br>20<br>5<br>-<br>1<br>5<br>3<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 25<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>1358<br>13 | 5<br>159<br>114<br>46<br>11<br>-<br>12<br>-<br>9<br>5<br>3<br>1<br>-<br>10<br>15 | 38<br>332<br>5709<br>144<br>11<br>88<br>12<br>5<br>17<br>1<br>5<br>10<br>27<br>35     |   |
| Totals Region I   |  | 14   | 6  | 2             | 22   | 16  | 12    | 9    | 37                    | 137                            | 193                 | 60                     | 390  | 26               | 151                             | 84                                      | 234   | 91 3        | 58 19                        | 98             | 647   | 1 | 3   | 5                 | 9    | 15 | 7   | 12   | 34         | 12 1                                   | 4 23   | , ·  | 79               | 297  | 741 3  | 91 1                         | <b>,</b> 129   | 311   | 747  | 393  | 1,451   |   |
| Region II<br>Grand Teton N.P.<br>Kocky Kountain N.F.<br>Wind Care N.P.<br>Yellowstome N.P.<br>Jevils Tower N.F.<br>Fossil Gymen N.K.<br>Scotts Bluff N.K.   | 10<br>10<br>10<br>10<br>10<br>10   | 11<br>11<br>3<br>116<br>1<br>-   | - 32<br>30<br>1<br>1                     | 2•<br>1<br>18 | 13<br>14<br>164<br>2<br>1  | 13<br>28<br>-<br>62<br>3<br>-   | 1     |      | 14<br>28<br>68<br>3 - | 32<br>25<br>1<br>107<br>5<br>1 | 2317                | 3•<br>2<br>8<br>-<br>1 | 37<br>30<br>1<br>132<br>5<br>L   | 14<br>12<br>22   | 2 5 - 1                         | 1 | 4<br>6<br>1<br>26<br>1<br>2   | 10          |                              | 1.             | 11  |   |     | 1•<br>-<br>-<br>- | 1.   |    |     | :    |            | 35                                     | 2 2  |      | 3829             | 52<br>62<br>1<br>216<br>8<br>-   | 3<br>7<br>27<br>-<br>3   | 4<br>3<br>15<br>1<br>2       | 59<br>72<br>4<br>258<br>9<br>6   | 63<br>73<br>4<br>332<br>9<br>-  | 3<br>10<br>2<br>57<br>1<br>1<br>3  | 6•<br>34<br>331<br>-2  | 72<br>86<br>10<br>122<br>11<br>1<br>6   |   |
| Totals Region II  |  | 142  | 37                                       | 21            | 200  | 106   | 4     | 3    | 113                   | 171                            | a,                  | ป                      | 209  | 30               | 8                               | 4                                       | 42  | 10          | -                            | 1              | 11  | - | -   | 1                 | 1    | -  | -   | -    | -          | 23                                     | 4 5  | 5 3  | 32               | 340  | 40   | 28                           | 408  | 482   | TI   | 49   | 608   |   |
| Region III  |  |  |  |               |  |   |       |      |                       |                                |                     |                        |  |                  |                                 |   |   |             |                              |                |   |   |     |                   |      |    |     |      |            |  |  |      |                  |  |  |                              |  |   |  |  |   |   |
| Carlsbad Caverns N.F.<br>Grand Canyon N.P.<br>Hot Springs N.P.<br>Mess Verde N.P.<br>Platt N.P.<br>Bandeller N.M.<br>Saguaro N.M.<br>Other S.W. N.M.'s (6)  | 10<br>10<br>10<br>10<br>10<br>10<br>10                                   | - 100<br>- 1<br>27<br>- 14<br>- 14<br>- 14<br>- 14<br>- 14<br>- 14<br>- 14<br>- 14 | 45 1 463                                 | 3             | 148<br>1<br>30<br>19<br>20<br>7                                    | - 34 - 2 - 2  | 1     | 1    | - 44 - 12 - 2         | 1<br>16<br>19<br>1<br>21<br>5  | 10<br>10<br>1       | 2 - 4                  | 1<br>20<br>57<br>1<br>35<br>6<br>-   | 6                | 141                             |   | 1762111   |             |                              | 1              |   |   |     | 1.                |      |    |     |      |            | 22141                                  | 2 1  |      | - 261771         | 1<br>27<br>26<br>25<br>8<br>- 3  | 5<br>47<br>13<br>1   | 1                            | 1<br>33<br>77<br>5<br>44<br>9 - 4  | 1<br>127<br>27<br>29<br>25<br>29<br>25<br>20<br>11<br>7   | -007<br>13<br>13<br>56<br>4  | -44361   | 1<br>181<br>78<br>35<br>14,<br>28<br>20<br>11   |   |
