



# MEETING ARIZONA'S CURRENT OUTDOOR RECREATION NEEDS

A REPORT CONCERNING MAINTENANCE  
AND IMPLEMENTATION OF THE 1967  
ARIZONA OUTDOOR RECREATION PLAN

PREPARED BY  
ARIZONA OUTDOOR RECREATION  
COORDINATING COMMISSION



VAN CLEVE ASSOCIATES, INC., CONSULTING PLANNERS

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*Arizona Outdoor Recreation  
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Project Director

March 18, 1970

Dear Sir:

Enclosed please find a copy of the recently completed Arizona Outdoor Recreation Plan, "Meeting Arizona's Current Outdoor Recreation Needs". We believe this to be a significant step forward for outdoor recreation planning for the State of Arizona.

Understanding that the Arizona Outdoor Recreation Coordinating Commission has the responsibility for the outdoor recreation planning process at the state level, it is hoped this document will be of assistance and lend guidance to the development of the outdoor recreation planning process of your agency. We also hope this plan will assist you in defining your outdoor recreation responsibilities as they relate to the State.

We welcome any comments you may wish to convey.

Sincerely,



Roland H. Sharer  
Project Director

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A Report Concerning Maintenance and  
Implementation of the 1967  
Arizona Outdoor Recreation Plan

Prepared by

ARIZONA OUTDOOR RECREATION COORDINATING COMMISSION

Robert A. Jantzen, Chairman  
Dennis McCarthy, Vice Chairman  
Gene C. Reid, Secretary

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VAN CLEVE ASSOCIATES, INC., CONSULTING PLANNERS  
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NOVEMBER 1969

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## INTRODUCTION

The Arizona Outdoor Recreation Plan (AORP) <sup>1/</sup> was completed in June, 1967. Its findings and proposals were based upon 1965-66 statewide inventory data and recreation activity and participation data derived from the 1960 National Recreation Survey (NRS). In October 1967, the AORP was supplemented by the report, Recreation Opportunities in Arizona's Urban Areas, prepared by the Arizona Outdoor Recreation Coordinating Commission (AORCC).

The purpose of this plan maintenance project is to further strengthen and supplement the AORP through: (1) re-analysis of previously published materials; (2) appraisal of current conditions of recreation demand, needs and deficiencies; (3) establishment of basic state goals, objectives and policy guides; and, (4) development of a definitive action program directly related to the foregoing.

The findings and proposals contained in this report represent the results of intensive analysis and refinement by the AORCC and its staff of data, judgments, conclusions and recommendations presented by the consultants throughout the project period. Proposed goals, objectives and guides have been reviewed and commented on by recreation-related agencies and organizations throughout the state. Therefore, in the opinion of the AORCC, this report represents the most accurate statement which can be prepared, within the limitations of available data, on the current status of outdoor recreation conditions, demands, needs, deficiencies, goals, objectives, policies and programs in Arizona.

It should be recognized, however, that while this report lends credence to the AORP presently in force, it does not eliminate the serious need to undertake the comprehensive up-dating and revision of the current Plan. Such an up-dating is required to develop and incorporate research data pertaining specifically to Arizona demands, aspirations and needs for outdoor recreation, to further pursue the formulation and adoption of state recreation policy, and to prepare more realistic and attainable legislative and capital improvements programs. More pragmatically, a comprehensive amendment of the Arizona Outdoor Recreation Plan is needed to meet new requirements of the Bureau of Outdoor Recreation for eligibility for Land and Water Conservation Funds to assist state and local public outdoor recreation projects.

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<sup>1/</sup> A Plan for Outdoor Recreation in Arizona, Arizona Outdoor Recreation Coordinating Commission; Consulting services by Daniel, Mann, Johnson and Mendenhall and Earle V. Miller, Engineers; June 1967.

## PART I

### GOALS AND OBJECTIVES

The Arizona Outdoor Recreation Coordinating Commission (AORCC) is the state agency responsible for "planning, coordinating and administering an outdoor recreation program in the State of Arizona." The AORCC was established by the Arizona State Legislature in 1966. One of the first major endeavors of the AORCC was to prepare A Plan for Outdoor Recreation in Arizona (AORP), published in 1967.

