RECREATIONAL USE OF LAND IN THE UNITED STATES

PART XI
OF THE REPORT ON LAND PLANNING

1938

THIS PART WAS PREPARED BY THE NATIONAL PARK SERVICE FOR THE LAND PLANNING COMMITTEE OF THE NATIONAL RESOURCES BOARD

The National Resources Board assumes no responsibility for the views and opinions expressed herein
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PREFACE

On November 28, 1934, the National Resources Board submitted to the President, in accordance with an Executive order, its report on National Planning and Public Works in Relation to Natural Resources and Including Land Use and Water Resources. Part II of that report was the Report of the Land Planning Committee. In the course of preparing part II of the above report a large volume of basic data and information was collected which could not then be included. The publication of the present report is for the purpose of making such data and information available to interested persons and organizations.

The present land report has been organized into 11 parts according to subject matter and the contributing agencies. These 11 parts are made available as 11 separate publications. Organization and publication on this basis was done because many persons and agencies are interested only in certain parts of the present report, and the necessity of purchasing the whole report in order to obtain the desired part or parts is thereby eliminated.

The present land report, when conceived as a whole, does not purport to be a complete work on the subject of land utilization, or of its related problems and proposed lines of action; neither is it designed to be a thoroughly integrated piece of work. The primary aim here has been to set forth the facts, analyses, and the recommended lines of action as developed by each of the various contributing governmental bureaus, divisions, sections, or individuals, on the problems with which each of such agencies or persons is concerned. The points of view are, therefore, those of the contributing agencies or individuals themselves. The Land Planning Committee presents the report as information, but assumes no responsibility for the opinions expressed in it.

This report was prepared under the direction of Dr. L. C. Gray, director of the Land Section of the National Resources Board, aided by John B. Bennett, who served as administrative assistant and as secretary to the Land Planning Committee. Editing and preparation of the report for publication were under the direction of Mr. H. H. Erdmann, agricultural economist of the Land Section, National Resources Board.

Authorship by agencies and individuals is acknowledged in their respective contributions. The following governmental agencies have contributed to the whole report: The Geological Survey, the Division of Grazing Control, the Office of Indian Affairs, the National Park Service, and the Bureau of Reclamation, in the United States Department of the Interior; and the Bureau of Agricultural Engineering, the Biological Survey, the Bureau of Chemistry and Soils, the Forest Service, the Soil Conservation Service, the Weather Bureau, the Divisions of Land Economics, of Farm Management and Costs, and of Farm Finance in the Bureau of Agricultural Economics, and the Land Policy Section, the
Educational Opportunities

Production Planning Section, the Import-Export Section, and the Agricultural-Industrial Relations Section of the Division of Program Planning of the Agricultural Adjustment Administration in the United States Department of Agriculture. Credit also is due to the State agricultural experiment stations and extension services, State planning boards, commissions, and other State organizations and individuals for aid in preparation of several sections of the report.

Land Planning Committee

M. L. WILSON, Chairman.
OSCAR CHAPMAN. MORDECAI EZEKIEL.
W. G. MENDENHALL. JACOB BAKER.
H. H. BENNETT. CHARLES W. ELIOT, 2D.
L.C. Gray, Director.

Some trees are worth more to look at,—

—than to cut down.
LETTER

NATIONAL PARK SERVICE

DEPARTMENT OF THE INTERIOR

Washington, November 1, 1934.

DR. L. C. GRAY, Director,
Land Section, National Resources Board,
Washington, D. C.

MY DEAR MR. DIRECTOR:

Your Recreation Division, constituted in the National Park Service, submits this report on the recreational use of land in the United States.

The term "recreational resources" at once signifies both a human need for outdoor recreation, and the existence of tangible natural resources for satisfying those needs.

It is the object here to appraise the outdoor recreational requirements of the people and to determine how natural recreational resources can be best conserved in order to satisfy those requirements. The opening and closing arguments are one; namely, that the national welfare demands of planned land and water use the maximum provision for recreation that is consistent with other justifiable uses of these resources.

The method adopted has been to assemble statistical data and scientific opinion available on recreation, by such methods as could be employed within the physical limits of time and facilities allowed for the assignment. By the use of questionnaires, facts and opinions have been secured from Federal, State, and local agencies administering recreation, from private organizations and individuals interested in recreation, and from visitors to recreational areas. While it has not been possible to hold many personal interviews and conferences with individuals and organizations outside the working group, every effort has been made to glean the best thoughts of such persons and organizations by use of the documentary evidences of these thoughts.

The National Park Service wishes to express its appreciation of the opportunity afforded by the National Resources Board to make this study of recreational resources throughout the Nation.

Sincerely yours,

ARNO B. CAMMERER,
Director.
Recreational Use of Land in the United States

SECTION I
LAND USE AND RECREATION
1. ORIENTATION

The Problem

In the general program of the National Resources Board the National Park Service has been assigned the section which deals with recreational use of land. This has been interpreted to mean recreational use of land and water, since the two are actually inseparable.

The quest of the present report is not only for that recreational vein which flows abundantly through our national resources, but for the most effective means of tapping that vein. Shall it be in the easy and casual "water-witching" method, or shall it be a planned attack? Certainly, the real, human need for abundant and varied recreation, and the long-established value of a planned campaign, dictate that our method should be the latter. In other words, our recreational resources are to be considered in this report as national resources, to be found and developed under a national plan. Therefore, recreational use of land in the United States must be coordinated with other forms of land use.

To correct any misconception that a national plan for utilizing our national recreational resources would imply inhibition of individual choice of such values, it should be stated at the outset that the very essence of recreation involves an element of individual choice or freedom.

Recreation, as used in this report, connotes all that is recreative of the individual, the community, or the Nation. In this sense it is broader than the "physical activity" concept. It includes mental and spiritual expression. It allows gratification of the nearly infinite variety of tastes and predilections so far as that gratification is consistent with sustained utilization of the Nation's recreational resources.

A specific example of this broader concept is given by Lovejoy.

* * * the backbone of "outdoor recreation" is the production and direct or indirect utilization of 'wildlife.' In the past this has usually meant hunting or fishing facilities, but in the modern and wider sense includes the aesthetic as well; the chance to see a deer as well as the chance to shoot one; the chance to photograph a beaver lodge as well as to wear a fur collar; the chance to observe arbutus peeping through the snow-packed leaves, as well as to buy bunches of the naked flowers from a car window; the chance to wander down aisles carpeted with soft brown pine needles and to listen to the sighing of the zephyrs in the boughs, as well as to buy lumber.¹
National resources of recreational value may be found almost anywhere, and a national plan for utilizing them must include their conservation for recreational use. The conservation of any large national resource involves land-use planning of national scope. For example, recreation may be found in the conventionalized social routine of the popular summer resort, or it may be found in the solitude of the wilderness. Facilities for the former are commonly supplied. Suitable areas for the latter must be reserved before all have disappeared. They must be of sufficient extent to give complete satisfaction.

It is the purpose of this report to disentangle some of the conflicting and inhibiting views which have prevented national recreational resources from being used, and to present a plan for coordinating their use with other land uses.

This means that the recreational function of the various forms of land use must be analyzed, evaluated in relation to the other functions, and provided for by the various administrative organizations of the Nation according to their particular capacities and responsibilities.

The continental United States contains 1,903,000,000 acres of land. Of this, approximately one-half is physically adapted to the production of harvested farm crops for food, clothing, etc. Progressive developments in agricultural technique hold out the promise that from this one-half of the total land area, plus limited pasturage of parts of the other half, the needs of the prospective population of the United States for food, wearing apparel, and export commodities, etc., can be met for an indefinite period.

This primary and dominant fact raises sharply the question of the future economic and social destiny of the remaining half of the land area of the 48 States. It is not needed for farm-crop production. Our cultivated area needs contraction, not expansion, and attempts to use such lands for that purpose will entail expenditures of capital and human effort far disproportionate to the average returns obtainable. On the other hand, the abandonment of such lands, the cessation of all organized and systematic protection against deterioration and destruction, would set in motion a process of slow attrition which, over the years, would markedly impair one of the Nation's basic resources, its soil capital.

The fact that one-half of the land area of the 48 States is poorly adapted to and not needed for farm-crop production does not mean that it is lacking in potentialities for social and economic services. On the contrary it is rich in such potentialities, which readily can be realized by systematic

determination of the kinds of economic or social service to which specific types of areas of land are best adapted, and by the gradual adjustment of the use of such lands, through voluntary private action or legislatively authorized public action, to the forms of service so determined.

It is evident, for example, that a balanced economy and sound program of industrial and social organization will require that adequate supplies of timber be permanently available to meet national needs, and shall be so distributed regionally as to maintain a proper balance between regional production and consumption. To this end, a large proportion of the available area should permanently be dedicated to forestry.

Another need of large dimensions is that of provision for the scientific, educational, and recreational requirements of a population steadily growing not only in numbers, but in cultural standards; a need made progressively acute and important by the increase in leisure time and the growing intensity of metropolitan existence. To satisfy these needs an adequate part of the territory not required to feed or clothe the Nation or to furnish products for export should be dedicated to public service as parks, monuments, recreational areas, playgrounds, etc.

As time goes on, the great social, scientific, educational, and economic potentialities of the wildlife resources of the Nation gain enlarged recognition. Their conservation, development, and augmentation are dictated by all considerations of public interest and welfare, and the dedication to that purpose of large areas of available lands through their permanent establishment as wildlife refuges or sanctuaries, with certain related areas for public shooting grounds, would be good public economy, productive of a high type and return of social and economic service.  

FIGURE 1.

Discussion of Terms

The rapidly growing interest in recreation in America during the past 30 years has given rise to the frequent use of many words and terms not always clearly defined as to their functional meaning.

Because of this confusion, a few terms are defined here, since it is desirable that the reader know what meanings these terms have, as used in this report.

Outstanding among these words are "leisure", "recreation", and "conservation".

Other words and terms in common usage relate to specific land and water areas used for recreation, the most common of which is "park." Others relate to types of recreational facilities, and still others to types of activities, administration, and personnel.

Leisure.—Leisure is that segment of time in the life of any individual, separate and apart from time spent as necessary for his personal care, sleep, and securing the necessities of life for himself and those dependent upon him, and the accumulation of surplus wealth.

Leisure connotes freedom to act at will, while other forms of time consumption involve certain elements of compulsion, either real or imaginary.

Recreation.—Recreation is the creative use of leisure.

It takes many forms expressive of needs, desires, qualities, powers, interests, and instincts of individuals. In character, it may be passive, as in complete rest and relaxation without action; semiactive or mildly active, as in listening to music, viewing works of art or a beautiful landscape, strolling, reading for pleasure, attending a dramatic performance, witnessing sports and games, taking part in quiet conversation; active, as in participating in sports and games, swimming, rowing, hiking, riding, fishing, hunting, camping, playing a musical instrument or singing, acting in a play, painting a picture, studying for self-improvement, traveling, gardening, engaging in various kinds of
handicraft arts, dancing, taking part in civic, political, or social activities, writing, public speaking, or debating. In quality, recreation always involves the idea of freedom of choice and freedom of action. It has the further quality of bringing immediate personal satisfaction or happiness. Recreation is an end in itself; it may have and usually does have far-reaching beneficial results, both individual and social.  

3 "Recreation is any pleasurable activity of mind or body which is stimulating and refreshing, and which is entered into without compulsion or expectation of material gain. It is a form of wish fulfillment and is usually associated with leisure." Lee F. Hammer, Russell Sage Foundation, New York, Letter Aug. 17, 1934.

Conservation.—Conservation is the wise use of natural resources.

The conservation of any natural resource requires first that the resource be dedicated to the highest uses for which it is suited. The second requirement is for immediate protection against all influences adverse to this highest use. Then comes determination of the question as to whether the public interest will be best served by immediate or deferred utilization of the resource. If use is to be immediate, then a plan of development must be invoked which will perpetuate or possibly even increase the resource for the type of utilization to which it is dedicated. If the highest use of a natural resource is to be found in the perpetuation of its primeval condition, any or all developments which lessen this primeval condition are destructive of that resource.

Types of Recreational Areas

Park.—A park is an area set aside for recreation, especially characterized by landscape either natural or designed.

It functions recreationally as a retreat for the people for rest, relaxation, and inspiration, in an environment of quietness and natural beauty, and for such activities as do not essentially conflict with the character of a naturalistic landscape.

Playground.—A playground is an area designated and used primarily for the play of children.

Such areas are sometimes divided into three types: (1) The kindergarten playground for children under 5 or 6 years of age; (2) small childrenÕs playground for children from 6 to 10 years of age; (3) neighborhood playground designed for the use of children of all ages up to 15 years.

Auxiliary use: The neighborhood playground may have and usually does have an auxiliary recreational use for youths and adults.

Administrative authorities: Playgrounds are types of areas most commonly provided in municipal recreational systems and in connection within educational systems. They are, however, frequently provided in county and metropolitan recreational systems.

Playfield.—A playfield is an area designated for the sports and games of
young people and adults.

Auxiliary use: A playfield area may include a children's playground.

Administrative authorities: Playfields are most commonly provided in municipal, county, and metropolitan recreational systems. They are likewise common in educational systems, and occasionally appear in State recreational areas.

**Athletic Field.**—An athletic field is all area designed for highly organized, competitive games and sports of youths and adults.

Attendance at athletic fields is usually subject to a fee, the design including provisions for track and field sports, competitive, highly organized games, seating for spectators, and field house, the entire area being enclosed with a wall-like fence.

Administrative authorities: Athletic fields are most commonly parts of municipal recreational systems and school systems, but are also occasionally found in county and metropolitan recreational systems.

**Recreation Center.**—A recreation center is an area designed and equipped for a wide variety of outdoor and indoor recreational activities for children, youths, and adults.

The design for such an area includes a children's playground, outdoor games and sports facilities for young people and adults, outdoor or indoor swimming pool, and a recreation building or community house equipped for social, civic, cultural, and physical activities.

Administrative authorities: Such areas are most commonly parts of municipal recreational systems, but are also occasionally provided in county systems. In many modern public schools systems may be found such a combination of an area and a building as would qualify as a recreation center.

**Neighborhood or "Intown" Park.**—A neighborhood or "intown" park is a recreational area designed according to the principles of landscape architecture primarily for adornment of the neighborhood in which it is located and as a place for relaxation for the inhabitants living near it.

In size, such an area may range from 2 or 3 acres to 20 or 30 or even more acres.

Comment: The neighborhood or "intown" park is the modern descendant of the "commons", "plazas", "squares", of the colonial towns and cities.

Auxiliary uses: It is not uncommon to use such parks for the play of very little children, conducting of concerts, dramatic performances, socials, neighborhood civic celebrations, and other public gatherings.

Administrative authorities: This type of park is most commonly found in municipal recreational systems, but appears occasionally in county and metropolitan systems.
**Large Recreational Park.**—A large recreational park is an area ranging from several hundred to several thousand acres, designed and constructed according to those principles of landscape architecture known as the "naturalistic", preserving and presenting a varied naturalistic landscape, and primarily intended as a retreat for the people for relaxation, inspiration, and enjoyment of the beauties of nature, and renewal of contact with the soil and growing things; as an escape from the crowding, sights, and sounds of the city; and for such active recreations as fit harmoniously into a naturalistic landscape.

Comment: These large recreational areas have become commonly subjected to uses not in harmony with their primary purposes or character, such as being utilized to an excessive degree as sites for playfields athletic fields, stadia, or swimming pools—a practice that unfortunately is likely to continue.

Administrative authorities: This type of park is most commonly associated with municipal recreational systems but it also appears in county and metropolitan recreational systems in those situations where such systems exist under practically urban conditions.

**Parkway.**—A parkway is an elongated, naturalistic, landscaped, recreational area comprising as its prominent features a pleasure driveway with a bridle path and hiking trail through its entire length, not always but often connecting two or more large recreational areas of park character.

Auxiliary uses: The areas along a parkway road frequently present opportunities for various forms of passive recreations and for such active recreations as picnicking, hiking, riding, bicycling, playing of games in open meadows; and swimming, boating, skating, and canoeing, if the topography includes a stream.

Administrative authorities: Parkways are features of municipal, county, metropolitan, State, and national recreational systems.

**Stream. Easement.**—A stream easement is an area along the bank or banks of a stream leased for a special period of time by some public agency for the purpose of allowing the public free access to the waters of a privately owned stream for fishing.

Administrative authorities: Such easement areas are administered at the present time (1934) exclusively by State agencies.

**Great Pond.**—A great pond is an area of natural water of 10 acres or more to which the public has a right of free access for fishing and fowling subject to Federal-State laws regulating fishing and fowling.

**Types of Wildlife Reservations**

Since the various forms of wildlife utilization provide different types of recreation, and since these different types of recreation frequently demand conflicting uses within a single wildlife area, it is desirable to define types of wildlife areas according to their uses.
**Wildlife Sanctuary.**—A wildlife sanctuary is an area set aside and maintained for the inviolate protection of all of its biota.

This is the type of area which is set aside for the pleasure of seeing and studying the biota, and is not subject to hunting, trapping, or any other commercial utilization. Whether or not the biota of the sanctuary produces a surplus which is harvested outside the boundaries of the sanctuary is incidental when compared with its main objective—protection.

**Refuge.**—A refuge is an area wherein protection is accorded to selected species of animal life.

Refuges are established for either game (game refuge) or nongame animals (i.e., pelican refuge) or in some cases both, but they involve the protection of the selected species for some particular purpose, whether that purpose is a matter of aesthetics, scientific investigation, hunting, or commerce. Other forums of animal life predatory upon or adversely affecting time selected forums within the refuge might be controlled.

**Preserve.**—A preserve is an area set aside and maintained for the production and/or harvesting of wild animal life on a sustained yield basis.

**Wildlife Preserve** is an area set aside and maintained for the production and harvesting of any or all forms of the native biota on a sustained yield basis.

**A Game Preserve** is an area set aside, and maintained for the production and harvesting, or harvesting only, of game animals.
Recreational Use of Land in the United States

SECTION I
LAND USE AND RECREATION
2. SUMMARY

Recreational Resources

The desire of the American people for the kinds of recreation that lands of various types may provide is a natural and legitimate one. It amply justifies public agencies, Federal, State, and local, in assigning lands to recreational use. That this desire is universally prevalent needs no argument—it has been conceded for a long time.

The history of the public recreational use of lands in the United States dates back to the town commons, squares, plazas, and great ponds of colonial times. Though town planners did not give much thought to recreational areas following the close of the colonial period, the movement has gained great impetus since the middle of the last century. New York took the initiative by establishing Central Park, and the Federal Government entered the picture when Yellowstone National Park was created. Today magnificent park systems of certain cities and States conclusively demonstrate both the desires of communities and the attainment of these desires. In their fulfillment is indicated in large measure the cultural achievements and standings of the respective communities.

Social and economic trends indicate a greater need for recreation, and there is a strong and growing tendency toward universal appreciation and understanding of outdoor recreational values. This is well exemplified in the rising protest against the continuing destruction of the Nation's few remaining wildernesses. The trend is in the direction of a great variety of new uses of land and is fulfilling the high motives of those who originally made recreational areas possible.

Since the recreational use of land does not stop with physical rehabilitation, but, in addition, stimulates invigorating mental exercise and cultivates salutary mental dispositions, the possession of which may be determining factors in the quality of life in the community, State, and Nation, it is vital that recreational resources be protected and developed.

It is this broader aspect of public policy which has actuated the Federal, State, and local recreation agencies, while fulfilling their duties as preservers, to render the possessions in their custody enjoyable and culturally profitable to the public. This has resulted in the provision of educational staffs, museums, road and trailside exhibits, and a wealth of informative literature—high attainments in rendering recreational resources culturally profitable and enjoyable.
The recreational desires of a progressive people, however, are not and cannot be satisfied with what a single governmental agency may provide and administer. A citizen may find congenial recreation in the inspection of various governmental projects and activities. One visitor may stand spellbound at the brink of a canyon, while another enjoys equivalent emotions when looking down upon some huge engineering project.

It seems that the time has come when the concept of our national recreational resources can no longer be limited solely to certain prescribed areas specifically and primarily devoted to recreational use. It must instead, as far as is practicable, comprehend all those resources of the country as a whole which are susceptible of use for recreation. In this concept, lands held as public parks or monuments appear as a subdivision, though a highly important one, of the vast lands which, in greater or lesser degree, can and will contribute recreational satisfaction. Furthermore, if the fullest recreational usefulness is to be derived from these resources, information concerning them should be widely disseminated.

It has been with such a concept in mind that the Federal Government has carried forward its task. Impressed though it has been with the importance of the service which it should render in the field of recreation, it also has been keenly aware that, if recreational lands are to be considered from the standpoint of the total number of persons who use them, and the frequency of their use, then the focal point and the foundation of a national recreational program is within the numerous municipalities and their immediate environs. It is there that the need for publicly provided facilities is greatest, and it is there alone that frequent use, by all for whom these facilities are designed, is actually possible. No other recreational system can possibly be laid out on a basis of such frequency or universality of use.