| Totals Region III   |  | 160  | 59                                       | 6             | 225  | 11  | 2     | 1    | 14                    | 63                             | 52                  | 6                      | 121  | 7                | 6                               | 2                                       | 15  | 1           | 3                            | 1              | 5   | - | -   | 1                 | 1    | -  | -   | -    | -          | 10                                     | 6 1  |      | 17               | 92   | 69   | 12                           | 173  | 252   | 128  | 18   | 3   |   |
| Region IV<br>Bryce Canyon N.P.<br>Crater Lake N.P.<br>General Grant N.P.<br>Glacier N.P.<br>Lassen Voleenic N.P.<br>Mount Rainier N.P.<br>Mount Rainier N.P.<br>Olympic N.P. & N.K.<br>Sequola N.P.<br>Yosenite N.P.<br>Zion N.P.<br>Death Valley N.M.<br>Law Beds N.M.<br>Pinnacles N.M.<br>Oregon Cares N.M.                                      | 10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>6<br>6 | L:<br>76<br>7<br>11:1<br>20<br>-<br>133<br>109<br>3<br>7<br>-<br>1                 | 19<br>16<br>7<br>2<br>16<br>59<br>1<br>2 | 10            | 4<br>95<br>7<br>167<br>49<br>22<br>152<br>172<br>6<br>3<br>10<br>1 | 1<br>4<br>2<br>37<br>4<br>10<br>2<br>27<br>26<br>1<br>1<br>2<br>2<br>1<br>1<br>2<br>2<br>1<br>1<br>-<br>2<br>-<br>2<br>-<br>-<br>-<br>-<br>-<br>- | 1     | 3    | 2424-402242112        | 32059443121362116-1-           | 3218-51-28-1-2      |                        | 6 22 6 105 6 20 11 1 50 15 2 2 11 4 1 -  | 24231 1 - 76 - 1 | 1214111421111                   |   | 3638-21-51221412-   | 1.          |                              |                |   |   |     | 1.                |      | 2  |     |      |            | 1<br>15<br>2<br>1<br>3<br>1<br>9<br>11 |  |      | 1516315181 13 -  | 6<br>32<br>10<br>182<br>6<br>19<br>25<br>6<br>80<br>178<br>3<br>6<br>2<br>1<br>- | 5522 82 44 21 331 -  | 1 - 336 - 3 - 278 2 - 1134 - | 12<br>37<br>12<br>217<br>9<br>33<br>30<br>6<br>121<br>210<br>7<br>4<br>20<br>8<br>6<br>-         | 10<br>108<br>17<br>323<br>6<br>15<br>6<br>15<br>6<br>13<br>267<br>6<br>13<br>2<br>1<br>1  | 5428<br>154<br>33931531  | 1 - 23 3 6 3 - 28 12 4 - 12 3 4 -  | 16<br>132<br>19<br>384<br>9<br>82<br>56<br>274<br>392<br>13<br>7<br>30<br>8<br>6<br>1 |   |
| Totals Region IV  |  | 546  | 122                                      | 20            | 688  | 119   | 14    | 4    | 137                   | 329                            | 43 1                | 29                     | 401  | 54               | 20                              | 16                                      | 90  | 7           | 12 1                         | 14             | 33  | • | - : | 1                 | 1    | 3  |     | 2    | 5          | 47 1                                   | 3 16   | 5 7  | 6                | 559  | 102  | 82                           | 743  | 1,105   | 227  | 99   | .,431   |   |
| Grand total   |  | 862  | 221                                      | 49 1          | ,135   | 252   | 32    | 17   | 301                   | 700 3                          | 12 1                | 09 1,                  | 121  | 117 1            | 58 1                            | 06                                      | 381   | 109 3       | 73 21                        | 4 6            | 596   | 1 | 3 1 | 8                 | 12   | 18 | 7 3 | 4    | 39         | 92 6                                   | 7 45   | 20   | 1,1              | 268  | 952 5  | 13 2,                        | .753   | 2,150 1   | 1,179  | 59   | ,888  |   |

· Confined outside park area.