The identification and establishment of long-range goals and objectives constitutes a basic point of departure for any credible, comprehensive planning effort. Accordingly, the AORCC has developed the following definitive goals and objectives for its own guidance and that of all other governmental agencies and private organizations concerned with outdoor recreation in Arizona. These goals and objectives are consistent with the intent of the AORCC enabling legislation and with the national goals established by the Land and Water Conservation Fund Act of 1965.

### GOALS

The goals of the Arizona Outdoor Recreation Coordinating Commission, with respect to outdoor recreation, are:

- : To assure the provision of ample outdoor recreation opportunities for all citizens of the State, regardless of race, creed, color, age or economic status.
- : To conserve and develop for the enjoyment of present and future generations of Arizonans and visitors such quantity and quality of outdoor recreation space as may be necessary to permit a reasonably free choice of recreation activity by the individual.
- : To strengthen the physical, mental and moral health and welfare of the people through encouraging and accommodating their desire for outdoor recreation.

- : To preserve the natural beauty of Arizona's landscape, and to assure public access to its outstanding scenic features.
- : To preserve, maintain and wisely manage the broad spectrum of flora and fauna as an essential natural element of Arizona's scenic and ecological character.
- : To develop for the maximum enjoyment of the public the recreational potential of Arizona's streams, mountains, forests and deserts, and to assure that such development will be compatible with their special character and natural functioning.
- : To preserve the unique and outstanding scenic, ecological and recreational values of the State's wilderness areas, and to manage them wisely for the use and enjoyment of future generations of Arizonans and visitors.
- : To preserve and make available for public education and enjoyment those historic and prehistoric buildings, features, and sites which are essential parts of the State's cultural heritage.

### OBJECTIVES

The Arizona Outdoor Recreation Coordinating Commission, in striving to achieve its established goals related to outdoor recreation, will pursue the following objectives:

<p>Statewide Outdoor Recreation Plan</p>	<p>Prepare, maintain and periodically up-date and improve a statewide plan for outdoor recreation embracing the planning, financing, acquisition and development of space and facilities at all levels of government and private enterprise.</p>
<p>Comprehensive Recreation Planning</p>	<p>Base the statewide planning of outdoor recreation upon comprehensive examination and evaluation of present and future recreation demands, resources and needs.</p>

Placement  
of  
Responsibility

Place responsibility for provision of adequate outdoor recreation space, facilities and programs at the lowest practicable level of government or with quasi-public or private organizations.

Relationship  
of Public  
and Private  
Efforts

Carefully evaluate the facilities and services provided by private and quasi-public organizations and commercial recreation enterprises before planning new public recreation facilities, so that a proper relationship between public and private facilities may be assured and duplication avoided.

Encourage  
Local  
Planning

Encourage the preparation of comprehensive outdoor recreation plans by municipalities, counties, regions, Indian reservations, and state agencies having specific responsibility therefor.

Coordination  
of  
Planning

Coordinate the planning of outdoor recreation facilities by towns, cities, Indian reservations, counties, state and federal agencies, and non-governmental organizations, so as to develop a unified, well-balanced statewide system which will serve the citizens of all jurisdictions.

Correlation  
with Other  
General Plans

Correlate the statewide outdoor recreation plan with all other elements of the State's general development plan and with local, county and regional master plans.

Acquisition of  
Outstanding  
Features

Promote the timely acquisition or reservation of the State's outstanding scenic, historic and other resource sites.

Advance  
Acquisition  
of  
Recreation  
Sites

Encourage the acquisition or reservation of land for outdoor recreation in advance of area development so that high-quality, well-located sites suitable for the planned purpose may be assured for future development.