The users of the recreational facilities to be provided by the States, incomplete though the State systems be, are several times as numerous as the users of the far-flung areas owned by the Federal Government. Upon the States rests the responsibility for acquiring and conserving examples of the native landscape which deserve protection, but which lie outside the field either of the Nation or of the municipalities, as well as places which possess similar distinction because of historic, prehistoric, or scientific features. Every reasonable encouragement and cooperation needs to be given them by the Federal Government in order that they may occupy satisfactorily the place in the national recreational scheme which is properly theirs.
Recreational Needs of the People

Man is essentially an outdoor animal as far as his biological and physiological needs are concerned. The supplying of means for the satisfaction of these needs among a highly urbanized people is one of the fundamental reasons for the reservation of lands and waters for recreational use. It is one of the laws of the growth of human beings that there is required a considerable measure of activity in forms expressive of age-old urges, impulses, and instincts. Juvenile and youth delinquency, and other antisocial expressions are, without question, partly the result of society's failure to recognize this principle.

Population in the United States increased from 4,000,000 in 1790 to 123,000,000 in 1930, but the rate of increase has been declining since 1860. The trend indicates that growth of the population in the future will be small, the estimate for 1980 being 170,000,000. The total birth rate has been falling steadily, which means that the proportion of older people in the population is growing larger. This trend has been accentuated by a steady decline of the death rate. Present indications are that the proportions of native whites will increase faster than Negroes, and that the proportion of foreign-born whites will decline.

Population is distributed very unevenly throughout the United States, as is well illustrated by the fact that the Mountain division has 3 percent of the population and 28 percent of the total land area, whereas the New England, Middle Atlantic, and East North Central divisions, comprising only a little more than 13.7 percent of the total land area, have almost 48.7 percent of the total population. Study of population distribution is helpful in revealing where particular attention should be given to reserving lands and waters, if the people are to have adequate and frequent opportunities for outdoor recreation.
Recent trends in urban and rural population have an important bearing upon recreational land problems. For instance, in 1890 the rural population made up 64.6 percent of the total population, while in 1930 it was only 43.8 percent. At the same time, the last census showed that the large cities have increased in area, but not in density of population within their older sections. Three-fifths of the total population increase occurred in five well-defined groups of cities which had but 26.2 percent of the Nation's population in 1920. Today a total of 47,395,009 inhabitants, or approximately 38 percent of the total population, is crowded on one-fifth of 1 percent of the total Land area of the United States.

Recreational needs and requirements during the past 70 years have been affected profoundly by the tremendous shift from agriculture to industrial, commercial, and professional occupations, because of the resultant concentrations of population.

In 1930 only 21.3 percent of all gainfully employed persons over 12 years of age were engaged in agriculture, lumbering, and fishing, whereas manufacturing and mechanical industries, trade and transportation, and clerical employment accounted for 57.5 percent.

In 1890, 18 percent of all children from 10 to 15 ears, inclusive, were gainfully employed. When the new code regulations went into effect in 1933, the employment of this age group was practically abolished. Since school attendance of children and young people occupies only 6 hours a day and 180 days a year, it behooves the public to provide adequate recreational facilities for them, so that their leisure time may be utilized beneficially.

With the continued development of labor-saving devices and scientific management of industry, opportunities for gainful employment will be fewer. There has been a steady decline since 1910 in the percentage of males in all age groups gainfully employed. The decrease in opportunities for gainful employment will likely affect more and more the children, young people, and old people of both sexes. Between these two extreme age groups there will be a group of gainfully employed persons working shorter hours.

This situation—fewer persons gainfully employed and shorter hours of work for those who have employment—creates an unprecedented and critical problem which demands farsighted planning for use of the increased amount of leisure at the disposal of the public. This leisure can be made of value in raising the physical, cultural, and spiritual level of the American people, if proper provision is made for its use, and it is guided into proper channels. Failure properly to provide for it throws the doors wide open to every antisocial influence, since the truth of the old saying "the devil always finds some work for idle hands to do", is as true now as it ever was.

In addition to planning for the recreational use of leisure, it would appear highly desirable to devise ways and means of using a measure of this enforced leisure in various forms of public service, as is being done now through the Civilian Conservation Corps, and also in developing
All of these conditions have given rise to the public responsibility for bringing about an adjustment between nature and man, out of which have come the present provisions and new plans for varied types of recreational areas.

**Geography of Recreation**

Humanity is distributed without any orderly relationship to recreational resources. When population is favorably situated with reference to recreational resources, it can only be considered a matter of fortunate accident. Recreational planning cannot be successful unless it takes into account the discrepancy between the distribution of populations and recreational resources.

Variety of elevation is an important factor in the recreational value of lands—the mountains are always eagerly sought. Water resources—lakes, streams, waterfalls, bays, and oceans—are a factor of the utmost significance in the recreation scheme, both because they constitute such a great part of the beauty of the outdoor scene, and are highly valuable for active recreation. On almost every recreation area the greatest concentration of use occurs in the immediate vicinity of the water. It is a happy circumstance that 45 percent of the total population, or 55,000,000 persons, live within 55 miles of the sea coasts and Great Lakes.

It is axiomatic that pleasurable outdoor recreational experiences require favorable climatic conditions. Rainfall, sunshine, humidity, and temperature all have their effect upon the pattern of recreational geography.

Flora and fauna provide the living interest, without which no
recreational area is complete. Forested areas, of course, rank high in the order of preferment, and natural abundance of plant life of many kinds is always an asset. In the geography of recreation, the variety, abundance, and the distribution of fauna are important factors. The smaller forms of wildlife, particularly the birds, add materially to the value of the smallest recreational areas, such as downtown parks and residence gardens. Hunting and fishing are among the leading, if not the greatest, of American outdoor recreational activities. They are factors which exert a great "pull" on population.

While all these factors have an important bearing on recreation from a national viewpoint, they have an equally important recreational significance considered from a regional, State, county, or metropolitan viewpoint, the principal difference being that the range of choice progressively decreases as the size of the unit under consideration decreases. Other things being equal, that area, whether national park, regional park, State park, or metropolitan park, which has favorable natural factors of the highest order available within the area be served, will exert the strongest "pull", and will tend to the greatest extent to refute the validity of any scheme which is based on a fixed pattern of distribution.

Continued >>>
SECTION II
RECREATIONAL RESOURCES AND HUMAN REQUIREMENTS

1. HISTORY OF RECREATIONAL LAND USE IN THE UNITED STATES

The history of the public recreational use of land in the United States may be said to date from the earliest colonial settlement. In a modest way, and more often for general civic purposes than for recreation as known today, the early town planners and builders made provision for open spaces in their plans. The New England town common is a distinguishing feature of the New England cities of today; the bowling green of Dutch New Amsterdam was an active recreation center; the squares of old Philadelphia and Savannah were reservations for aesthetic, rest, and relaxation purposes; the plazas of the Spanish colonial towns were social, political, and cultural centers. The plans for the new capital city of the Nation, drawn toward the end of the eighteenth century, set a new standard in the number of open spaces or reservations for parks in cities of that time. A decision of the Boston Bay Colony in 1641, that all "Great Ponds" were to be forever open, free to the people for fowling and fishing, was the forerunner of the modern conservation movement for recreation purposes by States.

Unfortunately, from the close of the colonial period to the middle of the last century these excellent examples of town planning and building were not followed except in a few instances, as in Salt Lake City and other towns of Utah, California, etc. Old towns grew into cities, new towns and cities were founded and grew rapidly without any comprehensive planning of open spaces for adornment or recreation. Waterfronts in cities were appropriated for industrial, transportation, and commercial uses. No plans or policies were developed in the first seven decades of the last century by either the Federal or State Governments for the preservation of natural resources of land and water for recreation. About the middle of the last century a few people, noticing the tendency toward urban growth, began to write and speak of the individual amid social evils of crowding too many people on too small areas in cities, without making provision for the people to keep in frequent contact with the elements of a natural environment. They advocated the preservation of large areas within cities to serve as retreats for the people, for rest, in an environment of peace, quietness, and natural beauty, and for such forms of active recreation as would not destroy the essential quality of the areas as places of inspiration and enjoyment of the beauties of nature.

The first concrete result of this movement was Central Park in New York City (1852), followed in rapid succession by the establishment of similar parks in several other large cities of the United States.
From these beginnings during the last half of the last century, have evolved the elaborate systems of recreational areas providing for both active and passive recreations in the cities of today.

The establishment of Yellowstone National Park in 1872 marks the entrance of the Federal Government into the field of conservation of natural resources for recreation, from which has grown the magnificent system of national recreational areas comprised in the national parks and monuments.

Between 1870 and 1890 a few States (California, New York, Michigan, Minnesota) began to establish State recreational areas—a movement which has since spread to nearly every State in the Union.

In 1892—93 the Boston Metropolitan Park System was established as a special method of handling on a district basis the acquisition, development, and administration of recreational areas which it was not practicable for local, town and city, governments in the region to handle alone. The metropolitan district plan has spread to other sections of the country, as seen in Rhode Island, Ohio, Washington, and Illinois.

In 1895 the first county park system was established in Essex County, N. J. Within the past two decades the acquisition, development, and administration of recreational areas by counties have progressed very rapidly. The principal developments have been in counties in the metropolitan regions of large cities, serving practically the same functions as metropolitan park districts, although in a few counties the recreational service provided is primarily for rural and small rural-urban communities.

In all of New England and in some of the other States of the Union the acquisition, development, and administration of recreational areas by townships is authorized by law, powers which have been exercised by many such minor political divisions.

Supplementing areas which have been set aside for various kinds of recreational use by the Federal, State, county, metropolitan, municipal, and town Governments, there are other types of areas which have been acquired by one or more of these political agencies for other primary purposes, but which may have auxiliary recreational uses. Chief among such areas are public forests. The public ownership of forests to its present extent is a development of the past 50 years, although the inception of the movement was earlier. Classed according to ownership, there are National, State, county, municipal, and town forests, with the Federal Government controlling the bulk of such areas. The water reservations, controlled chiefly by cities, and a few metropolitan districts, for supplying potable water to the inhabitants of urban communities, constitute another type of publicly owned areas with a possible auxiliary recreation use. Sanitary considerations often limit the recreational use of potable water reservations, although there are many examples of such use; water reservations for the purpose of supplying water for irrigation, industrial, and power purposes have many possibilities as recreation areas, and are becoming increasingly so used.
The various forms of wildlife reservations set aside, chiefly by the Federal and State Governments, are primarily of recreational and scientific value.

The vast system of National, State, and local highways which cover the country like a network, while not originally created for recreational use, have become of primary importance recreationally, since the invention and widespread ownership of the automobile.

During the past decade attention has been directed to planning of metropolitan regions, and in all such plans a prominent position has been given to conservation of lands and waters for recreation.

![Figure 11: Major Uses of Land in the United States](http://www.nps.gov/history/history/online_books/recreation_use/chap2-1.htm)

A little over half the land in the Nation is in farms. Of this land in farms, 38 percent was in crops in 1929 (including crop failure), 37 percent was in pasture (excluding woodland pasture), and 15 percent in woodland, the remainder being crop land lying idle, farmsteads, lanes, and waste land. All crop land is in farms, but the acreage of pasture, including range land outside of farms, exceeds that in farms. About 60 percent of this pasture land not in farms is publicly owned and 40 percent is privately owned. Nearly all this land is in the western half of the country and consists of range, mostly native, short-grass and bunch-grass vegetation adapted to the semiarid or arid conditions, in addition, much forest and woodland (over one-half) is grazed, particularly in much of the west and portions of the south, where the forest is quite open, permitting sunlight to reach the soil. The carrying capacity of this woodland pasture, like that of range pasture, is generally low. The 53 million acres of land used for nonagricultural and nonforest purposes is small, but its value is great, particularly the urban land. Finally, there are about 77 million acres of absolute desert, bare rock, certain marsh lands and coastal beaches which are now valued at almost nothing, but have a social utility for wildlife and recreational use.

Looking to the future, it appears that the estimated prospective increase in population is likely to involve a slight increase in crop land, a decrease of pasture land and of forest in farms, if past trends continue, and increase in forest not in farms, more and more of which seems likely to pass into public ownership, and a notable increase in land devoted to recreational purposes. The increase in crop land will be the net result, as in the past, of decreases in some areas, mostly hilly or eroding lands, or sandy or infertile soils and increases in other areas inherently more fertile or less exhausted of their fertility, or
otherwise more productive, or which can be made productive by reclamation.

Within the past 2 years interest has centered on National and State planning through the creation by President Roosevelt of the National Planning Board, later reorganized as the National Resources Board. This organization has stimulated the organization of a large number of State planning boards. Practically all of these State planning organizations have either actually undertaken or contemplate a thorough-going recreational survey and plan for their respective States.

These various public administration agencies have been the primary factors in the evolution of the various systems of National, State, metropolitan, county, and municipal recreation areas, supported, inspired, and sometimes prodded by powerful private organizations of citizens interested in different phases of the conservation of national resources for recreation.

Early in this century the general city planner and the city planning board became another important factor. Planning land utilization for recreation in cities is universally recognized as a fundamental part of general city planning.

Coincident with the establishment of the first municipal parks, an administrative agency was desired in each city to have charge of the acquisition, development, maintenance, and operation of lands for recreational use. This agency universally took the form of a board of citizens, a plan of government still widely prevalent in cities today, although changed in many by the institution of new forms of municipal government (city manager, strong mayor, and commission form of government). County and metropolitan park systems are almost universally governed by boards of citizens, and many of the States have adopted this method of administering recreation areas.

The public recreational movement in America represents a conscious cultural ideal of the American people, just as the great system of public education represented such an ideal. It takes rank with the system of public education as the necessary addition to the cultural equipment of the Nation. Its supreme objective is the promotion of the public welfare through the creation of opportunities for a more abundant and happier life for everyone. The conservation of the resources of the Nation to this end is a most fundamental and important phase of the recreation movement.
Physiological and Moral Aspects

Man is essentially an outdoor animal as far as his biological and physiological needs are concerned. Some of the fundamental requisites for his well-being are an abundance of fresh, pure air and sunlight, pleasurable physical activity—especially out of doors—and periods of rest, relaxation, and repose in environments of natural beauty, free from too close human contacts, and from the harsh noises and the high-speed tempo of this machine age. These needs are common to all ages and to both sexes. The supplying of means for the satisfaction of these needs where people are highly urbanized is one of the fundamental reasons for the reservation of lands and waters for recreational use.

It is one of the laws of the growth of human beings (whether growth refers to physical development, mental expansion, cultural enrichment, or social adjustment) that a considerable measure of activity is required in forms expressive of age-old urges, impulses, and instincts. Fullness and richness in living come only when there can be satisfying expression of the natural qualities and powers of the individual which are of physical, mental, spiritual, and social character, during all the age stages of his life. Society justifies itself only to the extent to which it utilizes the natural resources in its keeping. The troublesome question of juvenile and youth delinquency and other antisocial expressions are, without question, partly the result of society's failing to recognize this principle.

It is said that little can be done by society to change the fundamental traits or qualities of any human being, but that much can be done through environment to form attitudes and to determine the direction in which interests and instincts may be expressed. The difference between a delinquent child or youth and a law-abiding child or youth is generally the difference in expression of the same human impulses to action, which—originally neither good nor bad—were subjected to different environmental influences. The lighting impulse which leads a youth to commit law less acts with his "gang" is the same impulse which may make him a highly prized member of an organized sports team. Hence it follows that, given an environment comprising material facilities for the expression of natural, normal impulses, interests, and urges, and given intelligent, sympathetic leadership, it is possible for most children and young people to live fully and happily in harmony with the established usages, customs, and laws of the community.
Like all other natural resources, recreational resources exist where Nature has scattered them in careless abandon, and without any orderly relationship to human demand. When they are favorably situated with reference to populations, it can only be considered a matter of fortunate accident. Moreover, since the industry of man is definitely detrimental to those recreational resources whose principal value lies in their wilderness character, recreational areas of this particular type are nearly always remote from centers of human concentration.

Because the everyday outdoor recreational needs of the people must be met by facilities which are immediately at hand, large expenditures are constantly being made within city and metropolitan district boundaries for the purpose of restoring, at least to a semblance of natural character, areas whose natural recreation facilities have been spoiled by human activities.

It is well to note that even within a city the selection of recreational areas is governed to a large degree by topography. Natural ponds and lakes, the depressions occupied by streams, and the more rugged hilltops are areas whose natural characteristics give them preferred recreational value. Fortunately, such sites are frequently of minor value as real estate developments.

Geographical factors, more than anything else perhaps, are responsible for the element of Federal responsibility for recreation. Scenic, climatic, and wildlife resources do not recognize the boundaries of political subdivisions. Where use of these resources is had by all of the people, the Federal Government has the responsibility of safeguarding them. Recreational planning cannot be successful unless it takes into account the discrepancy between the distribution of populations and recreational resources.

Population—its nature and the pattern of its distribution—is of the greatest importance in locating areas which are to be devoted partly or wholly to recreation. A "counter pull" is exerted by a group of natural factors, some of which are almost generally given consideration, some of which are more often than not quite neglected. The very existence of these natural factors and their "pull" are inconsistent with the idea that there should, or ever could, be a more or less fixed pattern of distribution of the areas and facilities which people desire for their leisure time use. These factors, all of which need to be weighed against population distribution in the selection of parks and other recreational areas, appear to be as follows:
Land Reliefs

Variety of elevation is one of the important determinants in recreational value of land. Park folk in their search for recreational locations instinctively look for areas which possess this quality. Moreover, persons planning vacation trips are prone to seek locations whose altitudes are opposite from those of their home environments. Change of environment, as is well known, is in itself a recreational factor of the greatest importance. The altitude factor enters here with a special emphasis, because of the physical refreshment which most people experience from a change of environment of this particular sort.

The accompanying relief map of the United States (fig. 16) shows clearly the distribution of the principal mountain ranges of the country. It emphasizes the fact that the majority are located in the western part of the country. Comparison of this map with the map (p. 26) of present and proposed Federal park areas demonstrates how variety of land relief has been a determinant in the selection of a majority of the national parks.

Monotony is anathema to recreation. The maximum varieties of scenic interest are to be found in the rugged areas, whereas the plains only provide minor variations of the one scenic theme. All of a plain is usually within one life zone, whereas mountain ranges frequently include as many as five life zones. Thus, topographical variety brings a variety of flora and fauna. There are many other points which could be brought out to illustrate the importance of land relief in the recreational picture, but this hardly is necessary, since the recreational values of the mountains are universally recognized. Rugged areas are high in recreational value, but as a general thing they are remote from large population centers.
SECTION II
RECREATIONAL RESOURCES AND HUMAN REQUIREMENTS

4. HISTORIC SITES AND RECREATION

The relationship of historic sites to a general report on recreation becomes clear when it is realized that at present there are 600 or more historic and archeological sites merged more or less completely into existing Federal, State, local, and private recreational systems. Public holdings embrace sites covering all periods of American development, and contain extensive archeological remains, including many in the Southwest. Among the more notable historic sites are colonial homes, Revolutionary battlefields, sites associated with the lives of Washington, Lincoln, and other famous men, battlefields of the Civil War, besides reminders of our more recent history. In the various State park systems, and grouped as public holdings, are approximately 200 historical and archeological sites, scattered through 30 States. Of varying sizes and types, these areas include Indian remains, sites of battles with Indians, early French and Spanish forts and missions, colonial houses and forts, battlefields of the American Revolution, many early log structures, pioneer sites, and other remains connected with the westward development of the country, homes of individuals famous in American history, and other memorials.

Besides the public holdings, summarized above, there are numerous historical and archeological sites of genuine and widespread recreational interest owned by semi-public or private historical organizations and societies, or by individuals, but open to the public. These holdings include a great many historic houses, besides Indian mound sites, farm plantations, and even complete villages, dotting the country from Maine to California. Most of these have been developed in the past 40 years, and the greater proportion in the past 15. Drawing hundreds of thousands of visitors every year, these Federal, State, and local holdings form an important element of national recreational resources and the national recreational program.

Besides the problem of planning for the best use of existing park facilities, development of land and water use on a broadly planned scale raises the question of preserving historic and archeological sites which are at present unprotected.