4

LFC: BED 3/25/40.

#### HATIONAL PARK SERVICE 10-Year Fire Report

January 1, 1930, to December 31, 1939

|  |   | 901  | INSIDE PAR<br>hole sore)  | ES .  | TIN  | BER DESTROY<br>NSIDE PARKS   | ED           |   |   |  | CO51<br>(To  | ST OF FIRE SUPPRESSION<br>C Dearest whole dollar)  |   |  |   |  |  |  |  |  |  |
|--|---|--|---|---|--|--|--------------|---|---|--|--|--|---|--|---|--|--|--|--|--|--|
|  | No.<br>of   | Timber   | Brush   | Grass   | Total  | Government   | Private      | Total   | Fersonal<br>services  | f<br>Supplies,<br>transpor-<br>tation, etc.  | Equip-   | Indirect<br>costs<br>prorated  | Total   | Salaries<br>of park<br>employees<br>not paid<br>from F.F.F.                                      | Grand<br>total  | CCC man-days<br>contributed<br>since 1933  |  |  |  |  |  |
| A430   | Irs.  | (Aores)  | (Acres)   | (Acres)   | (Acres/  | (1.5.7.)   | (I.B.F.)     | (8.5.7.)  | (Dollars)   | (Dollars)  | (Dollars/  | (Dollars/  | (POILETS)   | (DOILETS)  | (DOIIEFS)   | (MURDer)   |  |  |  |  |  |
| Region 1<br>Acadia N.P.<br>Great Smoky Mountains N.P.<br>Mammoth Cave N.P.<br>Shemandoah N.P.<br>Colonial N.H.P.<br>Morristown N.H.P.<br>ChiokChatt, N.M.P.<br>Frederickaburg N.M.P.<br>Gettysburg N.M.P.<br>Gettysburg N.M.P.<br>Stolho N.M.F.<br>Yicksburg N.M.P.<br>Stomes River N.M.<br>Oomlagee N.M.<br>National Capital Parks<br>Blue Ridge Farkmay<br>Natohes Trace Parkmay | 10<br>9778666666642432  | 15<br>9.778<br>2.810<br>2.067<br>15<br>8<br>323<br>10<br>323<br>10<br>10<br>10<br>10<br>-<br>3<br>57<br>99 | 8<br>337<br>86<br>272<br>19<br>-<br>10<br>2<br>-<br>100<br>-<br>1<br>100<br>-<br>3<br>-   | 5<br>168<br>2,092<br>60<br>338<br>-<br>313<br>90<br>29<br>67<br>1<br>1<br>1<br>58 | 28<br>10,283<br>4,988<br>2,381<br>8<br>671<br>12<br>3<br>621<br>200<br>29<br>87<br>1<br>3<br>7<br>4<br>157 | 10<br>26<br>11<br>28<br>2<br>4<br>-<br>-<br>-<br>20<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 26<br>11<br> | 10<br>52<br>28<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | 1,630<br>3,758<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-   | 186<br>595<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 168<br>1,68<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 35<br>36<br>-<br>33<br>-<br>5<br>25<br>-<br>13<br>-<br>-<br>-                              | 2,019<br>6,013<br>268<br>124<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 351<br>1,528<br>389<br>190<br>25<br>107<br>2<br>51<br>107<br>2<br>54<br>10<br>60<br>69           | 2,373<br>7,511<br>322<br>657<br>311<br>25<br>112<br>25<br>12<br>2<br>79<br>-<br>61<br>21<br>10<br>-<br>10<br>59 | 3,055<br>13,405<br>14,874<br>5,837<br>40<br>633<br>80<br>31<br>85<br>314<br>117<br>1<br>1<br>3<br>138  |  |  |  |  |  |