Public Lands	<p>Encourage and support the multiple-use management principle for state and federal public lands, and assure the public enjoyment of their wildlife and recreational values as an essential consideration in such use of public lands.</p> <p>Encourage state and federal landholding agencies to inventory and evaluate those lands having outstanding wildlife and recreational uses so that they may be so designated in the statewide outdoor recreation plan.</p>
Special Areas of Need	<p>Give special attention to planning and provision of outdoor recreation space, facilities and programs meeting the needs of aged, handicapped, underprivileged and low-income citizens.</p>
Visitor Needs	<p>Carefully examine and periodically evaluate the outdoor recreation interests and desires of tourists and visitors so that their needs may be accommodated.</p>
Statewide Priorities	<p>Establish priorities for acquisition and development of outdoor recreation space and facilities and periodically up-date such priorities, so as to assure the earliest possible satisfaction of current deficiencies and give first attention to provision of highest-demand facilities.</p>
Coordination of Priorities	<p>Encourage all jurisdictions responsible for outdoor recreation — towns, cities, Indian reservations and counties, and regional, state and federal agencies — to establish individual priorities in coordination with the statewide plan, so that capital expenditures may be programmed in advance at all levels.</p>

PART II  
EXISTING CONDITIONS

A. SPECIAL CHARACTERISTICS INFLUENCING RECREATION PLANNING

A sound statewide plan for outdoor recreation must be based upon the particular conditions which have created that state's recreation resources, environment and potentials, and which will continue to influence the recreation demands and needs of its citizens.

The Outdoor Recreation Resources Review Commission 1/, in undertaking the first nationwide study of outdoor recreation, divided the conterminous United States into four geographic regions - Northeast, North Central, South and West. At the outset, it was recognized that physiography, climate, population characteristics and other factors influencing outdoor recreation vary widely within each region. For example, the eleven Rocky Mountain and Pacific Coast states included in the Western Region, differ widely from one another in many conditions concerning the nature of outdoor recreation. While the National Recreation Survey 2/, and subsequent analyses were conducted on a regional basis, and produced valuable, if broad, guidance to recreation demand, the results are neither specifically pertinent nor generally applicable to Arizona.

Arizona's geographic location, physical environment and climate represent a set of basic conditions which are unique, and it is essential that the effects of these conditions on outdoor recreation be fully understood before proceeding with analysis of recreation demand and need. Therefore, in developing a credible and comprehensive outdoor recreation plan for Arizona it is essential to commence with identification of those basic conditions and factors which are unique to Arizona. These special conditions and factors include: physiography and climate; vegetation and animal life; prehistoric, historic and scenic features; state and federal land ownership; and western traditions and attitudes.

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1/ Hereinafter referred to as "ORRRC".

2/ Hereinafter referred to as "NRS".

The foregoing special conditions relate directly to several other factors which influence outdoor recreation planning for Arizona: characteristics of the resident population; mobility of the population; and non-resident impacts.

### PHYSIOGRAPHY AND CLIMATE

Arizona's climate, which is largely the result of physiographic conditions, exerts a dominant influence on recreation in Arizona. It is, however, improper and misleading to regard Arizona as having a single climate, when, in fact, three basic climates exist within the state: desert, steppe, and highlands. Each of these climates gives rise to different kinds, as well as different amounts, of recreation demand, just as each produces different kinds and qualities of natural recreation resources and potentials. To fully understand the effects of climate on recreation, it is therefore essential to consider it in context with physiography and to recognize its effects on vegetation, wildlife and other recreation resources.

The 113,956 square mile area of Arizona contains a spectacular range of contrast in physiography and climate. Terrain and cover vary from sand dunes and desert growth near Yuma to spruce and fir forest near Flagstaff. Pine-topped mountains in central Arizona rise above streams and reservoir lakes, while watering places are few and far between in the barren valleys and stark mountain ranges along the Mexican border.

Variations in elevation, from 110 feet above sea level on the Colorado River floodplain near Yuma, to the 12,655-foot San Francisco Peaks near Flagstaff are the key to much of this contrast. While elevations vary widely over short distances, three major topographic regions are discernible: (1) the region of desert plains and mountains in the southwest, designated the desert region; (2) the belt of high mountains and narrow valleys extending diagonally across the center of the state in a northwesterly-southeasterly direction, designated the mountain region; and (3) the land of high plateaus and mesas north of the mountain region, called the plateau region.