In the midst of the great changes now affecting our national social and economic structure, it is easy to destroy undeveloped historic and archeological sites without giving full consideration to their importance. Industrialization, urbanization, movements of population, regional planning, electrification, housing programs these can easily crush, in their onward way, the fragile, and irreplaceable symbols which tie us to the past, and which we may later wish we had preserved.
development of a great river valley, in its electrification, in the
migrations necessitated by demand for a balance between agriculture
and industry, there is a tendency, more local than national, to demand
the destruction of old buildings and ancient remains, in order "to clear
the way for the future." Old log cabins, a dilapidated southern plantation
home, an Indian mound, as characteristic in their way as an old castle
along the Rhine, may appear to the persons directly charged with
carrying out a broad social plan to stand in the way of progress. But
actually such buildings may be an invaluable national asset, as real as a
hundred square miles of forest, and more completely irreplaceable when
lost. Such structures provide us with a feeling of continuity in our
development, they recall to our minds our most valuable traditions, such
as pioneer courage or the generous social impulses of the South; they
give us faith in our ancestry; and they provide us with visible symbols
of the long, steady progression of our civilization.

In a general program which looks toward widespread physical changes
in land and water use, attention should be given to the protection and
preservation of important historical and archeological remains during
the process.

With regard to matters of population, it should be noted that there is a
relatively close correlation between the distribution of historic sites and
the distribution of population. This fact possesses a double significauce.
The growth of population, with the resulting urbanization and
industrialization, is likely to result in an undiscriminating destruction of
everything old, unless legislation is enacted, as in European countries, to
prevent it. Secondly, since historic sites are often already close to large
bodies of population, they are in a position to furnish a natural and
inspiring form of recreation amid education without involving the
necessity of leaving the population areas.

There is likewise a close relationship between geography and history,
the former having in one sense laid a natural basis for the great main
line of American development. The location of our historic cities, the
population in our fertile valleys, the sites of the battles on American soil
are to be explained largely in terms of geography. The great natural
highways and avenues of communication throughout America are
likewise often the historic routes—the Cumberland Gap roads, and the
Hudson Valley and Ohio Valley routes, for example. In American
development, historic and geographic elements have become
intermingled.

Historic sites fill an essential social need, and it follows from this that a
program regarding them is a public responsibility. Our American
historic sites are among the most important tangible symbols of our
unity as a Nation. From California to Maine and from Texas to
Michigan we have a common cultural and social interest in our
background, in the events that made our Nation, in the great experiences
of the Revolution and the Civil War. Symbolized in such places as
Yorktown, Gettysburg, and Abraham Lincoln's birthplace, this common
national history forms perhaps our strongest single social bond.
Furthermore, historic sites help to nourish our national traditions out of
which much of culture comes. The pioneering outlook of the West, the
social generosity of the South, the civic strength of New England, are among the most important social resources of America. To allow the historic buildings and sites which embody these traditions to fall away from neglect is to nullify the physical evidences of the best productive labors of our forefathers. Especially to people in great cities, where crowding populations and industrial ugliness are strong, contact with the survivals of an earlier America brings "an invaluable corrective to their mental and imaginative outlook." To insure the accomplishment of this by some agency, public or private, is an essential duty of government.
Perhaps because recreation is more than just pleasurable physical exercise, perhaps because it partakes of the freedom of open country, the "competitors" which logically come to mind are those which directly affect the attractiveness of the open country. Some of these are: Private consumption of recreational resources, water pollution, lumbering, grazing, drainage, and artificial stream control.

Private Consumption of Recreational Resources

The common desire to own a small segment of forested lake front or stream side for a summer home or resort is rapidly leading toward the exhaustion of this waterfront resource, insofar as its availability to the great portion of our population is concerned. The desirable and habitable areas can be quickly consumed by a relatively small proportion of the population. It is, of course, true that great recreational value may accrue to the occupants of such retreats, but the question arises: Is this luxurious and extravagant utilization of a limited resource the wisest use? When every choice lake front, stream side, and beach is taken by private homes, clubs, stores, amusement devices, and exclusive resorts, will the common demand for outdoor living have been satisfied? It is not probable.

Unnoticeable, at first, is the fact that some summer homes, dude ranches, and resorts occupy the strategic points which actually control the much larger hinterland. The wilderness—whether pristine or greatly modified—is an organism. For example, if the stream banks, lake shores, and springs are taken by a relatively few residents, the whole area is, in effect, taken. Likewise, if a summer home is located at the mouth of a precipitous and scenic canyon or secluded mountain valley, the use of the entire canyon or valley is, in effect, preempted by the one holder, his family, and guests.

Examples of this sort of private consumption are to be found among the resort and summer-home colonies at Grand Lake and around Estes Park, Colo.; Lake Quinault and Lake Crescent, Wash.; some of the dude ranches of Wyoming, Montana, Idaho, and Colorado; and, in general, in the numerous strategically located private holdings around almost every lake in the East.

Let us take a specific example. At the south end of Grand Teton National Park lies Phelps Lake—an unusually picturesque lake at the
mouth of a precipitous gorge which cuts back into the Tetons. The trail to this section of the mountain hinterland leads up the gorge behind the lake. Until 1932 a private ranch controlled the lake. A mile away from the lake the public was halted by a fence and a "no trespass" sign which could only be hurdles at the price of $10 a day. This one ranch, then, not only consumed a beautiful lake and mountain setting but also controlled hundreds of square miles of superb mountain hinterland. This same case could have been repeated at numerous places along the base of the Tetons; in fact, this type of wilderness utilization would have had the mountain range completely locked and closed, except to a few people, had it not been for the establishment of Grand Teton National Park and the subsequent efforts of the Snake River Land Co.

The location of such privately owned recreational facilities frequently limits the use of vast recreational resources to a comparatively few individuals. Such is the manner in which large portions of this type of recreational resource are being dissipated. It is submitted, therefore, that the policy of permitting summer-home and resort sites within public lands of recreational value should be carefully reconsidered to the end that a more equitable and sustained use of the resource may be attained.

Continued >>>
SECTION II
RECREATIONAL RESOURCES AND HUMAN REQUIREMENTS
6. ECONOMIC ASPECTS OF RECREATION

Since it costs money—somebody's money—to provide recreation and the facilities for it; since such provision has certain direct and indirect economic results along with social results; since it is enlightening at least to explore the possibility that public provision of certain kinds of recreation is economically justified, the following questions, all economic in nature, may be reasonably propounded:

1. Just what is the place and the importance of recreation in the modern economic picture?

2. What is the total cost of providing Americans with leisure-time occupation?

3. What desirable stimuli, if any, are given to business by the pursuit of recreation, and more specifically by governmental provision of opportunity for recreation?

4. What effect does the establishment of parks have on business property values and employment?

5. To what extent does the meeting of recreational demands provide employment?

6. To what extent does the public provision of recreational facilities affect other public expenditures, such as for jails, insane asylums, hospitals, etc.?

7. What part of the total cost of providing recreation is properly a public responsibility?

8. How is the public to bear its share of the cost of (a) selecting, (b) acquiring, (c) developing, and (d) operating recreational facilities?

9. What costs may the user of publicly owned recreational facilities be expected to bear?

10. What is the extent and importance of private enterprise in recreational economy?

Some of these questions, and others that arise out of them, can be answered rather positively and surely; for others the information available is incomplete, difficult to evaluate, and the answers must at best be approximations of the truth; some must at present rest almost completely on opinion.
PRESENT EXTENT AND USE OF PUBLIC LANDS FOR RECREATION

1. FEDERAL LANDS

Lands Administered By National Park Service

*Functions.*—The primary function of the National Park Service is to provide an administration for national parks, monuments, and reservations with the objects of preserving their scenery, natural and historic objects and wildlife, and of providing for the public enjoyment of the same in such manner as to leave them unimpaired for the future.

The Executive order of June 10, 1933, greatly increased the work of the National Park Service by transferring to it (with certain exceptions) the parks, monuments, cemeteries, and memorials from the War Department, national monuments from the Department of Agriculture, and, further, increased its primary functions by charging it with the administration of public parks within and contiguous to the District of Columbia and (with exceptions) public buildings, both within and outside the District, and the duties and responsibilities of the former Public Buildings Commission, including control and allocation of space.

*Scientific Data Available.*—(a) There is careful planning in the subdivision of land uses within each park and monument, and master plans are used to control development in such manner that proper use of each class of land will be assured.

(b) Systematic surveys are made of the many new locations that are constantly being proposed for national park or monument status and for addition to existing parks. An adverse report of such investigation frequently carries a recommendation as to suitability of the area for inclusion in a State park system.

(c) Responsibility for the supervision of Emergency Conservation Work on State, county, and metropolitan parks and recreation areas is vested in the National Park Service. This has resulted in close association with all parks planning activities throughout the country.

(d) The National Park Service is further invested with authority to select the submarginal lands and prescribe the development thereon within the scope of the Submarginal Lands Acquisition Program where these are to be used for recreation purposes.

*Relations to Other Federal Agencies.*—There are formal cooperative agreements with the Bureau of Public Roads, Bureau of Fisheries, Bureau of Entomology, Bureau of Plant Industry, and the Public Health Service whereby specialized advisory services are rendered to the
Educational Opportunities

National Park Service. The Bureau of Public Roads actually carries on road construction, and the Bureau of Fisheries maintains and operates fish production plants in the parks.

Advisory assistance from other Federal bureaus is sought informally as the occasion demands. In addition there are local cooperative agreements such as those between certain parks and adjacent national forests for fire protection.\(^1\)

\(^1\) National Resources Board, National Land Planning Activities, July 1934 (mimeographed), 34 pp. (see pp. 13 and 14.)

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**FIGURE 22.**

History.—The first national park, Yellowstone, was set aside by Congress in 1872 for the dual purposes of protection and use. Other areas were later withdrawn for similar purposes, and it became an unwritten policy that public-domain areas of outstanding scenic value should be retained in public ownership as national parks.

The national parks, from the first, have been administered by the Department of the Interior. The National Park Service was established by act of Congress in 1916 as a bureau of the Department of the Interior for the administration of these areas. The organization of the bureau was effected the following year. At that time there were 16 national parks, 1 of which has since been abolished, and 1 has been reclassified as a national monument.

The early national parks comprised public domain which had been withdrawn from entry. All of the early national parks were located in Western States for the reason that the public domain existed only in those States.
Later the policy was expanded to permit the establishment of national parks on areas of outstanding scenic value which might be returned from private to public ownership. In general, Congress has adopted the policy that such lands should not be purchased with Federal funds, but that suitable areas may be established as national parks, provided they are deeded, without cost, to the Federal Government.

In 1906, Congress passed "an act for the preservation of American antiquities", authorizing the President to set aside, as national monuments, areas of special interest or value for scientific, prehistoric, or historic purposes.

The following is an extract from the act (Public, No. 209):

That the President of the United States is hereby authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected: Provided, That when such objects are situated upon a tract covered by a bona fide unperfected claim or held in private ownership, the tract, or so much thereof as may be necessary for the proper care and management of the object, may be relinquished to the Government, and the Secretary of the Interior is hereby authorized to accept the relinquishment of such tracts in behalf of the Government of the United States.

For 18 years, Yellowstone was the only national park in the world, and its origin and early history are therefore the origin and early history of the national park movement.

In 1932, Hon. Louis C. Cramton made a study of the early history of Yellowstone National Park, including its exploration, its establishment in 1872, and its later history. The following extract from Mr. Cramton's work summarizes the first 25 years of Yellowstone's history with particular reference to the development of existing policies:

During that period of time, there was fought out in the Congress of the United States and gradually crystallized in the Nation that fairly definite code of policies which now obtains in the administration of the national parks and monuments under your charge. The history of the first quarter century of Yellowstone National Park is in fact the history of the development of our present national park policies.

Some of these policies are so universally concurred in that it does not occur to us now that they ever could have been questioned. Others, not so universally accepted, have
become thoroughly established as our national policy in connection with the areas under your administration through the trials of Yellowstone. Among these policies may be noted the following:

1. That the Federal Government may, under proper circumstances, itself undertake the administration of a reservation of land "dedicated and set apart as a public park or pleasuring ground for the benefit and enjoyment of the people."

It is true that in 1872 this region was a part of the public domain of the United States within certain of its Territories and, therefore, the question of turning it over to a State for administration was not at that time directly an issue. That course had been followed a few years previously in the case of Yosemite, and the brief debate in the Senate, January 30, 1872, in connection with the passage of the Yellowstone bill shows that the experiment of turning great scenic regions over to the State for administration was not deemed successful. The merits of Yellowstone as a park project and its outstanding importance did much to establish a general policy of Federal control in such cases. After the Territories concerned became States, demand for transfer of control to the States could, as to Yellowstone, make no headway.

2. The twin purposes of such a reservation are the enjoyment and use by the present, with preservation unspoiled for the future. The act of March 1, 1872, set the area apart as a "pleasuring ground for the benefit and enjoyment of the people", and at the same time required "the preservation, from injury or spoliation of all timber, mineral deposits, natural curiosities or wonders within said park and their retention in their natural condition." There has never been any serious controversy in Congress concerning the wisdom of each of these.

3. The parks are to be administered primarily for the enjoyment of the people. The early and long-continued contest concerning leases and concessions in the park has always revolved around the determination of Congress that the welfare of the visitor shall be the first consideration in park administration.

4. Enjoyment of these areas shall be free to the people. The preface to Dunraven's "Great Divide" voices protest against the fee system universal in Europe which was securing widespread foothold in the United States and popular appreciation of a nonfee system in the national parks.

The park came into being within a few years after the close of the Civil War when the national debt was large, taxation was onerous, and economy in Federal expenditures was necessary. Very soon came panic and years of depression.
But at no time was there any proposal for adoption of a fee system in Yellowstone. All the debate stressed the idea that this wondrous land be free to the public. At first there was the theory that revenues from leases of needed utilities would be sufficient for the development and maintenance of the park. But as it became clear that this would not be the case and the needs became understood, the policy of appropriations from the Federal Treasury began, 1878, and has never been seriously challenged.

5. Administrative responsibility shall be civil rather than military. The act of March 1 provides, "Said public park shall be under the exclusive control of the Secretary of the Interior."

With negligible appropriations and resulting lack of administration, attended by alarming reports of game destruction and park spoilations, Congress in 1883 directed the Secretary of War, upon the request of the Secretary of the Interior, to make necessary details of troops for park protection. It was also provided that the construction of roads should be under the supervision and direction of an engineer officer detailed by the Secretary of War. In 1886 the appropriation for the park carried the provision that thereafter a company of cavalry should be stationed there for the protection of the park and eliminated any appropriation for civilian administration. Complete transfer of the administration to the War Department was proposed in bills introduced and in congressional debates. Because of the presence of troops on the frontier and the need for economy in Federal expenditures this same military administration continued for some years, but at no time did the complete transfer of the administration to the War Department make any headway in Congress. Eventually Congress eliminated the military protection and became definitely committed to civilian administration and civilian protection.

6. The welfare of the public and the best interests of the park visitors are conserved by protective permits for needed utilities. In the early days there was much fear, probably well-founded, that some monopoly would secure leases of land at strategic points which would enable them to hold up the public. No feature of park administration has had the amount of debate in Congress that there has been about Yellowstone leases. Through the insistence of Congress that the welfare of the visitor be the first consideration and through gradual growth of understanding of the necessities of the situation, the policy of protective permits with Government control of rates, service, and the extent and character of improvements has been developed.

7. The park area is to constitute a game preserve and not a hunting reservation. When the bill was under consideration in the Senate, it being observed that the destruction of game
and fish for gain or profit was forbidden, Senator Anthony urged that "Sportsmen going over there with their guns" were not wanted, that the park ought not be used as a preserve for sporting. Senator Tipton urged a prohibition against their destruction for any purpose. They were satisfied with assurance that hunting would not be permitted, and that the policy has remained unquestioned.

8. No commercial enterprise in a park is to be permitted except so far as is essential to the care and comfort of park visitors.

9. The national interest shall be supreme in the park area, and encroachments for local benefit shall not be permitted. The fight to maintain and establish this policy in Yellowstone was spectacular with well-financed and influential private interests supported by some official sanction determined to secure a right-of-way in the park area for a railroad connection, ostensibly for mining development, but actually in considerable degree at least, for speculative purposes. Failing to secure such a right-of-way, the effort was made to eliminate from the park the area involved, in return adding to the park much larger areas desired elsewhere. For years the House was amenable to the desires of these private interests, and the Senate was the stronghold of opposition under the leadership of Senator Vest. It is interesting to note how in this critical period so many men of the greatest caliber in the Senate rallied to defense of the public interests. And when the Senate lost hope and was prepared to accept the inevitable the House reversed its attitude. Finally the time came that any railroad right-of-way proposal or park segregation scheme brought definite adverse report from congressional committees. The disintegration of national park areas to meet local demands has been made impossible through the struggles that revolved around the Yellowstone.

10. Recreation is an essential purpose of park use even though secondary or incidental. The Yellowstone Act sets the area aside as "a pleasuring ground for the benefit and enjoyment of the people." Senator Pomeroy in urging the bill in the Senate said, January 23, 1872, that it was proposed to "consecrate and set apart this great place of national resort, as it may be in the future, for the purposes of public enjoyment." The park then 500 miles from any railroad and its nearest railroad point so remote from centers of population under existing modes of travel, it is surprising that any large park travel could have at that time anticipated.

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2 Cramton uses the term "recreation" in its more restricted sense. Recreation, as throughout this report, connotes all that is re-creative, including spiritual and stimulation as well. In this broader sense, recreation is the primary purpose.
The Montana Legislature, in its memorial in 1872, asked that this area "be dedicated to public use, resort, and recreation." The Hallett Phillips report, which had much influence with Congress in 1886, said the first object accomplished by Congress in the establishment of the park was "a pleasuring ground for the benefit and enjoyment of the people." Preservation of these areas for scientific study, or for the enjoyment of the aesthetic taste in looking upon the beauties of nature, or the preservation of the great species of game from extermination, or the protection of an important watershed, are all purposes that have had congressional support. But the simple idea of the common people going to these regions and enjoying themselves—recreation—has always had strong appeal to Congress.

11. "In a national park the national laws and regulations should be enforced by a national tribunal." These are the words of Joseph Medill, the great publisher, and was his verdict after he had observed at first hand the workings of the attempt to enforce laws of the State of Wyoming through local officials in the Yellowstone. When the park was s created, its nearest boundary was 140 miles from the nearest civil authority. The country loudly demanded park protection, but Congress was loath to give substantial appropriations. Finally, the State of Wyoming passed a law specifying offenses and punishments, and its enforcement was attempted. The best legal authorities questioned any such authority in the State, and the effort was abandoned.

Vest fought for years to secure an enactment of needed legislation prescribing offenses with penalties therefor and sought a Federal organization to administer the park. Because of the deadlock which ensued as to railroad and boundary legislation, the needed park legislation was not secured until 1894, when the Lacey Act became effective, May 7, 1894. This act followed debate and controversy of a score of years. It declares that the Yellowstone National Park shall be under the sole and exclusive jurisdiction of the United States; that the park, although portions of it are in Montana amid Idaho, shall constitute a part of the United States judicial district of Wyoming and the district and circuit courts of the United States shall have jurisdiction of all offenses committed within the park; that any offense committed which is not punishable by Federal law shall be subject to the punishment provided by the law of Wyoming; that the United States circuit court shall appoint a commissioner who shall reside in the park and try persons charged with offenses in the park, an appeal being possible from his decision to the Federal court; that one or more deputy marshals may be appointed to reside in the park, but that arrests may be made by any officer or employee in the park of any person taken in the act. This whole structure of
Federal control through existing Federal courts supplemented by a resident commissioner was worked out after 20 years of debate. Once enacted, its wisdom is generally accepted.

12. In the national parks nature is to be preserved and protected and not improved. The act of March 1 requires "retention in their natural condition." The report of the subcommittee of the committee on appropriations by Representative Holman in 1886 reads: "The park should so far as possible be spared the vandalism of improvement. Its great and only charms are in the display of wonderful sources of nature, the ever-varying beauty of the rugged landscape, and the sublimity of the scenery. Art cannot embellish these."

The above are the principal policies of a legislative character, or affected by legislative influences, which now governs in our park system. I have no doubt that many of our present policies and practices of a more purely administrative character in vogue today in various parks were likewise evolved through experience in Yellowstone.

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Policy.—The establishment of national parks was, for a long period of time, governed by an unwritten policy, indicated by the action of Congress. Some areas were established as national parks and other areas were rejected, without any written specification as to what qualifications were requisite. It came to be understood that superlative areas, of national value, are eligible to be established as national parks.

In 1918, when the National Park Service had been in operation for 1 year, Secretary Lane prepared a statement of policy for the guidance of the service, from which the following extracts are taken:

This policy is based on three broad principles:

First, that the national parks must be maintained in absolutely unimpaired form for the use of future generations as well as those of our own time.

Second, that they are set apart for the use, observation, health, and pleasure of the people.

Third, that the national interest must dictate all decisions affecting public or private enterprise in the parks.