| Totals Region I  |   | 15, 525  | 838   | 3,278   | 19,641   | 101  | 37           | 138   | 5,394   | 880  | 2,089  | J147   | 8,510   | 3,182  | 11,692  | بلبلد, 29  |  |  |  |  |  |
| kegion II<br>Grand Teton N.F.<br>Rocky Mountain N.P.<br>Mind Cave N.P.<br>Yellowstome N.P.<br>Devils Tower N.E.<br>Fossli Cyosd N.M.<br>Scotts Bluff N.M.  | 10<br>10<br>10<br>10<br>10<br>10  | 1<br>11<br>17<br>25,330<br>3<br>1<br>-   | 1<br>20<br>8<br>190<br>-  | 20<br>301<br>1,699<br>2<br>1<br>50  | 2<br>51<br>326<br>27,219<br>5<br>2<br>50   | 2<br>10<br>157,839<br>1<br>-   |              | 2<br>10<br>157,639<br>1<br>-  | ابلا<br>21<br>18<br>71 ملز<br>74<br>-   | 56<br>74<br>14<br>54,123<br>-<br>-   | -<br>ددبار 33<br>-   | 17<br>19<br>15,433<br>-  | 214<br>114<br>32<br>174 433<br>74<br>-  | 167<br>لالمان<br>78<br>11 لو199<br>20<br>6<br>لالم   | 381<br>524,<br>110<br>185,932<br>94,<br>6<br>1,   | 5,162<br>399<br>4,11<br>14,122<br>-<br>9<br>11   |  |  |  |  |  |
| Totals Region II   |   | 25,363   | 219   | 2,073   | 27,655   | 157,852  | -            | 157,852   | 71,720  | 54,267   | 33,411   | 15,469   | 171.,867  | 12,184   | 187,051   | 20,114   |  |  |  |  |  |
| Region III<br>Carlsbad Caverns N.F.<br>Grand Canyon N.F.<br>Hot Springs N.F.<br>Mesa Verde N.F.<br>Platt N.F.<br>Bandelier W.K.<br>Saguaro N.K.<br>Other J.W. N.K.'s (6)   | 10<br>10<br>10<br>10<br>10<br>10<br>10  | -<br>257<br>118<br>1,364<br>8<br>56<br>9<br>1  | 4<br>2<br>870<br>-<br>1<br>-  | -<br>5<br>2<br>154<br>2<br>11<br>1  | -<br>2023<br>2023<br>2023<br>2023<br>2023<br>2023<br>2023<br>202   | 123<br>13<br>6<br>2  |              | 123<br>13<br>6<br>2   | 640<br>35<br>1,677<br>6<br>150  | 378<br>2,625<br>22<br>-  | 9<br>921.<br>3   | ليليا<br>5,890<br>9  | 1,466<br>35<br>11,116<br>25<br>15<br>150  | 1<br>756<br>272<br>711<br>75<br>32<br>13<br>26   | 1<br>2,22i;<br>307<br>11,827<br>100<br>1,7<br>163<br>26   | 997<br>1<br>2,540<br>16<br>336<br>69<br>69   |  |  |  |  |  |
| Totals Region III  |   | 1,843  | 876   | 175   | 2,895  | يليلا  | -            | بلبلا   | 2,508   | 3,025  | 936  | 6,340  | 12,809  | 1,886  | 14,695  | 4,028  |  |  |  |  |  |