Geologically, the desert region is a part of the Basin and Range Physiographic Province which extends southward from Oregon and Idaho into Mexico. The plateau region belongs to the Colorado Plateaus Province which extends north and east into Utah, Colorado and New Mexico. The change from one structural province to the other occurs across a Transitional Zone, the mountain region. Other classifications of climate, geology and vegetation all relate in some way to these basic topographic divisions of desert, mountain and plateau. The Mogollon Rim and the White Mountains of eastern Arizona, are the primary watersheds for the northern and central parts of the state. Streams rising north of the Rim drain to the Little Colorado River, while those rising south of

the rim empty into the Gila and Salt River systems. The principal southern Arizona rivers - the Santa Cruz and San Pedro - rise near the Mexican border and flow north to drain into the Gila River.

### The Desert Region

The desert region, occupying nearly one-half of the state, is characterized by many separate mountain ranges which rise abruptly from low-desert plains or dry stream valleys. These plains and valleys range in elevation from near sea level to 2,000 feet or more near the mountain region. While the desert mountains are generally less than 2,000 feet high, they exceed 7,000 feet in some areas.

The desert region climate is characterized by short, mild winters, and long, hot summers. Below-freezing temperatures are rare. For the most part, daily winter temperatures range from the middle thirties to the high sixties, and, daytime summer temperatures of 115°F. are not uncommon. A wide variation of diurnal temperatures results from clear skies which permit fast thermal heating during daylight hours and quick loss of heat at night.

Annual precipitation averages about 10", ranging from 3" in the low desert to about 25" in the highest elevations. Precipitation is heaviest and most dependable in summer months, is showery in nature, and varies widely in intensity. Snowfall is limited to the highest mountains, but snowcover is not consistent enough to produce a heavy demand for recreation activities associated with ice and snow. With respect to comfort, low humidity and high evaporation rates temper the high summer temperatures. The highest mountains have very localized climates similar to those in the mountain region, and in summer offer a measure of relief from high temperatures prevalent throughout the region.

The mild winters of the desert region are conducive to very high and consistent participation in outdoor recreation over a large part of the year. High summer temperatures and low humidity produce a compelling desire by many residents to "escape" to cooler, forested, watered areas of the state. The reverse of this interregional movement - the desire of cool-climate residents to travel to desert areas in winter - is relatively insignificant. High daytime temperatures in summer inhibit outdoor recreation activity during the day and increase the demand for night-lighted facilities. Summer heat and humidity increase the desire to participate in water sports and to pursue other activities in a water-oriented environment.

The mild winter climate attracts heavy visitation by non-residents and encourages double or part-time residency by many. This annual in-migration sponsors a high seasonal demand for recreation facilities by non-residents, often over-

taking available desert area facilities and confronting the state with the problem of providing for sufficient outdoor recreation to accommodate both residents and large numbers of non-residents.

With respect to the suitability of the desert to recreation, it is important to recognize that the desert environment is remarkably fragile and susceptible to destruction. This implies the desirability of concentrating recreationists in reasonably developed areas so as to avoid encouraging the further proliferation of vehicular trails and tracks and to prevent uncontrolled access to and destruction of areas having significant botanical, archeological, geological and scenic values. Unauthorized collection of desert plants and artifacts is prohibited by Arizona state law.

### The Mountain Region

The mountain region is a rugged area of high, timbered mountains and deep canyons interspersed with grassed plains and high desert. It has an average elevation above 5,000 feet and a greater density of mountains including ranges as high as 10,000 feet. While the central mountain region receives the highest rainfall in the state, the high mountains in the northwest and southeast ends of the zone rise directly from arid or semi-arid valleys. Much of the area is forested and there are numerous permanent streams. Measurable amounts of snow occur throughout the region, with seasonal totals occasionally measuring as great as eight feet. The warm steppes are somewhat cooler, wetter and more humid than the warm desert although they are still relatively warm and arid by national standards. Their proximity to the highlands is responsible for mild days and cool nights during summer months.