In studying new park projects, you should seek to find scenery of supreme and distinctive quality or some natural feature so extraordinary or unique as to be of national interest and importance. You should seek distinguished
examples of typical forms of world architecture.\(^4\)

\(^4\)Letter from Franklin K. Lane, Secretary of the Interior, to Mr. Stephen T. Mather, Director, National Park Service, May 13, 1918.

Other statements of policy have been made since that time, one of the most complete being the following, which was approved by the Director of the National Park Service in 1932:

1. A national park is an area maintained by the Federal Government and "dedicated and set apart for the benefit and enjoyment of the people." Such Federal maintenance should occur only where the preservation of the area in question is of national interest because of its outstanding value from a scenic, scientific, or historical point of view. Whether a certain area is to be so maintained by the Federal Government as a national park should not depend upon the financial capacity of the State within which it is located, or upon its nearness to centers of population which would insure a large attendance therefrom, or upon its remoteness from such centers which would insure its majority attendance from without its State. It should depend upon its own outstanding scenic, scientific, or historical quality and the resultant national interest in its preservation.

2. The national park system should possess variety, accepting the supreme in each of the various types and subjects of scenic, scientific, and historical importance. The requisite national interest does not necessarily involve a universal interest, but should imply a widespread interest, appealing to many individuals, regardless of residence, because of its outstanding merit in its class.

3. The twin purposes of the establishment of such an area as a national park are its enjoyment and use by the present generation, with its preservation unspoiled for the future; to conserve the scenery, the natural and historic objects and the wildlife therein, by such means as will insure that their present use leaves them unimpaired. Proper administration will retain these areas in their natural condition, sparing them the vandalism of improvement. Exotic animal or plant life should not be introduced. There should be no capture of fish or game for purposes of merchandise or profit and no destruction of animals except such as are detrimental to use of the parks now and hereafter. Timber should never be considered from a commercial standpoint but may be cut when necessary in order to control the attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects, and dead or down timber may be removed for protection or improvement. Removal of antiquities or scientific specimens should be permitted only for reputable public museums or for universities, colleges, or other recognized scientific or educational institutions, and always
under department supervision and careful restriction and never to an extent detrimental to the interest of the area or of the local museum.

4. Education is a major phase of the enjoyment and benefit to be derived by the people from these parks and an important service to individual development is that of inspiration. Containing the supreme in objects of scenic, historical, or scientific interest, the educational opportunities are preeminent, supplementing rather than duplicating those of schools and colleges, and are available to all. There should be no governmental attempt to dominate or to limit such education within definite lines. The effort should be to make available to each park visitor as fully and effectively as possible these opportunities, aiding each to truer interpretation and appreciation and to the working out of its own aspirations and desires, whether they be elementary or technical, casual or constant.

5. Recreation, in its broadest sense, includes much of education and inspiration. Even in its narrower sense, having a good time, it is a proper incidental use. In planning for recreational use of the parks, in this more restricted meaning, the development should be related to their inherent values and calculated to promote the beneficial use thereof by the people. It should not encourage exotic forms of amusement and should never permit that which conflicts with or weakens the enjoyment of these inherent values.

6. These areas are best administered by park-trained civilian authority.

7. Such administration must deal with important problems in forestry, road building and wildlife conservation, which it must approach from the angles peculiar to its own responsibilities. It should define its objectives in harmony with the fundamental purposes of the parks. It should carry them into effect through its own personnel except when economy and efficiency can there by best be served without sacrifice of such objectives, through cooperation with other bureaus of the Federal Government having to do with similar subjects. In forestry, it should consider scenic rather than commercial values and preservation rather than marketable products; in road building, the route, the type of construction, and the treatment of related objects should all contribute to the fullest accomplishment of the intended use of the area; and, in wildlife conservation, the preservation of the primitive rather than the development of any artificial ideal should be sought.

8. National park administration should seek primarily the benefit and enjoyment of the people rather than financial gain, and such enjoyment should be free to the people without vexatious admission charges and other fees.
9. Every effort is to be made to provide accommodations for all visitors, suitable to their respective tastes and pocketbooks.

Safe travel is to be provided for over suitable roads and trails. Through proper sanitation the health of the individual and of the changing community is always to be protected.

10. Roads, buildings, and other structures necessary for park administration and for public use and comfort should intrude upon the landscape or conflict with it only to the absolute minimum.

11. The national parks are essentially noncommercial in character and no utilitarian activity should exist therein except as essential to the care and comfort of park visitors.

12. The welfare of the public and the best interests of park visitors will be conserved by protective permits for utilities created to serve them in transportation, lodging, food, and incidentals.

13. The national interest should be held supreme in the national park areas, and encroachments conflicting therewith for local or individual benefit should not be permitted.

14. Private ownership or lease of land within a national park constitutes an undesirable encroachment, setting up exclusive benefits for the individual as against the common enjoyment by all, and is contrary to the fundamental purposes of such parks.

15. National parks, established for the permanent preservation of areas and objects of national interest, are intended to exist forever. When, under the general circumstances such action is feasible, even though special conditions require the continuance of limited commercial activities or of limited encroachments for local or individual benefit, an area of national park caliber should be accorded that status now, rather than to abandon it permanently to full commercial exploitations and probable destruction of its sources of national interest. Permanent objectives highly important may thus be accomplished and the compromises, undesired in principle but not greatly destructive in effect, may later be eliminated as occasion for their continuance passes.

16. In a national park the national laws and regulations should be enforced by a national tribunal. Therefore, exclusive jurisdiction of the Federal Government is important.

17. National monuments, under jurisdiction of the Department of the Interior, established to preserve historic
landmarks, historic and prehistoric structures, and other objects of scientific or historical interest, do not relate primarily to scenery and differ in extent of interest and importance from national parks, but the principles herein set forth should, so far as applicable, govern them.  


Various organizations that are interested in recreation and conservation have taken a keen interest in the policies governing the establishment and administration of the national parks. For example, the Camp Fire Club of America issued a small pamphlet entitled "National Park Standards", which has been adopted or endorsed by 37 other organizations.

Inventory of National Park System.—Prior to 1933 the areas administered by the National Park Service were classified under only two designations, national parks and national monuments. The Forest Service administered a number of areas classified as national monuments. The War Department administered a number of areas, two of which were classified as national parks, several as national monuments, and others as military parks, battlefield sites, cemeteries, and miscellaneous memorials. An area at Morristown was established in 1933 as a national historical park and placed under the administration of the National Park Service. Since the Executive order of June 10, 1933, became effective on August 10, 1933, the areas administered by the National Park Service have included the following classifications.  

6 Editor's note: See Book Four, section on National Park Service, for National Capital Parks System.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>National parks</td>
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</tr>
<tr>
<td>National historical park</td>
<td>1</td>
</tr>
<tr>
<td>National military parks</td>
<td>11</td>
</tr>
<tr>
<td>National monuments</td>
<td>67</td>
</tr>
<tr>
<td>Battlefield sites</td>
<td>10</td>
</tr>
<tr>
<td>National cemeteries</td>
<td>11</td>
</tr>
<tr>
<td>Miscellaneous national memorials</td>
<td>4</td>
</tr>
<tr>
<td>Total number of areas</td>
<td>128</td>
</tr>
</tbody>
</table>

The total area of the principal groups is as follows:

\[
\begin{align*}
\text{Acres} & \\
\text{National parks} & 8,541,027 \\
\text{National monuments} & 6,687,954 \\
\text{Other designations} & 18,407 \\
\hline
\text{Total} & 23,824 \text{square miles, or } 15,247,388
\end{align*}
\]
The total area administered by the National Park Service, exclusive of Alaska and Hawaii, comprises 9,288,610 acres, or approximately 14,513 square miles.

The national parks have been set aside primarily because of superlative features which are of great national value. Some of the chief features that are represented, and examples of parks containing these features, are as follows:

**Topography:**

Mountains: Mount McKinley, Glacier, Yosemite, Sequoia, Rocky Mountain, Grand Teton, and Mount Rainier National Parks.

Canyons: Grand Canyon, Yosemite, Zion, and Yellowstone National Parks.

Lakes: Crater Lake, Yellowstone, and Glacier National Parks.

**Geology:**

Volcanic: Hawaii, and Lassen Volcanic National Parks.

Caves: Carlsbad Caverns National Park.

**Biology:**

Animals: Yellowstone, Mount McKinley, Yosemite, and Glacier National Parks.

Forests: Sequoia, General Grant, Yosemite, Glacier, and Mount Rainier National Parks.

The national monuments and areas of other designations may be classified as historic, prehistoric, and scientific. Various subclassifications, and examples of areas containing these features, are as follows:

**Historic:**

Exploration and discovery: Verendrye, Cabrillo, El Morro.

Settlement: Scotts Bluff, Tumacacori, Gran Quivira.

Military: Colonial, Morristown, Gettysburg, Chickamauga and Chattanooga, Fredericksburg and Spotsylvania, Appomattox.

Invention and industry: Kill Devil Hill.

Prehistoric:

Ruins: Casa Grande, Navajo, Montezuma Castle, Bandelier.

Mounds: Mound City Group.

Scientific:

Geologic:

Volcanic and igneous: Katmai, Sunset Crater, Devils Tower, Craters of the Moon.

Erosional: Cedar Breaks, Rainbow Bridge.

Caves: Oregon Caves, Lehman Caves.

Mountains: Holy Cross, Mount Olympus.

Paleontologic: Dinosaur, Petrified Forest.

Biologic: Muir Woods, Saguaro.

Ethnologic: Old Kasaan, Sitka.

All of the national parks and monuments are sanctuaries for wildlife, and several of them are noted for the species that may be seen. Yellowstone National Park is widely known as a wildlife sanctuary because of its buffalo, elk, black bear, grizzly bear, mountain sheep, antelope, and other species. Mountain goats are found in Glacier and Mount Rainier National Parks. Elk are numerous in Rocky Mountain and Yellowstone Parks. Moose are found in Glacier, Grand Teton, and Yellowstone Parks. Mount McKinley is celebrated for its Dall sheep and caribou.

The forested areas of the national parks are not lumbered, but are kept in their primitive condition. There are notable forests in several of the national parks. Big trees (Sequoia gigantea) are found in Sequoia, General Grant, and Yosemite National Parks. Yosemite and Sequoia also have outstanding forests of sugar pine, ponderosa pine, and numerous other species. Mount Rainier has splendid forests of fir and cedar.

Mount McKinley National Park contains the highest peak in North America. Mount Whitney, the highest peak in continental United States, is on the boundary of Sequoia National Park. Death Valley National Monument includes spectacular desert scenery, with interesting exhibits of plant and animal life, together with the lowest land elevation on the continent. Carlsbad Cavern is unduplicated in the United States. Hawaii has the most active volcanic area within the Nation's possession. Grand Canyon is a stupendous example of the power of erosion.

National parks offer a wide variety of recreational opportunities, including opportunity for many outdoor activities as well as features that
are inspirational and educational in character.

In the appendix, pages 250 to 251, will be found two statistical tables containing a list of national parks, national monuments, and areas with other designations, administered by the National Park Service. These tabulations show for each reservation the State in which it is located, area, the special characteristics of the reservation, detailed information regarding its establishment, extent of development, and other data.

Administration and Development.—At the time of the organization of the National Park Service the volume of travel to the national parks was small, totaling less than one-half million people. As the use of automobiles increased and as the national parks became more widely known, they became more and more the destinations for vacation trips. In the 3 years from 1918 to 1921 the number of visitors to national parks increased from one-half million to a million people. In the next 5 years the number of visitors increased to nearly 2 million. The 5 years following brought the park travel to more than 3 million persons by 1931. During 1932 and 1933 the depression caused a decrease in travel, but in 1934 the total had again risen and reached a new record of 3-1/2 million visitors. The travel to national parks showed a steady increase every year from 1918 to 1931, and the present indications are that future years will show further annual increases.

Figures are not available for the travel to all of the national monuments, but the annual travel to certain national monuments from 1927 to 1934 is shown graphically on the accompanying chart (fig. 23). This travel has increased from less than 400,000 persons to more than 800,000. These figures do not include travel to the national monuments formerly administered by the Forest Service or the areas formerly administered by the War Department.
The development of facilities for visitors to national parks has increased with the increase in travel, but in many cases it has lagged behind the actual needs. The extent of the development in the various national parks varies with the volume of travel to the park, and with the character of the area.

The Government builds and maintains the roads and trails, ranger stations, museums, quarters for employees, free public campgrounds, and facilities available to the public without charge.

In general, the hotel and restaurant accommodations, transportation, and other services for which a charge is made, are provided by privately owned companies operating under a franchise or contract with the Department of the Interior. Such franchises provide for the operation of hotels, lodges, motor camps, automobile transportation lines, stores, and similar facilities necessary or convenient to the public.

The operating companies make annual reports to the Department; their books are audited by the National Park Service; and the rates charged are subject to regulation by the Department.

At one time it was the practice for each park to collect an automobile license fee from automobiles and other vehicles entering the park. This revenue was at first available for expenditures in the park, including maintenance of roads. Legislation now provides that these fees, and all other park revenues, be turned into the Treasury as miscellaneous
receipts. The automobile license fee has been continued in most of the older national parks, though the scale of charges has been reduced. In a number of the newer parks no such fee is collected. This fee varies in different parks, ranging from 50 cents to $3 per car, and is approximately proportionate to the number of miles of road in the park.

The fee applies to the vehicle and not to the passengers. The permit issued is an annual one, and no further charge is made for additional trips during the year.

In Carlsbad Caverns National Park a fee is collected from each visitor for guide service through the cave.

In general it is the intention of Congress that the national parks should be available for public use, and it has not been expected that they should be self-supporting. Exceptionally, however, as in the case of Carlsbad Caverns National Park, the revenues collected exceed the expenditures.

Public utilities, such as water supply, sewer systems, power plants, and telephone, are furnished by the Government in some instances, and by the operators in other instances.

The policy of development in national parks is that the areas shall remain as nearly as possible in their original condition, and that buildings and other construction shall be limited to those facilities necessary or desirable for the needs of the public. No building may be constructed, either by the National Park Service or by operators, except upon plans approved in advance by the Director. Utility buildings are kept out of sight of public travel or in locations as inconspicuous as possible. The type of architecture of public buildings is not standardized, but is chosen to blend harmoniously with the surroundings. Special attention is paid to road construction, in order to avoid unnecessary scars.

The Government constructs roads and trails in the national parks and monuments in order to serve the visitors and to make the principal features of the areas accessible. In the national parks and monuments the road systems comprise a total of 2,049 miles of road, of which 1,764 miles are in national parks and 330 miles are in national monuments and other areas. The trail systems comprise a total of 5,145 miles of trail, of which 4,999 miles are in national parks and 146 miles are in national monuments and other areas. The telephone systems owned by the Government in these areas comprise 2,313 miles of line, of which 2,260 miles are in national parks, and 53 miles are in national monuments and other areas.

Nineteen museum buildings have been constructed. In seven of the parks, museum exhibits are housed in headquarters buildings. Museum displays have been developed in at least six of the national monuments, and a number of new projects are proposed. Most of the museum buildings have been constructed with donated funds.

Development work in national parks and monuments has included, in areas of historic and archeological importance, the restoration of portions of existing structures in order to prevent extensive deterioration and loss. Some of the cliff dwellings at Mesa Verde have been strengthened, and
partially reconstructed in order to save portions of the structures. Similar work has been done at Montezuma Castle and several of the national monuments whose chief feature is archeological remains.

The work of preserving and restoring historical structures has been accomplished in a number of the historical national monuments. At Wakefield, the birthplace of George Washington, a building has been constructed, illustrating, with as much accuracy as possible, the type of home in which George Washington was born. At Yorktown, the Moore house has been remodeled to put it in approximately the same condition as it was at the close of the Revolutionary War.

The administration of each national park is in charge of a superintendent, who reports to the Director of the National Park Service. In each park the personnel is organized into a number of departments. The ranger department is responsible for the protection of the park and its visitors. It consists of a chief ranger, assisted by the permanent rangers and by temporary rangers, who are usually employed for the summer season. The naturalist department is responsible for the informational and educational services; it consists of a park naturalist and temporary ranger naturalists. A park organization usually includes a clerical department, engineering department, sanitary department, electrical department, mechanical department, and other functions. The organization of the different parks varies with the number of personnel and with special activities which may be carried on, appropriate to the character of the area.

The administrative organization of national monuments is similar to that of national parks, though often on a smaller scale. The custodian is the executive officer. The organization is adapted to fit the objectives for which the area has been reserved.

Field of the National Park Service in Historic Sites.—The growth of the field of the National Park Service in the preservation and development of historical and archeological sites, clearly evident in the 60-odd areas now represented in the park program of that Bureau, has come about as a result of the gradual adaptation of an organization to function over a period of years.

In their inception, and for a considerable period thereafter, the methods developed and the agencies used by the Federal Government in handling...
the problems of national, historical, and archeological sites took diverse and unrelated courses. Beginning in 1890, and extending over a period of 40 years, the activities of organizations of war veterans and private historical societies brought about the development of national military parks, including such areas as Guilford Courthouse, Chickamauga, Gettysburg, Shiloh, and Vicksburg. At the time it did not seem unnatural that these areas should all be placed under the administration of the War Department. But the partial character of this movement and its shortcomings as a national program were revealed in a natural reluctance to take account of sites other than military. Some of the best of our national sites have been passed by or left entirely to unaided private initiative because there seemed to be no Federal agency willing to take the responsibility for sponsoring their preservation and control.

At the same time activities were under way in the field of archeological discoveries. Near the end of the nineteenth century, the Smithsonian Institution undertook some of its earliest and most famous investigations in archeological materials found in the cliff dwellings and pueblos of the Southwest and the mound sites of the Ohio Valley. This work was carried further by such agencies as the National Geographic Society and the Carnegie Institution, and more recently by universities and museums.

Unfortunately, awakening public interest led to the exploitation of many invaluable sites. The necessity for legislation to preserve these, and other irreplaceable areas of historic and archeological interest, became apparent. Thus occurred the first general Federal law in 1906, sometimes called the Antiquities Act, which provided for the creation of national monuments to preserve historic and other scientific areas. Although this act was an important step forward, in the light of experience it proved inadequate to meet the public responsibility involved. The sites which have been preserved under the act came to be administered by different agencies of the Government; in the Agriculture, Interior, and War Departments.

TABLE VIII.—The personnel of the National Park Service, as of July 1, 1934

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<thead>
<tr>
<th></th>
<th>Permanent</th>
<th>National Park Service, seasonal</th>
<th>Regular temporary</th>
<th>Total</th>
<th>E. C. W.</th>
<th>P. W. A.</th>
<th>Total</th>
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<td><strong>Washington office:</strong></td>
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<tr>
<td>Director's office and branches</td>
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<td>-----</td>
<td>2</td>
<td>72</td>
<td>135</td>
<td>21</td>
<td>228</td>
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<td>Branch of buildings</td>
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<td>412</td>
<td>3,426</td>
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<td>414</td>
<td>3,498</td>
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<td>National parks</td>
<td>477</td>
<td>321</td>
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<td>1,826</td>
<td>864</td>
<td>96</td>
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National Park Service: Recreational Use of Land in the United States (Federal Lands)

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<td>Field branches, eastern</td>
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<tr>
<td>National capital parks</td>
<td>614</td>
<td>16</td>
<td>150</td>
<td>780</td>
<td>30</td>
<td>115</td>
<td>925</td>
</tr>
<tr>
<td>State parks</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>3,236</td>
<td>----</td>
<td>3,236</td>
</tr>
<tr>
<td>Total field force</td>
<td>1,367</td>
<td>363</td>
<td>1,350</td>
<td>3,080</td>
<td>4,596</td>
<td>440</td>
<td>8,116</td>
</tr>
<tr>
<td>Total National Park Service</td>
<td>4,451</td>
<td>363</td>
<td>1,764</td>
<td>6,578</td>
<td>4,731</td>
<td>502</td>
<td>11,811</td>
</tr>
</tbody>
</table>

Although perhaps not clearly perceived at the time, the fundamental tendencies looking toward a better governmental administration were more truly indicated when, in 1916, the National Park Service was created for the care and development of national parks, monuments, and reservations of scenic, natural, wildlife, or historic character. To this agency were transferred, at that time, certain historical and archeological sites such as Mesa Verde, then under the general control of the Department of the Interior. Afterward, additional areas were placed under this administration, notably certain archeological areas in the Southwest and such historical sites as George Washington's Birthplace in Wakefield, Va.

In order properly to evaluate and develop this growing program, and to provide machinery for its administration, an important step ahead was taken in 1931 with the appointment of a chief historian within the National Park Service. In the next two years a significant program was developed for the historical areas then under the control of the Service, with a more suitable personnel and a more comprehensive point of view. Already equipped with administrative and technical facilities for dealing with problems of physical development, the National Park Service was now prepared to deal professionally with the historical program, and to develop a more far-reaching policy for the handling of all Federal historical sites.