| Region IV<br>Bryce Canyon N.F.<br>General Grant N.F.<br>General Grant N.F.<br>Glacier N.P.<br>Hamsell N.F.<br>Lassen Volomic N.F.<br>Kount Rainier N.F.<br>Olympic N.M. & N.F.<br>Sequoia N.F.<br>Yossmite N.F.<br>Death Valley N.K.<br>Lava Beds N.K.<br>Nuir Woods N.K.<br>Pinnacles N.K.<br>Oregon Caves N.K.   | 10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>6<br>6<br>10<br>10<br>6 | 1<br>29<br>9,801<br>2<br>66<br>2,760<br>1,869<br>1,869<br>-<br>7<br>7<br>50                                | -<br>5<br>1<br>229<br>37<br>11<br>396<br>-<br>493<br>7779<br>62<br>-<br>100<br>-<br>2,560 | 1<br>566<br>200<br>3<br>3,382   | 1<br>35<br>1<br>199<br>77<br>3,846<br>1<br>809<br>2,651<br>2<br>3,482<br>7<br>2,611                        | L<br>25,07L<br>33,282<br>1L<br>1,0L2<br>27<br>30<br>-  |              | 4<br>25,075<br>27<br>33,262<br>1,12<br>1,042<br>27<br>30  | 756<br>103<br>76, 804<br>154<br>154<br>711<br>2, 118<br>1, 64;5<br>6, 188<br>1, 64<br>5<br>6, 188<br>1, 64<br>5<br>6, 188<br>1, 64<br>5<br>2<br>1, 64<br>5<br>2<br>1, 64<br>5<br>2<br>1, 64<br>5<br>2<br>1, 64<br>5<br>1, 75<br>6, 103<br>76, 804<br>1, 75<br>6, 103<br>76, 804<br>1, 75<br>1, 7 | 109<br>69, eli 3<br>395,<br>2,580<br>1,733<br>1,363<br>45<br>17<br>2<br>2,214                        | 787<br>18,799<br>751<br>3,665<br>5,875<br>1,067<br>5   | 4<br>363<br>26<br>35,815<br>-<br>-<br>-<br>903<br>973<br>973<br>-<br>-<br>-<br>-<br>-<br>- | 4<br>2,015<br>131<br>201,341<br>259<br>1,660<br>6,337<br>10,156<br>9,611<br>137<br>1,091<br>4,700<br>700                    | 68<br>971<br>5.223<br>994<br>995<br>2.721<br>2.669<br>2.721<br>2.55<br>11<br>157<br>51<br>9<br>5 | 72<br>2,986<br>633<br>2,846<br>5,840<br>12,877<br>12,280<br>375<br>14<br>1,248<br>55<br>709<br>5                | 81<br>2,154<br>176<br>37,105<br>21<br>762<br>5,286<br>109<br>20,551<br>16,672<br>120<br>21<br>3,055<br>1<br>120<br>21<br>3,055<br>1<br>20<br>5 |  |  |  |  |  |
| Totals Region IV   |   | 14,9ևև   | 4,944 4,675 4,838 24,457  |   | 59,627   | 1  | 59,628       | 89,283  | 76,386  | 31,378   | 38,579   | 235,626  | 11.,122   | 249,748  | 46 86,257   |  |  |  |  |  |  |
| Grand total  |   | 57.675   | 6,608   | 10,364  | 74,648   | 217,724  | 38           | 217,762   | 168,905   | 134,558  | 67,814   | 60,535   | 431,812   | 31,374   | 463,186   | 139,543  |  |  |  |  |  |

LFC: BED 3/25/40.