This combination of topography, vegetation and water produces a high level of recreation opportunity, particularly in back-country types of activities. Winter weather is not so cold as to restrict winter activities to "winter" sports. The relatively few residents of the region have abundant year-round recreation opportunity close at hand. Portions of this region are quite close to the state's population centers and receive heavy year-round use and particularly heavy summer use by residents of desert areas.

### The Plateau Region

The plateau region is characterized by volcanic cinder cones, buttes, badlands, flat-topped mesas and plateaus. Mostly above 5,000 feet in elevation, it slopes generally from the Mogollon Rim to the Colorado River, with the Little Colorado River being the principal tributary.

Average annual precipitation varies from less than 10" in lower areas along the Little Colorado River to more than 25" near Flagstaff, on the Kaibab Plateau and

in places along the Mogollon Rim. Heavy snowfall in parts of the plateau region supports the only consistent winter sports in the state, as well as contributing runoff to the lakes, live streams and forests which provide environment for many high-demand summer recreation activities. Average January temperatures range from 25° to 45°F., while average July temperatures range from 65° to over 90°F. at the bottom of Grand Canyon.

The most rugged climate in Arizona is found on the cold steppes, confined mostly to the northeast corner of the state, where winters are cold, dry and windy and summers are quite warm. Combinations of these precipitation and temperature levels produce a very wide variation in types of vegetation within the region, ranging from those typical of the arid, high-desert plains northeast of the Little Colorado, to the heavily-forested Mogollon Rim and Kaibab Plateau.

Recreation opportunities in this region are more directly related to season. There is less participation in outdoor recreation in winter, and winter-season recreationists tend toward cold-weather and snowplay activities. Residents of the region enjoy a broader range of summer recreation opportunity close at hand. The cool summer climate, mountains and forests attract heavy summer use by residents of other parts of Arizona, and the region's outstanding scenic features attract heavy visitation by non-residents from all over the nation, particularly during summer months.

### Geology

The three physiographic regions are the consequences of five major geologic eras: Older Precambrian, Younger Precambrian, Paleozoic, Mesozoic and Cenozoic. These geological eras produced the great variety and broad distribution of rock and mineral specimens available to scientists and their lay counterparts, the "rock-hounds". The collection of rock and mineral specimens is a significant recreation activity throughout the state, and the home manufacture of jewelry and ornaments from these specimens provides important recreation as well as incidental income for many people.

Grand Canyon National Park museum presents a unique and outstanding geology exhibit of interest to amateur and professional geologists alike. Other areas of special interest are Chiricahua National Monument, Petrified Forest National Park, Oak Creek Canyon and Meteor Crater.

## VEGETATION

Vegetation is a product of its environment, and the species and distribution of plant life depend upon a number of variable, interacting environmental factors. Arizona's vegetation may be divided into four general types; alpine, forest, grassland and desert.

Alpine vegetation occurs only on the San Francisco Peaks, although plant life at the summit of Mount Baldy (11,500 feet) in the White Mountains is nearly alpine in character.

Spruce-and-fir forest occurs at elevations just below timber line in the San Francisco Peaks, White Mountains, the highest parts of the Mogollon Rim and the Kaibab Plateau. Open meadows are interspersed along streams, and the flora is rich in sub-alpine species. Arizona's most desirable back-country recreation occurs in this type of forest. The most extensive forest type is ponderosa pine, which occurs below the spruce-fir level and merges with the pinon-juniper forest and chaparral at lower elevations. The pinon-juniper forest covers large areas of the state at elevations between 4,500 and 7,500 feet. The chaparral-oak woodland occurs below the ponderosa pine and generally south of the Mogollon Rim. Species include shrubby oak, sumac, manzanita, ceanothus and buckthorn, which give way to typical desert-species at lower elevations.