In 1933, two developments of outstanding importance occurred. One was the transfer to the National Park Service, during the general reorganization of Federal administration, of all historical and archeological sites formerly administered by various bureaus and boards of the Agriculture and War Departments. The second was the creation in the Service of an historical and archeological division to take care of problems relating to these areas.

With 60 national historical and archeological areas now under a single administration, for the first time an adequate and unified national program became possible, stressing preservation and development of an
educational philosophy under which national historic sites come to have a definite cultural use.

It was not unnatural that, coincident with these developments, there should come the appointment of the Director of the National Park Service as the representative of the United States on the newly formed International Commission on Historic Monuments.

PHOTO 7.—White House Ruin at Canyon de Chelly National Monument, Ariz. From cliff dwellings within this 83,846-acre monument it is possible to trace the cultural of aboriginal occupation from savage nomadism to a relatively advanced stage of civilization recorded in the vast deposits of refuse and building remains.

**Authorized Projects.**—Congress has authorized the establishment of the following national parks and national monuments, when the lands involved have been deeded to the United States, without cost to the Federal Government:

1. Shenandoah National Park project, located in the Blue Ridge Mountains, Va. Authorized by Congress May 22, 1926. The area involved comprises 521,000 acres, of which 176,420 acres have now been acquired. It is anticipated that the remainder of the area will be acquired, and that the transfer to the United States will be completed within a year. The area was recommended for a national park by a committee appointed by the Secretary of the Interior. The committee was asked to recommend an area in the Appalachian Mountains most suitable for a national park, and instead recommended two—the Shenandoah area and the Great Smoky Mountains in Tennessee and North Carolina. Lands for a considerable portion of the latter have been transferred to the United States.

2. Mammoth Cave National Park project, Kentucky. This area was authorized by Congress May 25, 1926. The area comprises from 35,000 to 70,000 acres of which about 35,000 acres have now been acquired. Establishment of the park was authorized by Congress upon the
recommendation of the Congressional delegation of Kentucky. The proposed park includes the historic Mammoth Cave and also several additional caves in the immediate vicinity.

3. Isle Royale National Park project, Michigan. Establishment of this park was authorized by Congress on March 3, 1931. The area comprises Isle Royale in Lake Superior, and a few adjacent smaller islands. This is the home of numerous moose, and primitive conditions prevail in much of the area. Area is approximately 133,200 acres. A local committee has been appointed to acquire the land when practicable, but under the economic conditions that have prevailed in recent years little progress has been made.

4. Everglades National Park project, in Florida, was authorized by Congress on May 30, 1934. The boundaries have not been definitely determined, but the area lies within a region approximately 50 miles square. It may comprise as much as 2,000 square miles, or more than a million acres. The proposed park includes Cape Sable, the most southerly point of the mainland of the United States, as well as a considerable area of the southwestern portion of the Florida Peninsula and neighboring keys. The features of the area are its remarkable bird life, many species of palms, orchids, mangrove trees, and other subtropical plants, and a great variety of fish, including both salt water and fresh water species. The interesting Seminole Indians live in this region, most of which is a primitive wilderness. It is anticipated that the land for the park will be acquired by a State committee to be appointed by the Governor. The area was recommended by a State association, with the endorsement of the members of Congress from Florida and was approved by the National Park Service, following an inspection by the Director and other officers and advisers of the Service.

5. Badlands National Monument project, South Dakota, was authorized by Congress on March 4, 1929. The area involved is approximately 246 square miles, or 157,000 acres. Most of the area is public domain. Options have been acquired on most of the land in the area that is in private ownership. The State of South Dakota has agreed to build certain approach roads, and these will be completed in 1935. The features of the area are delicately tinted, fantastically shaped formations carved by erosion out of the comparatively soft shales and clays. Fossil remains are abundant in parts of the region and are of high scientific value.

6. Grandfather Mountain project, North Carolina. A clause in the Sundry Civil Act of June 12, 1917 (Public, No. 21, 65th Cong.), reads as follows:

   Hereafter the Secretary of the Interior is authorized to accept for park purposes any lands and rights-of-way, including the Grandfather Mountain, near or adjacent to the Government forest reserve in western North Carolina.

   No action has been taken under this authority.

7598), authorized the Secretary of the Interior to establish as a national monument certain lands in Riverside County, Calif., comprising 1,600 acres, provided that the consent and relinquishment, of the land by Agua Caliente Indians shall first be obtained, and that the lands shall be paid for at a price to be agreed upon, with funds to be donated for such purpose. None of the preliminary requirements has been fulfilled. This area is referred to elsewhere as suitable, if available.


10. Pioneer National Monument project, Kentucky. Authorized by act of Congress, approved June 18, 1934 (S. 3443). This project embraces four historical points, Boonesborough, Boones Station, Bryans Station, and Blue Licks Battlefield, which is the accredited site of the last battle of the Revolution on August 19, 1782.
State Lands

Provision of outdoor recreational facilities by the several States has a history which far antedates the establishment of national parks. State properties dedicated wholly or partly to recreational use now accommodate a total number of annual visitors which exceeds those of the national parks and monuments and the national forests. In point of acreage, they are still considerably below the national parks and monuments. State parks, which bear the bulk of the recreation burden, contain only about 3 percent as great an area as the national forests. Although national forest areas are now being purchased in a number of regions which had none until the start of the recent purchase program, and though it is to be expected that there will be some extension of holdings of the types now administered by the National Park Service, it is likely that State properties will always receive a much greater number of visitors each year than those owned and operated by the Federal Government.

The State Recreation Situation Today.—Today 46 of the 48 States possess State parks or areas differently named, but set aside wholly or primarily for recreational use—Colorado and Montana being the exceptions. Their holdings total approximately 3,755,985.49 acres. Accurate figures on attendance are not procurable, since few States take them, but in 1930 the National Conference on State Parks estimated, on the basis of reports received from nearly all of the States, that it was approximately 45,000,000 in that year. Figures submitted to the National Resources Board in August of this year indicate a 1933 attendance of approximately 61,297,683 persons. In addition, it is estimated that State forests and game and fish properties in 23 States have approximately 5,000,000 visitors each year.

Since State parks are created for recreation, and since the amount and variety of recreation they supply far surpasses that supplied by other State holdings, any detailed consideration of the place of the State in the field of outdoor recreation will naturally concern itself primarily with State parks.

History of State Parks.—The history of the State park movement from the establishment of Yosemite up to the present is briefly presented in the foreword of the State Park Anthology, as follows:

It was not until automobiles became fairly numerous, and sufficient good or fair roads had been built to permit ready
access to areas at a distance from centers of population, that
the State-park movement may be said to have been fairly
launched. Such State parks as had been established in the
meantime had generally been created to preserve some
outstandingly scenic area, such as the Niagara Reservation
in New York or the Yosemite Valley in California, and
resulted from a strong public opinion that was concerned as
a rule only with a single project, and that had little or no
vision of a day when most of our States would be building
up systems of State parks.

It is during the past decade that the establishment of State
park systems has become a widely recognized function of
our State governments. In the old days park advocates
would say, "Here is an area so outstanding in its beauty that
it ought to be saved for the public." Today we say, "Here is
a public, vast in numbers, with modern means of
transportation, good roads, and leisure, more and more
cramped by the growth of cities, to whom contact with the
beauty of nature and opportunity for the simple types of
outdoor recreation are inure and more necessary for a
healthy mind and a healthy body. Let us find and preserve
some of what is left of our unspoiled out-of-doors, so that
our people today and tomorrow may have a chance to know
what it is like and to enjoy it." 1

1 Evison, Herbert, editor, A State Park Anthology, National Conference on
State Parks, Washington, D. C., 1930. (See p. 7.)

Relative Adequacy of Areas Provided.—Among the 46 States having
State parks, or areas, of similar character there is an extremely wide
variation in the extent to which such areas have been provided. This is
expressed by a range of .02 acre per thousand inhabitants in Delaware to
200 acres in New York State. The comparatively low acreage in many
Western States is largely compensated by the fact that excellent outdoor
recreational opportunities are provided for them by national parks and
national forests, although these do not fully meet the needs of their
people.

Public Support.—In a few States, notably New York, Iowa, Indiana,
Illinois, Michigan, Connecticut, and California, regular and reasonably
adequate funds are made available for acquisition, development, and
maintenance of recreational areas, though these funds have been
considerably curtailed during the past 5 years. In most others this field
of State activity is still struggling for some reasonably adequate
recognition.

Selection of Sites.—Selection of State recreational areas, chiefly State
parks, has been based in varying degree on comprehensive surveys
conducted in the following States: Massachusetts, Connecticut, Rhode
Island, New York, Indiana, Illinois, Iowa, and California. Though a few
other States have built up systems excellently balanced, most of them,
either because of failure to establish standards, or because of their lack
of knowledge of their recreational resources, have included in their systems areas too small, of slight value scenically or for active recreation, unduly expensive to develop and operate, or crowded too closely on one another.

Types of Properties.—The bulk, in number and extent, of State properties which have been established primarily for recreation are called State parks. Familiar as that term is, it is well-nigh meaningless, or perhaps it may be said to have a slightly different meaning in each of the 46 park States. It is applied, for example, to the spectacular, 60,000-acre Custer State Park in South Dakota, and to an, Indian mound on an acre of land in Columbus, Ohio (Campbell State Park); to a 7-acre picnic ground crowded on a lonely brook in an old stand of hemlock in Connecticut (Humaston Brook) to a 15-acre beach on Lake Michigan (Mears State Park) and to a beach without hinterland in California. Only a few States have distinguished between their scenic and active-recreational properties, and those primarily of historic or scientific importance by designating the latter as monuments.

In contrast with this general confusion are certain States which have established definite and high standards for their parks which insist, generally, on areas of considerable extent and scenic distinction and which decline to include properties which are commonplace or almost wholly local in character of use. Notable among these are New York, Indiana, Illinois, and California. No system, however, appears to be wholly free from undesirable or incomplete properties.

Also by contrast with the low-grade holdings which many States have accepted into their park systems are a number which embrace features of superb beauty and of genuinely national importance. Examples of
this type of park are the Niagara Reservation in New York, the Humboldt and other redwood parks in California, the forests of giant hardwoods in Turkey Run and Spring Mill Parks in Indiana, and Custer State Park in South Dakota.

Administrative Machinery.—The machinery of administration for State recreation areas—chiefly State parks—is of nearly as many varieties as there are park-owning States. Of the numerous kinds, however, there are two types which are most general in those States which have had parks for some years. One is the commission or board, concerned almost wholly with parks, such as is found in Kentucky, Rhode Island, Iowa, New Mexico, Texas, Washington, and South Dakota. The other is the conservation department headed either by a single conservation commissioner, as in New York and Massachusetts, or by a conservation commission, but having charge of several divisions, of which parks is one.

The commonest type of administration is that which places parks under the State forester or State forestry commission. This has occurred in most cases because the forestry branches were established before the parks, and appeared the most logical agencies under which to place park administration until a separate agency had been set up. Two States in this group—South Carolina and Florida—have recently decided to establish distinct branches in charge of parks. In a number of others, parks are pretty definitely subordinated to the forests, with not much distinction between the two in treatment of their resources.

Ohio has an anomalous administrative organization, with the State forester administering a group of excellent forest parks a park division in the conservation department administering a group of reservoir lakes; and the Ohio Archeological and Historical Society in charge of a group of historical and archeological sites. Pennsylvania has a number of park commissions, loosely connected with the department of forests and waters, which also administers a group of so-called forest parks. In New Jersey, although most of the parks are under the Conservation Commission, one is administered by an independent commission, while another administers the New Jersey portion of the Palisades Interstate Park. In Massachusetts, a number of State park reservations are under county-supported commissions.

New York's system is unique, with her several park regions, each under a separate commission, all united in, and under a considerable degree of fiscal control of, a State council of parks, which in turn is nominally subject to control by the conservation commissioner.
Powers of Park Administrators.—While there is considerable variation in the extent of authority granted to park administrators, certain powers are found to be common to most or all of them. The following powers are generally possessed:

(a) To purchase lands for use as parks.

(b) To accept gifts of park lands or of funds for the purchase of such lands.

(c) To exercise the right of eminent domain.

(d) To construct necessary roads, structures, and other facilities in the parks.

(e) To employ persons needed for operation of parks, and to expend such funds as may be available for other necessary expense of operation.

(f) To promulgate and enforce rules and regulations governing use of the parks and protection of their resources.

(g) To make necessary studies of the scenic and potential or actual recreation areas within the State on which to base selection of sites for inclusion in a State system.

A few States have not yet granted their park authorities the right to exercise the power of eminent domain. On the other hand, certain of the New York regional commissions have the power of appropriation, taking the land when it is needed, and settling for it afterwards through the Court of Claims.

The power of eminent domain has been exercised with varying success in the several States which possess it. Awards considered by the condemning authority to be unjustifiably high are found usually in those States where the award is made by juries selected in the locality in which the property being condemned is situated, they are generally considered fairly satisfactory in those States in which the jury or court is
Planned Recreation Areas.—The States of New York, Indiana, Illinois, Iowa, California, and perhaps a few others which have been concerned with park administration over a considerable period of years, have long recognized that parks present difficult and complicated problems of planning, requiring the services of men of technical training and an appreciation of the special considerations which should govern the development of lands of this type. On the other hand, the idea that the natural area requires no particular planning at all has died hard—is not, in fact, dead everywhere yet—but it has left in its wake scores of parks in which irreplaceable features of high quality have either been destroyed, badly marred, or modified by unplanned and uncontrolled public use.

The park planning problem, in general, stripped to its essentials, is that of making usable a natural and relatively unspoiled area, which has remained that way in most cases because it has never been subjected to much use, and at the same time to preserve those scenic or other features which are either the principal reason or one of the principal reasons for establishment of the park.

Park Facilities and Their Operation.—As previously noted, Connecticut operates all facilities provided in its parks. While camp and picnic grounds are generally operated directly by the State, overnight lodgings in hotels or cabins, stores, restaurants, bath houses, boats and canoes, rental of riding horses, and other special facilities are usually or frequently handled by concessionaires.

Concessions are awarded in two different ways. Under one arrangement the State's return and the conditions of operation are fixed in advance, and the concessionaire who is supposed to be best fitted for the task is selected. Under the other, the terms of operation are fixed in advance, but the award is made to the highest bidder. In some cases, prices, methods of operation, standards of service, and limitations on the placing of advertising signs are set forth in great detail in the concession agreement; in others, these are covered in very general terms.

Exclusive Use Privileges.—The practice of turning over to individuals for their exclusive use small portions of State park lands has, fortunately, never become widespread. It has been permitted in Custer State Park, S. Dak., in Devils Lake State Park, Wis., and in one or two other locations. Most State park authorities are strongly opposed to it. Senator Norbeck, Chairman of the Custer State Park Board, has said, "We have leased about 100 sites for cottages in the State park, but are not encouraging any more of it. It brings its own complications and many of them. Suitable locations can be found outside the park for these cottages." 2

2 Letter from senator Norbeck to National Resources Board, Aug. 22, 1934.
chiefly in Pennsylvania and Massachusetts, but is being eradicated in the latter State as rapidly as possible.

**Nature Education.**—Use of State holdings for nature education cannot be called extensive. The outstanding undertaking of this sort is found in the Palisades Interstate Park, where it is a joint project of the park commission and the American Museum of Natural History. The Buffalo Museum of Sciences occupies a somewhat analogous position with respect to the nature-education work and to the Allegheny School of Natural History at Allegheny State Park, in western New York. Indiana has had organized nature-education service in several of her State parks for some years. Nature guide service, partly on a basis of volunteer leadership, neither regular nor organized, has been offered from time to time in Iowa parks and in Pennsylvania.

Museums are found in a considerable number of State parks. A few are expertly handled, on the basis of modern museum science, for the sole idea of enlarging public understanding of these parks and their immediate surroundings. The majority have been established without any particular policy, and tend to be heterogeneous and badly organized, suffering chiefly from excessive generosity of donors. The establishment and arrangement of the occasional small zoological collections found in State parks have been undertaken on somewhat the same unscientific basis, with a few notable exceptions, such as that at Bear Mountain, in the Palisades.

Generally speaking, educational effort in State parks has been of very limited extent and value; it offers a wide field of opportunity that few State park authorities appear as yet to have grasped.

**Preservation of Natural Conditions.**—In most State parks, the preservation of the native landscape and of native animal and bird life is accepted as a primary objective. The cutting of trees and shrubbery is in general prohibited on most of these areas; animals and birds likewise are accorded special protection. Important exceptions are the Adirondack and Catskill parks in New York, where cutting is more strictly prohibited than in almost any other parks—even the national parks—but where hunting is permitted during the season.

The degree of preservation actually attained varies greatly among the several States and among the several hundred parks. In areas too small for the active-recreation load they are required to carry, it is almost a complete failure. The same is equally true in areas which have been badly planned, and in which, as a consequence, there has been no adequate assertion of control over public use. It has been largely defeated in a number of parks by the construction of a needlessly large mileage of roads and trails. It has been impaired by the frequent tendency to overdo clean-up—elimination of ground cover, removal of standing dead trees (snags) which are valuable habitats for many bird species—and other forms of interference with natural conditions. It has been hindered even in the case of expertly planned development by failure to ascertain the effects of such development upon wildlife conditions.
SECTION III
PRESENT EXTENT AND USE OF PUBLIC LANDS FOR RECREATION
3. LOCAL SYSTEMS

Metropolitan Recreation Areas

A metropolitan region or district, as defined by the Federal Census of 1930, comprises a central city (or cities) and all adjacent and contiguous civil divisions having a density of not less than 150 inhabitants per square mile, and also, as a rule, those civil divisions of less density that are directly contiguous to the central cities, or are entirely or nearly surrounded by minor civil divisions that have the required density.1


Ninety-six metropolitan districts were established in 1930, each having an aggregate population of 100,000 or more, and containing one or more central cities of 50,000 or more population.2

2 Ibid.

For the purposes of metropolitan park planning, the determining factor is not density of population, but accessibility for frequent recreational use by the inhabitants, particularly of a central city (or cities). Under modern methods of transportation, especially by automobile, such accessibility for comparatively frequent recreational use may be secured in a metropolitan region within a radius of approximately 50 miles from the center of the central city (or cities). Such a region is considerably larger than the metropolitan district, as defined by the Census Bureau.

Recreational areas in a metropolitan recreation system are sometimes located within the central city and in smaller cities within the metropolitan region. As a rule they are located in the more open, rurallike parts of the region, since the primary purpose of the metropolitan park is to provide an area of large extent, preserving a naturalistic landscape and opportunities for such active forms of recreation as fit harmoniously into a natural landscape as, for instance, picnicking, hiking, riding, boating, fishing, camping, winter sports, and nature study.

There are, however, numerous exceptions to this rule among the properties owned and administered by authorities controlling metropolitan recreation areas. Among such areas may be found
Educational Opportunities

children's playgrounds, playfield parks, areas devoted specifically to golf, bathing beaches, stadia, boulevards, and parkways; in short, such areas and facilities as are characteristic of municipal recreational area systems.

There is no single plan or method of providing metropolitan recreational areas in the United States. Lying within 50 miles of a central city (or cities), there are examples of recreational areas owned and operated by the Federal, State, county, township, and municipal governments, and by special metropolitan districts.

There are only six special metropolitan park districts in the United States: Boston, Rhode Island, Cleveland, Akron, Toledo, and Cincinnati. Tacoma is included in a metropolitan park district, but this is primarily a city system. Most of the special park districts in Illinois have jurisdiction over an area larger than the central city, but these likewise are essentially city systems.

Available data indicate that in 1930 four metropolitan park districts controlled park acreage as follows: Boston Metropolitan Park District, 11,500 acres; Cleveland Metropolitan Park District, 9,369 acres; Akron Metropolitan Park District, 1,450 acres; Toledo Metropolitan Park District, 215 acres.

Many municipalities own and administer recreational areas outside their boundaries. In 1925—26 the number of cities reporting metropolitan parks owned by them was 109, with 245 separate areas. In 1930, 186 cities reported owning a total of 381 parks in their metropolitan regions with a total of nearly 90,000 acres.


During the 5-year period, this marked increase in the number of cities owning and administering recreation areas in their metropolitan regions, and the increase in the number of such areas, indicates a tendency in municipal recreation planning to include the region. Many of the municipal park and recreation departments operate under laws specifically giving them authority to acquire and administer lands for recreational purposes both within and without the boundaries of their respective cities.

Another important governmental agency in metropolitan park planning is the county. The majority of the 74 counties reporting one or more county parks in 1930 lie in the metropolitan regions of cities. Two counties (Cook and Du Page) in the metropolitan region of Chicago, four counties (Essex, Hudson, Passaic, and Union) in New Jersey, and one county (Westchester) in New York, owned and administered 61,177.3 acres in 1930, or over 56 percent of the total county park areas in the United States.
Twelve counties in the metropolitan regions of 10 cities controlled 83,043.7 acres or over 76 percent of the total county park area in the United States.\(^5\)

\(^5\) Park Recreation Areas in the United States, 1930, op. cit., p. 37—43.

Many of the State recreation areas are within the metropolitan regions of cities (radius of 50 miles of central city), and serve these cities as metropolitan parks or recreation areas. No comprehensive study or analysis of the numbers of State recreation areas located within metropolitan regions of cities has been made. In Rhode Island, Connecticut, and Massachusetts practically all of the State recreation areas are within the metropolitan regions of one or more cities. In New York 6 of the Long Island State parks, the Palisades Interstate Park, and some of the State parks of New Jersey are within the metropolitan region of New York, Newark, and Jersey City; 12 in the metropolitan region of Syracuse; 4 in the metropolitan region of Rochester; 5 within the metropolitan region of Albany; as well as 7 in Massachusetts, which are found in the same region; and 1 within the metropolitan region of Buffalo. In Michigan nine State parks are in the metropolitan region of Detroit, and five in are the metropolitan region of Grand Rapids. The Indiana Dunes State Park is within the metropolitan region of Chicago. There are other examples of the relation of State recreation areas to the metropolitan regions of cities, but the cities cited show that one of the important functions of many State park areas is to provide a comparatively frequent recreational service to the population of central cities and their metropolitan regions.

Falling within a 50-mile radius of certain cities are some national recreational areas controlled by the National Park Service. These serve more or less as metropolitan recreation areas to the adjacent cities. Examples of cities having national recreation areas within a 50-mile radius are Knoxville, Tenn. (Great Smoky Mountains National Park); Chattanooga, Tenn. (Chickamauga and Chattanooga National Military Park); Richmond, Va. (Petersburg National Military Park); Washington, D. C. (Fredericksburg and Spotsylvania National Military Park); Little Rock, Ark. (Hot Springs National Park); Baltimore, Md. (Gettysburg National Military Park); Denver, Colo. (Rocky Mountain National Park); and Seattle, Wash. (Mount Olympus National Monument). Nearly 700,000 acres of park lands are comprised in the areas within the metropolitan regions of the above cities, but the bulk of the total acreage is within the metropolitan regions of two comparatively small cities—Denver and Knoxville.

Some of the national forests in the West and in the East are now providing certain recreational services usually provided by the larger metropolitan parks. Such cities as Los Angeles, San Diego, Sacramento, Seattle, Tacoma, Portland, Salt Lake City, Denver, and many smaller cities in the West now enjoy such recreation advantages in the national forests; while in the South and East, Little Rock, Jacksonville, Knoxville, Chattanooga, Erie, and many smaller cities are within metropolitan-use range of national forests. As the full plans of the United States Forest Service mature, the possibilities of the national
forests as metropolitan recreational areas will no doubt become much more important.
1. THEORY OF DIVISION OF RESPONSIBILITY FOR RECREATION

In the field of recreation:

(1) What are the responsibilities of the local governments?

(2) What are the responsibilities of the State governments?

(3) What is the responsibility of the Federal Government?

If a certain responsibility for providing recreation falls logically and necessarily on the Federal Government, how should this responsibility be divided among the various branches of the Federal Government?

Because these old questions must be faced again in the relatively new field of recreational planning, they demand reexamination.

Local, State, and Federal Responsibilities

Supplying facilities for the day-by-day recreational needs of the people is primarily a local responsibility, whether met by municipalities of sufficient population and wealth to supply all the various types of recreation required, or by county or metropolitan park boards which, dealing with the needs of a group of urban and rural communities, make it possible for each of those communities to enjoy such facilities. Use by outside residents of facilities so supplied and maintained is incidental.

Every State has areas either of such high scenic value or of such high value for active recreation, or both, or possessing such interest from the scientific, archeological, or historical standpoint, that their use tends to be State-wide in character. Acquisition of such areas, and their development and operation, appear to be primarily a function of the State, though this should not preclude joint participation in acquisition, and possibly in development and operation, by the State and, by such community or communities as might receive a high proportion of the benefits flowing from their establishment.

Taking the Nation as a whole, there are, again, areas of such superlative quality, because of their primeval character or scenic excellence, or historical, archeological or scientific importance, or because of some combination of these factors, that they are objects of national significance. It is the responsibility of the Federal Government to acquire and administer these.
The Federal responsibility is particularly emphasized in the case of the primeval wildernesses. There are several reasons for this. Remaining areas of primeval condition are few. Those who live in the regions immediately adjacent to the wilderness are usually pioneers whose lives and thoughts are devoted to wilderness conquest. Hence the Federal eye rather than the local eye must be depended upon to recognize and protect what wildernesses remain. A wilderness reserve ordinarily must be of great size if it is to remain primeval, and the present value may seem insignificant, whereas the deferred value is very great. Take all these conditions and circumstances together, and it is apparent that the monumental task of saving the primeval must be very largely a Federal responsibility.

There is, in addition, another group of areas, the ocean and Great Lakes beaches, which as a group, are heavily freighted with national interest, and are extensively sought by persons living at a great distance from them. It is unlikely that these areas will be acquired by the States to a sufficient extent for the public, and it would appear reasonable to expect the Federal Government to acquire and administer a representative group of them.

**Departments and Bureaus of the Federal Government**

The division of responsibility among the several governments seems thus to be susceptible of fairly clear definition. Defining the division of responsibility as it concerns the several departments and bureaus of the Federal Government is more difficult. Several types of federally owned lands, such as national parks and monuments, national forests, Federal wildlife reservations, and Federal reclamation lands, provide recreation. Recreation is the primary objective of national parks and monuments and Federal game refuges, although in the latter areas the recreational value is usually realized elsewhere.

Recreation is a secondary objective of the other types of federally owned lands. The recommendations made at a later point in this report arise from certain principles which are stated as follows:

1. It is a Federal responsibility to develop to their highest usefulness the recreational values inherent not only in national parks and monuments, but in other Federal holdings as well, as long as they remain in Federal ownership.

2. In this development every effort should be made to avoid unnecessary duplication of "special purpose" organizations.

3. There should be constant and conscientious striving toward interbureau and interdepartmental cooperation.

4. Wildlife protection and administration must be coordinated on all holdings if the Federal Government is to be effective in its responsibility to conserve this recreational resource.

5. Commercial objectives should not be permitted to jeopardize the value of lands which are primarily of importance for recreational use.
Municipalities

It is estimated that land devoted to all municipal purposes amounts to about 10 million acres, which is about one-half of one percent of the total land area in the United States.

1 Editor's note: The tables used in this section without individual citations were compiled from 1930 census Bureau figures, and information obtained by the National Recreation Association in a Nation-wide survey of municipal parks and recreation areas (1925—26).


If the recreational use of land be considered from the viewpoint of concentration of population, and from the viewpoint of the necessity of frequency of use, it is evident that the focal point and the very foundation of a national plan for recreation is within the numerous municipalities of the United States and their immediate environs. Improved methods of transportation have made possible a distribution of the responsibility to other political units, such as counties, metropolitan districts, States, and the Federal Government, but the basic responsibility remains with the local municipalities.

What, therefore, is the extent of responsibility of the municipalities?

In attempting to answer this question, the 16,598 incorporated municipalities will be divided into two general classes, based upon the ability or lack of ability of these municipalities to provide not only the minimum types of land areas desirable for meeting the daily or very frequent recreational-use needs of its people, but also the necessary finances to support a recreation-administering agency on a year-round basis.

3 There are unincorporated communities in the United States as large in population as many that are incorporated. The number is unknown.

Municipalities under 8,000.—The experience of the National Recreation Association covering a period of over 25 years in organizing recreation systems has demonstrated quite conclusively that most municipalities
under 8,000 population cannot provide the desirable necessary recreation areas and maintain a year-round recreation administrative organization. Practically all such municipalities may be expected to provide some kind of a maintenance organization.

Therefore, the first group of municipalities to be considered is comprised of all those having less than 8,000 inhabitants.

These four groups of municipalities comprise about 93 percent of all incorporated places in the United States, 22.7 percent of the total population of all incorporated places, and 14.5 percent of the population of the Nation.

TABLE XV.—Municipalities in the United States under 8,000 population showing numbers and total population

<table>
<thead>
<tr>
<th>Municipal groups</th>
<th>Number in each group</th>
<th>Total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 8,000</td>
<td>625</td>
<td>3,903,781</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>1,332</td>
<td>4,717,500</td>
</tr>
<tr>
<td>1,000 to 2,500</td>
<td>3,087</td>
<td>4,820,707</td>
</tr>
<tr>
<td>Under 1,000</td>
<td>10,346</td>
<td>4,362,746</td>
</tr>
<tr>
<td>Total</td>
<td>15,390</td>
<td>17,804,024</td>
</tr>
</tbody>
</table>


The strictly rural village, town, and small city, if present trends continue, will occupy a less and less important position in American life unless the widespread distribution of cheap electric power attracts industries to them from the larger centers of population.

Very little information is available as to what these small communities have provided for themselves in recreation areas; the most complete available statistics are from a study conducted by the National Recreation Association in cooperation with the American Institute of Park Executives in 1925—26. The following table is a summary of the findings of this study.

TABLE XVI.—Municipal recreation areas in small villages, towns, and cities 1925—26

<table>
<thead>
<tr>
<th>Municipal groups</th>
<th>Number places</th>
<th>Number reported in study</th>
<th>Number having no parks</th>
<th>Number having parks</th>
<th>Total acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 10,000</td>
<td>721</td>
<td>322</td>
<td>67</td>
<td>255</td>
<td>11,366.87</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>1,320</td>
<td>309</td>
<td>72</td>
<td>237</td>
<td>5,186.89</td>
</tr>
<tr>
<td>Under 2,500</td>
<td>12,905</td>
<td>1,320</td>
<td>751</td>
<td>569</td>
<td>5,346.64</td>
</tr>
<tr>
<td>Total</td>
<td>14,946</td>
<td>1,951</td>
<td>890</td>
<td>1,061</td>
<td>21,900.40</td>
</tr>
</tbody>
</table>
Of the 721 communities in this group (5,000 to 10,000) in 1920, reports as to park areas were secured from 322, or 44.6 percent of the total. Sixty-seven, or 20.8 percent of the total reporting, had no parks, while 255, or 79.2 percent of total reporting, had 11,366.87 acres, an average of nearly 45 acres per community. Twenty-eight of the communities reporting parks had a total park area of 3,238.69 acres; the ratio of park acreage to the total population in these 28 cities was 1 acre to every 58 inhabitants. The average number of parks per city was about 4.4

In the group with from 2,500 to 5,000 inhabitants, approximately 25 percent were reported. Seventy-two, or 23 percent of those reporting, had no parks, while 237, or 77 percent of those reporting, had 5,186.89 acres of park areas, an average of over 21 acres per community. These statistics of recreation areas did not include school sites, which in many communities were large enough to provide quite amply for the outdoor active recreation needs of the children and young people. Thirty-five of the 237 communities reporting parks had 2,529.89 acres, and the average ratio of park acreage to population was 1 acre to every 45 inhabitants. The number of park properties ranged from one to seven. Thirty-three of these communities reported a total of 298.91 acres of school sites and a total of 89 sites.5

In the group under 2,500 population, reports were received from about 10 percent. More than half of the 1,320 communities reporting had no parks, while 569, or 43 percent of those reporting, had a total of 5,346.64 acres, an average of about 9.4 acres per community. Of the 569 communities reporting parks, 80 were selected as the most representative from the viewpoint, of either the size of their park acreage, or school ground area, or both.

These villages ranged in size from 86 to 2,484 inhabitants. The total park area owned by 69 of the 80 communities was 1,762.17 acres, or an average of slightly more than 25 acres per community. The ratio of park acreage to population was 1 acre to every 33 inhabitants. Seventy-five of the 80 communities reported a total of 594.99 acres of school grounds.

A summary of the average park acreage per community of all the communities reporting parks in the several population groups is presented in the following.
TABLE XVII.—Average acres per community of municipalities reporting parks in various population groups, 1925—26

<table>
<thead>
<tr>
<th>Population groups</th>
<th>Number communities reporting</th>
<th>Average park communities acreage per community</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 10,000</td>
<td>255</td>
<td>44.6</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>237</td>
<td>21.9</td>
</tr>
<tr>
<td>Under 2,500</td>
<td>569</td>
<td>9.4</td>
</tr>
</tbody>
</table>

TABLE XVIII.—Average acres per community of selected municipalities reporting parks and ratio of park acreage to inhabitants in various population groups

<table>
<thead>
<tr>
<th>Population groups</th>
<th>Number selected communities</th>
<th>Average park acreage per community</th>
<th>Ratio of acreage to population</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 10,000</td>
<td>28</td>
<td>115</td>
<td>1:58</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>35</td>
<td>72</td>
<td>1:45</td>
</tr>
<tr>
<td>Under 2,500</td>
<td>69</td>
<td>25</td>
<td>1:33</td>
</tr>
</tbody>
</table>

These two tables give a slight clue to what municipalities in the various population groups may be expected to provide for themselves in recreation areas, based on what some of them have actually done.

It is very difficult to fix a reasonable standard for the various groups of small municipalities to follow in providing their own recreational areas. On the basis of the very limited data of the most progressive communities in the various population groups as presented in the immediately preceding table, a reasonable average ratio of acreage to population in the population group is set forth in table XIX.

TABLE XIX.—Total desirable park acreage in each population group derived from application of the standard fixed for each group

<table>
<thead>
<tr>
<th>Population groups</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 8,000</td>
<td>1 acre to every 75 inhabitants.</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>1 acre to every 60 inhabitants.</td>
</tr>
<tr>
<td>1,000 to 2,500</td>
<td>1 acre to every 50 inhabitants.</td>
</tr>
<tr>
<td>Under 1,000</td>
<td>1 acre to every 40 inhabitants.</td>
</tr>
</tbody>
</table>

TABLE XX.—Estimated average total park acreage per community in each population group

<table>
<thead>
<tr>
<th>Population group (1930)</th>
<th>Number communities</th>
<th>Estimated total acreage each group</th>
<th>Estimated average park acreage per community</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000 to 8,000</td>
<td>625</td>
<td>52,050</td>
<td>83+</td>
</tr>
<tr>
<td>2,500 to 5,000</td>
<td>1,332</td>
<td>78,626</td>
<td>59+</td>
</tr>
<tr>
<td>1,000 to 2,500</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It will be shown later that the total estimated recreational area desirable for 17,804,824 inhabitants of the 15,390 incorporated places under 8,000 population (1930) is approximately one-half of the total estimated desirable recreation space for the 60,333,452 inhabitants in the 1,208 cities of 8,000 population and above; this appears to be entirely out of proportion, considering the relative number of people in the two general groups of incorporated places.

![Diagram of recreational acreage](http://www.nps.gov/history/history/online_books/recreation_use/chap4-2.htm)

FIGURE 31.

The basic reason for this apparent lack of balance is that irrespective of the number of people to be served there is a minimum desirable number of types of recreation areas with a total gross acreage necessary in any corporate community if the outdoor recreational needs of the inhabitants...
are to be served. For example, a community of 1,500 people should have one combined playground and school site of not less than one block, or about 3 acres; one playfield of not less than 5 or more acres; one small park of at least a block, or about 3 acres, in the shopping center of the town; one picnic grove of 10 or more acres; one small natural swimming center if topographical conditions present the opportunity; a site for a public library and perhaps another for a community house. In short, the total desirable recreation area would be from 25 to 30 acres. This same amount of space in a large city, if divided into special types of areas, would serve satisfactorily a far larger number of people. If 25 acres, for example, were divided into tracts of 5 acres, each located in a residential district of 160 acres in a city having as low a density as 25 persons per acre, these playgrounds would serve adequately the outdoor play needs of the children of a population of approximately 20,000. At the same time they would provide space for a school building on each with recreational opportunities for adults also. The recreation areas of villages, towns, and small cities are frequently used by the people living on the farms in the surrounding country so that they serve a far larger number of people than are actually enumerated as living in the small municipalities themselves.

For financial reasons all-year-round administrative recreational leadership cannot, as a rule, be provided by the 15,390 small municipal corporations comprising this general group of incorporated places. Reliance must be had for recreational administration, and perhaps for acquisition and development of some of the desirable types of properties, on a larger governmental unit. The county is perhaps the best existing governmental agency for handling this problem, not only for the numerous villages, towns, and small cities, but also for providing a recreation service under leadership for the population dwelling in the open country. In many instances also State-owned properties and outlying parks of the larger cities will be so located as to serve frequently the recreational needs of the people of many of the villages, towns, small cities, and strictly rural population in their vicinity.

*Cities of 8,000 and up.*—The second group of cities comprises all those of 8,000 population and above. The number of cities in this general group classified according to size is shown in the following table.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number cities (1910)</th>
<th>Population</th>
<th>Percent total population of Nation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000,000 or more</td>
<td>5</td>
<td>15,064,555</td>
<td>12.3</td>
</tr>
<tr>
<td>500,000 to 1,000,000</td>
<td>6</td>
<td>5,763,987</td>
<td>4.7</td>
</tr>
<tr>
<td>250,000 to 500,000</td>
<td>24</td>
<td>7,956,228</td>
<td>6.5</td>
</tr>
<tr>
<td>100,000 to 250,000</td>
<td>56</td>
<td>7,540,966</td>
<td>6.1</td>
</tr>
<tr>
<td>50,000 to</td>
<td>98</td>
<td>6,491,448</td>
<td>5.3</td>
</tr>
<tr>
<td>Population Range</td>
<td>Cities</td>
<td>Population</td>
<td>Acres of Recreation</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------</td>
<td>------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>100,000</td>
<td>185</td>
<td>6,425,693</td>
<td>5.2</td>
</tr>
<tr>
<td>25,000 to 50,000</td>
<td>606</td>
<td>9,097,200</td>
<td>7.4</td>
</tr>
<tr>
<td>10,000 to 25,000</td>
<td>226</td>
<td>1,993,175</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>1208</td>
<td>60,333,452</td>
<td>49.1</td>
</tr>
</tbody>
</table>


The above cities may be expected to provide not only the necessary recreational spaces within their borders, or very near their boundaries, for daily or frequent use of their populations, but also to maintain a year-round administrative recreational service.

Each of the cities in the above groups may reasonably be expected to provide at least 1 acre of recreational area for every hundred of its inhabitants. This ratio should be higher for all or part of the group comprising cities from 10,000 to 25,000, if these cities are to provide for themselves all the different desirable types of recreational areas. However, for purposes of calculation, the generally accepted standard of 1 acre for every hundred of the population will be used for all groups.

This standard, applied to the total population of all groups, would show that there should be reserved for recreational purposes for these 60,333,452 inhabitants a total of 603,333 acres now, without making allowance for future growth of population. The study of municipal recreation spaces conducted by the National Recreation Association, 1930, covering cities of 5,000 and above, and securing reports from 1,072 cities of a total of 1,833, showed a total of 308,804.87 acres now owned by 898 cities; 174 cities reporting as having no parks. 6

This total recreation acreage, however, includes 89,196.3 acres lying outside the limits of the cities. Deducting this total from 308,804.87, there remains within the city limits of the 898 cities a total of 219,608.57 acres. The probabilities are that if complete records on recreational areas, including school sites owned by all the cities of 5,000 and above within their limits, had been available in 1930, they would show that about one-half of the desirable recreational areas had been acquired, although a rather surprisingly large number of the smaller cities was entirely lacking in park spaces.

Studies conducted by the Recreation Division of the National Resources Board, 1934, show 206,916.17 acres of recreational spaces in 440 cities of 5,000 population and above.

Taken as a whole, the cities of 10,000 inhabitants and above are still far from the goal of even so low a standard as 1 acre to every 100 of the population.

Balanced planning of lands for recreation within cities requires that the total acreage secured by application of the principle of 1 acre for every 100 of the population be divided into types of areas of varying sizes, each type performing a specific, primary recreational function. Among some of the most outstanding types of recreation areas are:

1. **Children's Playgrounds.**—Of the total recreation area secured through the application of the principle of 1 acre to every 100 inhabitants, not less than 12 percent should be allocated to children's playgrounds for children from 5 to 14 years of age, each playground ranging from 3 to 8 acres in extent with an average size of 5 acres.

From 3 to 5 percent of each 160 acres of residential area should be reserved for a children's playground.

These areas may also be sites for grade schools. In fact, the distribution of grade-school sites and community-playground sites will in general coincide, and in an ideally planned city the great majority of the children's playgrounds should be located adjacent to schools.

2. **Neighborhood Playfields or Playfield-Parks.**—From 15 to 18 percent of the gross area, under the principle of 1 recreation-acre to every 100 inhabitants, should be allocated to neighborhood playfields or playfield-parks. There should be one of these areas to each 640 acres of residential territory, and it should range in size from approximately 15 to 30 acres, or even more. In other words, it should contain from 2-1/2 to 5 percent of each 640 acres of residential territory. These areas may also be used as the sites for junior- and senior-high schools, or, conversely, large sites of such schools may be used as community playfields and neighborhood parks.

3. **Miscellaneous Recreational Areas.**—These include athletic fields, stadia, golf courses, bathing beaches, areas devoted exclusively to tennis or some other special type of facilities. There is no special rule governing the amount of area which should be set aside for miscellaneous active-recreation areas. Requirements of the particular use determine more or less the amount of space required for each, as a minimum of 100 acres for an 18-hole golf course, 15 to 20 acres for a first-class athletic field or stadium, including the enclosed space and outside area for auxiliary fields and auto parking.

In a properly balanced system of recreational areas in a city, it is probably desirable to use for active recreation from 30 to 50 percent of the total recreational area, assuming 1 recreation-acre for every 100 inhabitants.

4. The acreage remaining after deducting areas for children's playgrounds, playfields, or playfield-parks and miscellaneous active recreational areas may be distributed among areas characterized by landscaping and natural or designed topographical features. They are intended primarily for adornment of areas in cities wherever they are located; to preserve natural topographic features better adapted for general recreation than for any other purpose; to provide opportunities for relaxation in an environment of beauty; to make possible frequent...
contact of the people with the elements of nature; to promote the study of nature; and, in some instances, as in large parks or waterfront parks, to provide opportunities for forms of active recreation which the natural conditions readily permit, such as hiking, riding, picnicking, boating, swimming, nature study, presenting dramatic performances, concerts, play festivals, civic celebrations, and playing of games.

The following are among the most important types of landscaped areas:

(a) **Neighborhood or in-town Parks.** These are comparatively small areas located in residential districts, downtown sections, and even in parts of cities occupied by industry and transportation. There is no general rule as to the desirable total or individual acreage of this type of property. They should, however, be distributed over the city on the basis of about one for every square mile. They are sometimes combined with a playfield area, making a playfield-park.

7 Editor's note: There is a class of very small properties, numerous in some cities, called ovals, triangles, circles, and parking strips, annually resulting from left-over areas in the street plan, or consciously introduced by real-estate subdividers, They are not neighborhood parks.

(b) **Large Parks.**—Large parks are areas ranging from a hundred or several hundred acres to several thousand acres, although in small cities areas from 40 to 100 acres perform for the inhabitants much the same functions as do the larger areas in large cities. Such areas are generally characterized by varied topographic features and an abundance of plant life arranged according to the principles and rules of landscape architecture, although very frequently they provide a variety of active recreational opportunities. There is no rule governing their numbers, size, or distribution. Natural topographic features in a city, availability and cheapness of land, and accessibility to large segments of the population are factors in their location. All small cities should have at least 1 area of this type, and in the larger cities it is desirable that they be distributed so that no citizen would be more than 1 to 3 miles from one.

(c) **Educational-Recreational Areas.**—These comprise areas for a zoological park or garden, botanical garden, arboretum, and special educational gardens. Among these types of areas, zoos are by far the most numerous.8 The park-recreation systems of American cities are notably deficient in special opportunities for the study of plant and animal life in their natural habitats.

8 Park Recreation Areas in the Unite States, 1930; Bulletin no. 565, op. cit. p. 21.

5. Other recreational areas not infrequently owned by cities, but which are excluded from the gross area assuming 1 acre to every hundred of the population, include organized camp sites, outlying forest parks, boulevards, and parkways. The first two are excluded because they lie outside the boundaries of the cities, and the second two, because they
are parts of the general highway system of cities. Exception may be noted in the case of a parkway that has sufficient width and natural topographic conditions to render general recreation services somewhat similar to a large park.

After the requirements for children's playgrounds and playfields and miscellaneous active recreation areas have been fulfilled in the recreational land-use plan of a city, it is often wise and good planning to forget the general rule of 1 acre for every hundred inhabitants in providing the different types of landscaped areas, including especially large parks. The preservation of natural topographic features, as water fronts, rugged terrain, and stream valleys, should be done on a generous scale even though the result may be that the total gross area of recreation space within the city may become as high as 1 acre to every 50 of its inhabitants. Not a few cities in the United States have already exceeded the ratio of 1 acre to every hundred inhabitants.

According to the standards of land planning for recreation which have been suggested for various groups of municipalities in the United States, the gross area devoted to recreational purposes in these municipalities should now be approximately 1,000,000 acres. This is only about 10 percent of the estimated total area of all lands devoted to municipal uses in the United States.

The exact amount of lands comprised in the park-recreation systems of the cities of the United States, plus the school sites and other publicly owned areas with an auxiliary recreational use, is not known. However, on the basis of statistics available for existing park acreage, partial statistics of existing school sites, and other publicly owned lands with an auxiliary recreational use, it is estimated that the gross acreage available for recreational use is somewhere between 400,000 and 500,000 acres. In other words, existing lands for recreational use within cities are approaching 50 percent of the gross area considered desirable.
State and Interstate Systems

Either through passage of some form of enabling legislation or through actual acquisition of lands, all but two of the States have recognized that provision of facilities for recreation is a legitimate function of State government.

The responsibility of the State appears to be to acquire, develop, and maintain for public use and enjoyment such areas of land and water as will meet with reasonable adequacy such needs of its own people for inspiration, nature education, and active recreation, and other recreational needs as are not the responsibility of local political subdivisions or of the Government of the United States.

In advance of preparation of this section, a number of men and women, possessing either long experience in State park administration, or serious students of the whole broad subject of recreation, were consulted with respect to certain important problems related to State administration of lands and waters for recreational purposes. Most of the recommendations which follow arise more or less directly from the comments made by this group.

Classification of Holdings

The majority of those persons consulted were agreed that some form of classification of State recreational holdings was desirable, though the suggested classifications submitted by them varied widely in number and definition. Consideration of the subject on the basis of their replies and of first-hand knowledge of the existing situation appeared to indicate the desirability of comparatively few designations, with as clear cut distinction as possible between the various types, and with a nomenclature uncomplicated and most likely to be accepted fairly readily by the public.

As one means of assuring suitable administration practice with respect to each classification or type, and in order that the using public may have a reasonably definite concept of the character of the various types, it would be well for the several agencies of the States entrusted with administration of lands and waters set aside primarily or wholly for leisure time use, to give serious consideration to the following proposed classification of such properties:
**State Parks.**—State parks are those areas of considerable extent in which are combined either superlative scenic characteristics and a fairly varied opportunity for active recreation or distinctive scenic character and exceptional opportunity for active recreation.

Essential to the character of any State park is the preservation of the native landscape and of native fauna to the extent that provision and enjoyment of active recreation-use facilities shall not be permitted to destroy or materially to impair valuable landscape features or to injure wildlife or its natural habitat; and further that all of its natural resources shall be withheld from commercial utilization.

**State Recreation Reserves.**—State recreation reserves are those areas which, lacking scenic distinction, supply such opportunity for active recreation as entitles them to be considered a part of the State's responsibility.

**State Monuments.**—State monuments are those holdings established for public use wholly or dominantly because of their historic, archeological, or scientific interest on which even the simplest types of active recreation, if permitted at all, are subordinated to the primary purpose for which such monuments are established.

**State Waysides.**—State waysides are those small areas situated along or close to highways, administered by the highway department in cooperation with the park administrative agency. They are designed to provide the highway traveler with places where he may stop to rest and to picnic and are so located as to escape the annoyances of highway traffic. These should be distinguished from extensions of the highway right-of-way acquired to include and preserve natural features which contribute to the attractiveness of the highway, but which are not designed for use as stopping places. They should also be distinguished from highway stopping places or turn-outs designed primarily to provide locations where cars may be stopped off the highway while their occupants enjoy some distant view at their leisure.

**State Parkways.**—State parkways probably need no definition beyond calling attention to the fact that they embrace an elongated park with a road running through it—in contradistinction to a highway possessing a broad right-of-way. In the case of the parkway, access is wholly under control of the administrative agency; in the case of the highway, abutting property owners possess definite rights of access.
SECTION IV
PROGRAM FOR DEVELOPMENT OF THE NATION'S RECREATIONAL RESOURCES
4. FEDERAL COMPONENTS

The Federal System

It is thought that the preservation of such national resources as productive soil (in situ), water resources, wildlife—especially examples of the primeval—archeological, and outstanding historical sites is properly a responsibility of the Federal Government. Since the subjects of erosion, wildlife, and water are being treated by other sections of the National Resources Board, it is necessary in this report only to indicate that they are extremely important to the subject of recreation. Preservation of the primeval and of historical and archeological sites is a special problem of conservation which must be treated as a Federal responsibility.
PHOTO 8.—Trees such as nature could not replace for us in ten generations. Photo by Asahel Curtis.

Continued >>>
The automobile in the space of 30 years has evolved from an experimental curiosity into a vital element in our existence. Although there is today an elaborate system of highways and approximately 20 million automobiles to our 123 million Americans, approximately half of our families still do not own their own transportation. It has been but little more than a decade since a trip of 500 miles or more by automobile was an uncommon experience, and even today it is probable that comparatively few people have made more than a dozen trips of a thousand miles or more.

Such amazing expansion has meant rapid change and progress in the design of both automobile and highway. As a profession, the design of highways for motor vehicles has had difficulty in becoming what one might call a "stable science", because its problem has changed with the same rapidity as the change in automobile design.

In relatively few years normal touring speed of highway traffic jumped from 15 to 20 or 25 miles an hour, to 35 miles, to 45 miles, until one might be safe in saying that today's normal speed is 50 to 55 miles an hour. Each progressive acceleration in average speed has set up different requirements in highway design, as to grade, alinement (curvature), super-elevation or banking of curves, width of roadway, and type of surfacing material, and has caused vast increase in highway mileage.

In the face of constant economic change and inventive accomplishment, long range predictions as to future use and importance of the automobile in American life, even though based on the most careful study of past history and present trends, are almost certain to be inaccurate. Who can assert that in the span of a generation, the automobile may not show a decline in general use, or perhaps in special uses? The fact that we kill as many people by automobiles during a year as we lost soldiers during the year 1918 is ample and indicting evidence that mass use of the automobile is untested and unproved.

What will be the attitude of the average individual when he will have made a dozen motor trips of a thousand miles or more? What will be the outcome of a change in the economics of the several means of long distance travel? At present for one person, a transcontinental trip is less economical by automobile than by other transportation means; for two persons it is the reverse. Who can say with authority that this fact will long remain?

Whatever the unpredictable long range place of the automobile in American life, there are strong indications predicated on past record and
Educational Opportunities

current trend that at least the near future should certainly see the automobile used to a greater extent, the country with more automobiles per capita, and a continuing progress made in automotive design.

Present day statistics estimate that only 40 percent of all motor travel is for commercial and strictly transportation purposes. This indicates that 60 per cent of all motor travel is largely recreational. Eight thousand miles per year is the average use of each of the 20 million registered motor vehicles in the United States. This demonstrates the important place the automobile holds in our national recreation scheme. A large percentage of this travel is local, but while no exact figures are available to prove that long distance travel is increasing, figures covering out-of-State registrations are indicative of such increase.

City streets, no doubt, carry the largest percentage of private traffic, arterial routes in metropolitan areas are second in importance, and State highway systems third. The latter have been coordinated so that in the aggregate they tend to form a national highway system.

The city street has met the change from horse-drawn to motor traffic with little or no change in its design except for roadway surface and sporadic widening. Twenty-five years ago earth surface was the common type used on all city streets whereas today the paved surface is in general use. The city street has probably declined in its use for recreational traffic, and while it may carry a tremendous amount of traffic, it might be considered only as a means of access to and from one's residence rather than as a type of traffic artery for recreational use.

The arterial routes in metropolitan areas probably are the most used for recreational purposes since they provide routes of travel for trips of one day or less. This without doubt is the largest volume of present recreational traffic.

The State highway system provides the means for trips of one day or more. It handles traffic between points within the State, and for those taking extended trips provides the means for crossing a State. The principal arteries of a State highway system normally follow the most natural and direct route for the flow of traffic.

Streets and highways have been developed under a most liberal policy. Their legal status permits great freedom of use and there are practically no restrictions as to access. The advent and general use of the automobile and truck have necessitated some restriction. Certain residential streets prohibit truck traffic which has resulted in designation of truck routes through metropolitan areas. The State highway has provided practically no restrictions except those which might be considered in the cause of safety, or the restriction of types of vehicles which might destroy the highway surface. At the present time, taking the country at large, our general policy is in favor of unrestricted use of highways.

In metropolitan areas there has been some progress made in the direction of designing certain traffic arteries for a specific purpose. It is quite natural that this does not occur until the traffic over a given route
for a particular distance becomes too great for one roadway. It then becomes logical to consider the design of a second or even third trafficway between two given points using each route for a particular purpose. Some cities distribute traffic on the basis of speed, others on the basis of use.

The parkway is a new type of traffic artery that has been developed in metropolitan areas because it is in these areas that traffic has first increased to such volume as to force the construction of more than one type of roadway. The parkway, as the name implies, is built for passenger car traffic and largely for recreational use. It is defined as a special type of trafficway based on the following principles:

1. A right-of-way of sufficient width to provide a shielding strip of land on both sides of a paved motorway, thereby excluding privately owned abutting property from direct contact with the traveled roadway.
2. The elimination of grade crossings at main intersecting highways.
3. Access roadways spaced at infrequent intervals to reduce friction between entering and departing vehicles and the main traffic streams.

To summarize, it is a roadway within an elongated park.

The wide right-of-way which permits the restrictions as to frontage and access is the fundamental principle behind the parkway idea. Legally, a highway cannot restrict frontage or access rights. A park area is the only type of public land which can legally provide restrictions as to use. The wide right-of-way provides means by which abutting property on the trafficway is made public land, with the only frontage rights. The procedure then is to construct the highway in an elongated park. The park land provides insulation for the highway, giving it restrictions as to frontage and access rights, or to express it another way, provides "publicly controlled access."

Since there is no abutting private frontage, access need be provided only at long intervals; cross traffic can be separated, and need for parking of cars along the curb is eliminated. The insulation provided by the flanking strips of park brings to the trafficway, from the traffic standpoint, much of that freedom from interference and from impediment that is the advantage of the subway and the elevated, while from the recreation and aesthetic standpoint it provides unlimited opportunity for an attractive roadside that is denied to the subway and the elevated.

The parkway is essentially a traffic artery designed exclusively for passenger car use, largely recreational. It is the most recent type of travel route development for the motor vehicle. It has come into use in metropolitan areas where traffic between given points has necessitated more than one traffic artery. It provides an easy and pleasant access to and egress from congested metropolitan areas, as well as a pleasant route for recreational motor travel in and about a metropolitan district.

Because of its recent inception both as trafficway and factor in recreation, the mileage of existing parkways is an exceedingly small percentage of our national highway system. It has, however, already
justified and proved its use in metropolitan areas, and gives promise of an increasingly important place in our national highway system and our national recreational plan.

The State highway departments have to date been pressed to the limit of their capacity to build normal traffic routes. Because of this there has been practically no opportunity to build a parkway unit of the State highway system primarily for recreational purposes.

However, the highway systems within National parks and State parks are planned primarily for recreational use. The fact that they are built on park land gives the necessary roadside control. Since most National and State parks are happily not located on normal commercial traffic routes, highways and their commercial traffic are eliminated naturally from the parks largely because a use of the park roadways would lead commercial traffic out of its way.

The location of the National parks and State parks has frequently required that the State highway system provide approach roads to the parks from the main highway system. There are a few cases where parks are located on both sides of a principal highway artery, but in most instances the park areas are reached by spur roads from the main trafficway. The approach roads may then be considered the only roads that have been built by State highway departments primarily for recreational use. The roads within the parks have been built and financed by the park authorities. The approach roads have been largely a problem of the State highway departments, although there have been a few instances of Federal participation in the case of approach roads to national parks where the land is 90 percent federally owned for a distance of 60 miles from the park boundary. This has been done as a means of financing the approach roads to national parks in such States as have a large percentage of federally owned land and where traffic is largely national traffic enroute to a national park.

The parkway idea on a large scale might logically come as a development in the progress of the design of State highway systems. In the first place, both the parkway and the highway would naturally follow the normal route for the traffic between two given points. It would be unsound to build parkways of great length on State or National scale until the traffic warrants it.

There may be instances in certain sections where the nature of the country is scenic rather than agricultural or commercial, and the bulk of traffic over a given highway is of the recreational type. In such instances it might be necessary to acquire a roadside protection in order to maintain the scenic or recreational values of the route and still not restrict or prohibit commercial use, since the volume of traffic might not warrant a construction of two routes. As traffic increases over a given area it is quite natural to believe that the same development as began in the metropolitan areas might take place beyond the metropolitan area; that where the traffic is sufficient for two arteries, one might be planned for through and largely recreational traffic while the other would carry local and commercial traffic.
The economics, the purposes, and the objectives of a parkway and a highway are fundamentally different. The highway will come into use as a way between two points because of traffic demands, regardless of the availability of construction funds. It is graded, surfaced, and generally improved from time to time, to meet the requirements of traffic but with little or no attention to recreation standards. The parkway on the other hand is conceived, designed, and built for specific and limited purposes. While it may be considered for the relief of a crowded highway, at the same time it is set aside for the exclusive use of passenger traffic. It is considered as a completed project built to specific high standards at the outset, whereas the highway must accept the best available. The parkway will include a paved surface, permanent bridges, grade separations, and roadside planting, to make a completed project conforming with the highest standards of the art of the road builder. In contrast, the highway might reach this goal by gradual improvement, as it must be content with such economic support as it can get.

The parkway will be conceived on an aesthetic basis, whereas in the case of the highway, these qualities are incidental, or at least follow other considerations. Artistic opportunities are at once considered in the design of a parkway. It is considered and justified on the premise that it gives a pleasant and comfortable trip to the traveler, a premise that calls for the artistic and inspirational qualities of the art of road building. The parkway may depart from the most direct route in order to provide excellent scenery. It may reasonably seek more irregular topography to provide a more pleasant roadside. It will include architectural design as a necessary part of its bridges and other structures. It will include landscape design in the treatment of the roadside development.

The metropolitan parkway as above discussed may be chosen as a proved means of relieving an overcrowded highway, a preferable alternate to building a second highway.

The George Washington Memorial Highway from Washington to Mount Vernon is a development in the use of the parkway. Although it serves a metropolitan area, the name "Memorial Highway" distinguishes it. It was considered primarily for its inspirational and artistic qualities. It was built to lead to a national shrine. It was built for recreational purposes. The traffic over it was in a large measure developed because of itself. It was not built to relieve a crowded trafficway to Mount Vernon.

The Colonial National Monument Parkway is being constructed in Tidewater Virginia by the National Park Service through the Bureau of Public Roads to connect physically three important areas—Jamestown Island, the first permanent English settlement in America; Williamsburg, the Colonial capital of Virginia; and Yorktown Battlefield, which saw the final defeat of the British Army, and the beginning of our national life. This parkway is being built on a 500-foot right-of-way with structures and incidental construction in adaptations of the eighteenth century brick styles.

"Scenic parkways" built through areas of natural beauty solely for the purpose of the recreational and inspirational values of motoring over
them, are being discussed as the next development in the use of the parkway. Such projects would seek to bring the recreational values of a road within a national park to an area of natural scenic beauty by applying the parkway right-of-way principle. Such parkways at the present time are without precedent.

The Federal Government in the emergency program has authorized as a Public Works project the construction of a parkway connecting the Shenandoah and Great Smoky Mountains National Parks. It has also provided for the survey of a parkway through the Green Mountains of Vermont and, as a third project, the Natchez Trace from Natchez, Miss., to Nashville, Tenn. These are the first attempts toward the design of a traffic artery on a large scale for which the first purpose is recreational type of traffic. These are in the main experimental projects, and are pioneering in a new field.

PHOTO 31.—Going-to-the-Sun Highway, a recreational road in Glacier National Park. Photo by George Grant.

PHOTO 32.—The Mount Vernon Memorial Boulevard, a parkway connecting the Capitol City with the Washington plantation. The generous right-of-way protects the roadway from undesirable views inland and affords some fine views of the Potomac River.

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SECTION V
EDUCATIONAL OPPORTUNITIES OF
RECREATION AREAS

1. EDUCATIONAL RECREATION

Enjoyment of a thing is enhanced through understanding. The program of presenting and analyzing the salient features of parks and monuments has been motivated by the desire to increase the visitor's enjoyment through making the things about him more intelligible.

The technic of presentation is unique in many characteristics, and gives promise of untrammeled future development. Because it is, or can be made, adaptable to a great variety of recreational areas, elements of the technic are presented.

PHOTO 34.—A hiking party under the escort of a ranger naturalist. A naturalist has done his work well if he has given either the information sought or through his information increased the enjoyment of the visitor.

PHOTO 35.—A campfire scene at Tuolumne Meadows, Yosemite National Park, Calif. Every evening during the summer season visitors to this glorious High Sierra country gather around the cheerful fireplace.

The Educational Program of the National Parks

While the national parks serve in an important sense as recreation areas, their primary uses extend far into that fundamental education which concerns real appreciation of nature. Here beauty in its truest sense receives expression and exerts its influence along with recreation and formal education. To me the parks are not merely places to rest and exercise and learn. They are regions where one looks through the veil to meet the realities of nature and the unfathomable power behind it.
To provide each visitor to a national park with an opportunity to interpret and appreciate its superlative features has become the goal of all those interested in the highest use of national parks, and has led to the establishment of an educational program to attain this end. In this program there is little which pertains to classrooms, textbooks, or other formal educational methods. The average visitor wants to see and learn through his own observation, and seeks guidance from someone who knows.

The main objectives of the educational program have been:

1. Simple, understandable interpretation of the major features of each park by means of field trips, lectures, museums, and literature.

2. Emphasis upon leading the visitor to study the real thing rather than utilizing second-hand information. Typical academic methods are avoided.

3. Utilization of a highly trained personnel with field experience, able to interpret to the public the laws of the universe as exemplified in the parks, and able to develop concepts of the laws of life useful to all.

4. A research program which will furnish a continuous supply of dependable facts suitable for use in connection with the educational program.

Endeavor has centered upon placement of trained scientists or historians in every park, who act as curators of natural treasures, and as technical advisers on scientific features; and who, with the help of temporary naturalists or historians, conduct a five-point program consisting of guided trips, campfire lectures, museum projects, and a study of nature trails and useful publications.

With the establishment of historical parks and monuments has come the need for a specialized type of educational program dealing with history. The visitor must be aided to visualize historical events as portrayed by fragmentary relics left to view. Restored buildings and earthworks turn the visitor's mind to conditions and events. Museums are necessary to interpret the local story, and to present the antiquities of the period. The interpreter must be an enthusiast with a thorough background of American history. In general, the educational method is comparable to

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1 Editor's note.—Here again, there is a different interpretation given to the scope of the term recreation. Recreation, as used throughout this report, connotes all of those activities included in the statement of Dr. Merriam, and, in this sense, recreation is the primary purpose of the national parks.

2 Merriam, John C., A National Park Creed, National Park Bulletin, No. 8, July 1926, p. 3.

3 Bryant, H. C., and Atwood, W. W., Jr., Research and Education in the National Parks, National Park Service, 1932.
Guided Trips.——Guided trips constitute a most important and unique part of the program. They afford the visitor real experience where first-hand information involving all five senses is obtained, affording clear and lasting mental concepts. Then too, the parks are better fitted for this type of program than is the regular educational institution because of the quality of the historic and scientific features available.

The method stressed is expressed in Agassiz's old dictum: "Study nature, not books." The enthusiasm of a ranger-naturalist is contagious. He is able to make a trailside interesting. He brings senses seldom used into prominence. Plants are recognized by odor and taste, birds by call note and song, and trees by the feel of the barks. Geological stories are made plain through careful observation. Leading events in history are made interesting through acquaintance with historic landmarks. Too often a study of biology is sought through tedious dissection and microscopic analysis; too seldom is there study of the living thing in its natural environment.4


A parks official has done his work well if he has opened visitors' eyes and unstopped their ears, interpreted the findings of the specialist to the layman, demonstrated how fascinating it is to study geologic and historic features and living things first-hand, and left a vision of the great natural processes involved.

Walking trips under the escort of a ranger-naturalist are routed through areas rich in the natural phenomena especially exemplified in the park, and the features of outstanding interest along the way are discussed. In parks and monuments where history is prominent in the educational program, the ranger-historians stress first-hand acquaintance with scenes in which major human events have transpired.

Guided trips vary in length from an hour to several days, such as are conducted into the mountainous back country. In many parks specialized
trips are added for those especially interested in rocks, trees, wild flowers, insects, birds, or mammals.

One of the most popular innovations in the naturalist program is known as the auto caravan. Visitors driving own automobiles are conducted to points of special scenic, historic, or scientific interest. Daily caravan trips, under expert guidance of a trained naturalist or historian, are scheduled in all of the major national parks, and the demand for this service is increasing rapidly. Here again there is wide variety in trips offered. In Yellowstone, a game-stalking caravan; in Yosemite, a history and an Indian legend caravan; and in Crater Lake, a rim drive caravan.

PHOTO 38.—Prehistoric animal tracks (in Yavapai Museum), Grand Canyon National Park.

*Lectures and Campfire Talks.*—Park visitors are keen to utilize evening hours at a campfire program. People gather at hotels, lodges, and campgrounds, join in community singing, and listen to musical and educational programs. A prime feature of all these programs is a talks by a naturalist or historian, who explains various scientific or historic
features of the park. Both motion pictures and lantern slides are used for illustrations. Interest and attendance have brought about improved equipment in the form of outdoor amphitheaters providing comfortable seats and suitable projection equipment.

Lectures vary widely in subject and method of presentation so as to fit location and type of audience. Around a small campfire in a campground the program is very informal, whereas at central locations the presentation may be more formal and with less opportunity for questions from the audience. Special animal lectures are given in several parks at the bear-feeding platforms. Dependable information on animal life, given with live specimens as illustrations, has proved very successful.

PHOTO 39.—Column of stones showing structure of canyon wall (in Yavapai Museum), Grand Canyon National Park.

Museums.—An essential part of an interpretative program is the park museum and the orientation station. In the 24 national parks there are 19 museum buildings, and museum exhibits housed in headquarters buildings are found in 7 other parks. Museum displays have been
developed in at least six of the national monuments, and there are many new museum projects. This array of museum buildings and displays had its simple beginning in 1921, entered a state of rapid development with the beginning of the Yosemite and Yellowstone museums in 1924, and has continued its rapid growth up to the present time. Under the emergency programs of 1933—36, the total number of National Parks Service museums will be increased to 66.

Park museums have been designed to help people understand what they have seen and to act as an index to what they may see in the park. Graphic devices and objective materials have been used to organize the local story and relate it to the national story. In some cases a central museum, as in Yosemite, has rooms devoted to geology, biology, ethnology, and history; in other cases, as in Yellowstone, wayside museums have been provided, each one specializing in and explaining nearby phenomena—rock formation, geysers, history, and animal life. A new museum in a restored log cabin in the Mariposa Grove of Big Trees in Yosemite tells the story of the Big Tree. Museum wings to administration buildings in southwestern monuments outline the significance of the areas and exhibit the artifacts obtained from pueblo ruins which constitute the chief features of these monuments. A staff of museum curators and preparators is maintained to develop the museum program.

PHOTO 40.—Trailside exhibit by beaver dams in Yellowstone National Park, Wyo. The exhibit tells the history of the Fur Trade Era in the West and gives pertinent life history facts concerning the beaver.

Orientation Stations.—As a means of determining the best methods of helping visitors, two notable educational experiments have been instituted. Under the direction of Dr. John C. Merriam, president of the Carnegie Institution of Washington, a lookout station was built at Yavapai Point on the South Rim in Grand Canyon National Park. Before installation of apparatus, a number of prominent scientists spent several weeks at Grand Canyon studying the problem of interpretation. As a result, the following devices were instituted: Telescopes and descriptive exhibits mounted on the parapet, supplemental transparencies, photographs, and diagrams; specimens and exhibits inside the exhibit room; and a guide leaflet describing the function of the apparatus,
The parapet views are so arranged as to designate features of extraordinary interest, to give closer views in many instances by the use of the telescopes or field glasses, to give small close-up views with photographs accompanying the telescopes, to illustrate the localities with specimens, and to point out trails by which main features can be reached. One telescope permits a view of the rushing, muddy Colorado River; another the top of Cedar Mountain; and others, the various strata. In the cases may be seen the tools used by the river in cutting its channel—mud, silt, sand, pebbles, and boulders. A sample of the water from the river shows the large amount of sediment carried. Other cases contain specimens indicating crustal movement, oldest rocks of the canyon, remains of ancient life, and present-day life.

A geologic column constructed of actual rocks brought from the strata in the canyon forms a notable exhibit at the southwest corner of the porch. Alongside is a fossil column which shows the evidences of life that have been found in the different geological horizons. A remarkable block of rocks illustrating an unconformity of hundreds of millions of years is displayed at the rear of the observation porch. Here also are several large sandstone slabs exhibiting fossil footprints.

Supporting exhibits in the interior room amplify by means of transparencies, specimens, motion pictures, and lantern slides the story of the canyon as told on the parapet. Exhibit cases are oriented to correspond to the parapet views in the cases and are similarly numbered. Automatic projecting machines show films of the Colorado River in action.

Largely self-operating, this station is unique in its construction, installation, and method of presentation. It has demonstrated that technical science may be presented in an effective, convincing way to park visitors. A similar lookout station has been erected in Crater Lake National Park, where the additional attempt is made to convey aesthetic appreciation to the public.

A second educational experiment was initiated through a fund made available by the Laura Spelman Rockefeller Memorial and administered by the American Association of Museums under Dr. H. C. Bumpus. This project began with the development of a natural-history museum at Yosemite. Later, it included the organization of a complete educational program for Yellowstone, with major emphasis on trailside museums of which four, architecturally attractive, have been built at strategic points to portray local features. One presents a general picture; another, the history of the region; another, geysers another, rock formations; and still another, biological features. In addition, there was developed the trailside
exhibit as a method of explaining such features as the Obsidian Cliff and a beaver dam. New types of geological and biological exhibits were developed, and the presentation has successfully served the needs of the public.

In connection with the development of a complete educational unit in Yellowstone, it was evident that the motorist needed some guidance toward his understanding of park features. This realization led to the preparation of a publication entitled "Trailside Notes." The pamphlet is arranged in two columns with vignettes giving the outlines of the particular points of interest to be noted along the route. Below each drawing is a brief, but reliable, statement regarding the natural history features. Trailside notes have been worked up for several of the main-traveled routes in Yellowstone, with the result that the motorist may add greatly to the value of his visit to the park.

6 National Park Service. Trailside Notes for the Motorist and Hiker, 1933.

Nature Trails and Exhibits in Place.—The nature trail is an efficient method of helping park visitors get acquainted with interesting geologic and biologic features along a trailside. There are always those who prefer studying things quietly by themselves; labeled rocks, trees, and plants fulfill this requisite. Specially designed metal labels are inconspicuous to all except those interested in them.


Self-guiding nature trails are now available to the public in many parks. Glacier National Park has five such trails. In Mount Rainier more than 600 metal labels are used along developed trails.

In a number of the parks certain features along permanent trails and roads have been labeled and termed "exhibits in place." A good example of this is seen at Grand Canyon, where trails have been constructed leading to localities of particularly important geologic features. Markers calling attention to fossil shells and sponges in the Kaibab limestone are placed along major trails. Others are placed at localities where fossil footprints and fossil plants may be seen. In Yosemite, rocks on Sentinel Dome are labeled, as are numerous other features in various parks.

Small exhibits properly sheltered from the weather and placed near interesting features are termed "trailside exhibits." A series of these placed near the loop road in Yellowstone explain rock formations. One placed alongside a beaver dam portrays the part played by the beaver in early American history, the engineering ability of the animal and its economic uses of the present. Parking spaces are provided nearby, and visitors noting the exhibit stop and study it. This type of portrayal is certain to have extended use in other parks.
Small orientation stations consisting of a map or large photograph with all points named are in use in several parks. For example, enlarged photographs, rustically framed, picture what is seen from Valley View in Yosemite.

Originally wild flowers were exhibited in suitable containers, and were properly labeled. A recent improvement is the exhibition of wild flowers growing in gardens, especially arranged for study. The most pretentious garden of this kind is to be found in Yosemite. One part exhibits plant communities; the other, plant relationships. The whole is a colorful and useful adjunct to the museum.

Libraries.—Most of the major parks have built up small reference libraries for the use of the educational staff. In only a few instances, however, has it been possible to provide public reading rooms. In Yosemite there is in the museum building a very attractive library much used by the public. Yellowstone and Mesa Verde also have developed fine technical reference libraries used by the staff but open also to the public. Branch county libraries have been established in two or three parks, but the books available are intended primarily for the use of park employees. Plans are being made for development of libraries in historical parks. With the increase in use of the park educational facilities by field classes from colleges, universities, and high schools, it is becoming essential that complete reference libraries be available in all major parks. This need is being met as rapidly as possible.

Publications.—The publications of the National Park Service are of seven types:

1. Printed circulars of information on each park, and well illustrated books such as the National Parks Portfolio, Glimpses of Our National Parks, and Glimpses of Our National Monuments. All but the National Parks Portfolio are for free distribution.

2. Miscellaneous folders, leaflets, and circulars regarding the various historical areas, parks, and monuments rotaprinted in the Miscellaneous Service Section of the Department of the Interior. These are for free distribution.

3. A series of leaflets entitled "Making of American Scenery." Only one has been issued, and that a number of years ago.

4. A series of more technical reports dealing with the geology, fauna, and flora of various parks.

The latter two series (3 and 4) are available only from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a cost price, as is the National Parks Portfolio.

5. Printed motorists' guides for several of the major national parks, also location maps, all of which are distributed free.

6. Miscellaneous mimeographed press bulletins and radio talks are issued by the Washington office.
7. Miscellaneous mimeographed press bulletins, memoranda, and reports, including the Nature Notes, are published in a number of the major parks. Grand Canyon, however, has ceased to publish Nature Notes because of lack of funds. In the case of Yosemite, Nature Notes is printed on a job press. This publication contains a series of short articles on natural history subjects and serves to acquaint the visitor with the interesting features of the park. Articles pertaining to discovery, early trade routes, and happenings with the Indians are frequently included. Several of the parks have also issued mimeographed manuals of information and manuals of instruction for use by the educational staff. The recommendation has been made that all Nature Notes be combined and issued as one publication in the Washington office. This cannot be done now, as there are no funds for the purpose.

Some very useful books and pamphlets have been issued privately, or by other Government bureaus. The Carnegie Institution of Washington has published a number of fine reports dealing with paleontological research in Grand Canyon. Two large volumes, one on Yosemite and the other on the Lassen Peak region, dealing with vertebrate fauna, have been issued by the University of California Museum of Vertebrate Zoology. A splendid series of papers covering researches made in Yellowstone National Park has been issued by the Roosevelt Wildlife Experiment Station. The United States Geological Survey has recently published an illustrated volume on the geologic history of the Yosemite Valley. The United States Bureau of Biological Survey is responsible for the pamphlet dealing with the Mammals and Birds of Mount Rainier National Park.

Guidebooks for various parks have been issued privately: Haynes' Yellowstone Guide; Hall's Yosemite Park Guide; Hall's Sequoia Parks Guide; and Elrod's Glacier Parks Guide. Operators in several parks have cooperated by issuing information manuals for their employees.

The Stanford Press has issued a series of volumes dealing with the western parks, beginning with Oh, Ranger!, followed by one on the Grand Canyon, one on the Big Trees, and another on Zion and Bryce National Parks and One Hundred Years in Yosemite.

Up to the present, owing to lack of Government funds for printing, more papers have been issued by outside organizations than by the National Park Service. Many of the special papers have been offered first to the Service for printing, but the authors, discouraged by the long wait for funds, have taken back the manuscripts, and had the books privately printed.

There is real need for better support of the publications work in order that this strong educational force may assume its proper place in the educational program.

College and University Field Classes.—Utilization of the national parks and national monuments by universities and colleges as outdoor classrooms to supplement academic study of the natural sciences is increasing. Many of the outstanding educational institutions of the country are taking advantage of the exceptional opportunities for such
field work, notably Princeton University, Clark University, the University of Virginia, Western Reserve University, Montana State University, the University of Missouri, the University of North Carolina, the University of California, and the University of Hawaii.

Geology, botany, and zoology are the subjects most commonly studied in the parks, but recently an art school was established in Glacier National Park. The work provides university credit in all of these cases.

It is desired to encourage such use of the parks and monuments, for it is realized that these areas are ideal outdoor laboratories for practical study of geology, biology, archeology, and other field sciences.

The Federal Government cooperates gladly with all such study groups, arranging facilities so that field work and demonstrations can be most effectively accomplished. Members of the educational staff in the various parks render valuable assistance to students and teachers.

**Yosemite School of Field Natural History.**—The Yosemite School of Field Natural History is a summer school for the training of naturalists, where emphasis is placed on the study of living things in their natural environment. The school was founded in 1925 in answer to a demand for better-trained naturalists for the Yosemite Nature Guide Service. Furthermore, there was need for a training not furnished by the universities. The teaching staff is composed of university professors who donate their time, and members of the Yosemite naturalist service staff.  

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More and more a bachelor's degree is considered a minimum of entrance; works is of the graduate school type. Students are limited to 20, and they are housed in a circle of tents. Though no university credit is offered, a certificate indicating accomplishment is awarded graduates of the school. The course is not a duplicate of university summer work, but is supplementary thereto. Field observation and identification occupy 60 percent of the students' time. Graduates of this school are filling positions as nature guides in parks and summer camps throughout the country. Many of the naturalist positions in the National Park Service are held by graduates.

**The Yosemite Junior Nature School.**—The Yosemite Junior Nature School is planned for those children wishing to study the natural history of Yosemite National Park under the leadership of a ranger-naturalist. Many features of the trailside are brought to the attention of the keen young observers. There are usually several volunteer workers who assist the ranger-naturalist during the 6-week session. The work is divided into groups based on ages and grades. Classes meet at the museum and utilize its many facilities for study.

This is the one fully organized effort to afford special opportunities to children. Many parents spend the summer months in Yosemite purposely to give their children the advantages of this nature school.

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8 1930, Yosemite School of Field Natural History, Nature Almanac (American Nature Association), pp. 139-140.
Research.—An educational program must be founded on reliable facts secured through scientific research. The park visitor cannot be instructed regarding a battlefield unless the guide knows and understands the historical facts surrounding the engagement. Facts useful in the work must be culled from literature, and much library work must be done by trained historical assistants before a dependable story can be told. Hence the need for the historical research staff located at the Library of Congress. In the field of biology there must be a staff of technically trained men to study the fauna and flora of the park areas, furnish the facts needed for proper wildlife administration, and develop a wildlife policy.

A start only has been made on a research staff sufficient to improve accuracy of statement and safety of method employed. Meanwhile dependence has been placed on utilization of experts from other Government bureaus. Sanitation problems are supervised by a man assigned by the Public Health Service; insect problems, by men detailed by the Bureau of Entomology, and archeological problems, by the staff of the National Museum. Universities and scientific institutions are encouraged to undertake special research problems helpful to the National Parks Service. In this way there is secured a continuous flow of new and dependable information on the chief phenomena within the parks.

In general, the research program relates itself primarily to the securing of essential facts relating to needs of wildlife, explanation of features, comfort of visitors, and proper administration.

Conclusions.—Within the superlative areas comprising national parks and national monuments, opportunity is afforded to meet the realities of our natural surroundings and to study the inexorable underlying laws. In the historical areas important and stirring aspects of human achievement are presented which stir the highest mental concepts and patriotic emotions. Inspiration gained from visits to these areas brings enrichment to human lives. However, such inspiration is often dependent upon a maximum of understanding of significant phenomena.

Of the potential student body of 3-1/2 million represented by annual travel records, more than 2 million now use the educational program in some way.

The present park educational program is inadequately supported financially, and is undermanned everywhere. Added financial support to permit increased personnel looking toward adequate meeting of demand and additional working tools is the greatest need at present. With increased travel and use of educational facilities must come an expanded program.

Education in State and Municipal Parks

Similar educational programs are being developed in State and municipal parks. Those States which have most actively espoused the program are New York, West Virginia, Indiana, and California. The Cleveland
Metropolitan Park System has employed a naturalist and has provided marked nature trails.

It is in State and municipal parks that there is greatest need for educational programs. Too often these parks provide open spaces but little assistance in scientific interpretation of features. Travel is very heavy and visitors seek profitable utilization of their time. Modification of programs to meet the shorter stay and the more local-minded visitor is relatively easy, if emphasis is placed on self-finding trails and museums, as has been done in Bear Mountain Park in New York State. There is a slight tendency to develop playground facilities and commercial type of amusements which well may be justified, but this need not interfere seriously with an educational program designed to care for a type of recreation more mental than physical.

The proposed expert service by the Government would provide opportunity to stimulate the expansion of educational programs in State and metropolitan parks. Of course, the best stimulus will come from demand of the public, following successful operation in those parks which undertake an educational program.