Northern Arizona grasslands occur below and merge with the pinon-juniper forest. In southeastern Arizona, chaparral growth gives way to a grassland which is an extension of the Sonoran Highlands type found in Mexico. Mesquite growth has become a problem for ranchers wherever this grassland fringes the southern desert.

Northern desert vegetation, characterized by salt bush, mormon tea, and sage-bush, occurs along the Little Colorado River. Sonoran desert vegetation, for which Arizona is perhaps best known, covers more than one-third of the state. Low mountain slopes are covered with palo verde, bur sage, cholla, prickly pear, yucca and agave. Alluvial slopes contain spectacular displays of cacti, including the saguaro. On the alluvial plains are creosote bush and salt bush. Stream beds are lined with mesquite, catclaw, desert willow and sycamore. The Joshua tree occurs between Congress Junction and Kingman, and ironwood and smoke-tree occur at lower, relatively frost-free elevations.

Some of Arizona's vegetation - the saguaro, organ pipe and senita cacti - is unique and symbolizes the desert in the minds of most people. Two national monuments preserve outstanding areas of cacti and flower photography is a significant outdoor recreation activity. Nevertheless, temperature and humidity motivate the most people to seek recreation in areas where forest types of vegetation are most common.

Outstanding exhibits of Arizona flora are available at Boyce Thompson Arboretum near Superior, Desert Botanical garden in Phoenix, and at Saguaro and Organ Pipe National Monuments.

### ANIMAL LIFE

Diversities of climate, elevation and vegetation in Arizona have produced a broad variety of wildlife habitat harboring an extremely diversified fauna.

Naturalists from all over the world visit Arizona to study its unique, arid-land fauna. The fauna of the state is composed of three major types: (1) the Mexican, occurring at all elevations over the southern half of the state; (2) the Rocky Mountain, occurring at higher elevations in the northern and central parts of the state and in isolated groups on the higher mountains in the south; and (3) the grassland, occurring mainly in the eastern half of the state.

The damming of rivers and streams, and other actions in the state's settlement and development, imposed drastic changes upon wildlife, including all kinds of animal life which depend to some extent on habitats afforded by intermittent or permanent streams. Some of the large carnivores have been exterminated, and most have been extremely reduced in numbers by predator control measures. While the large herbivores have also been greatly reduced in range and/or numbers, some have successfully adapted to new conditions and are now on the increase. Many grassland species have been greatly reduced, and at least one, the blacktailed prairie dog, has been exterminated.

An estimated 15,000 to 20,000 kinds of invertebrates are found in the state. The desert arthropods, animals with articulated bodies and limbs, including beetles, spiders, scorpions, centipedes, bugs, ants and a host of insects common in other states, are largely nocturnal in habit. Arthropods of the grassland and oak-zone types are more diurnal and include many kinds which are also found in north-western Mexico but not elsewhere in the United States. Coniferous forest arthropods are generally similar to those of other Rocky Mountain and northern states.

Vertebrate animals include fishes, amphibians, reptiles, birds and mammals. Of at least 61 species of fish inhabiting the state, 28 are natives. The single native game fish, the Arizona native trout (*Salmo gilae*) occurs in pure form in the headwaters of Eagle Creek and streams where it has been re-established. There are five principal introduced trout species: grayling and rainbow, brown, cutthroat and eastern brook trout. Primary trout fishing waters are in the central and northern parts of the state. Warmwater game fish include channel catfish, yellow bass, smallmouth bass, largemouth bass, green sunfish, bluegill, white crappie, black crappie and yellow perch. Primary warmwater fishing areas are the Colorado River, and rivers, lakes and canals in central Arizona. Arizona's

native fishes are among the most interesting found in the United States; some are rare, some are isolated relics and some have scientific value for other peculiarities.

There are 38 species of amphibians - salamanders, frogs and toads - in Arizona. During the summer rainfall period, frogs and toads are often found in great abundance. Arizona species are remarkably well adapted for life in an environment which is extremely harsh for amphibians.

The state's reptile population includes 45 species of snakes, 37 species of lizards, and five species of turtles, all of which are remarkably adapted to desert habitats. There are eleven species and six sub-species of rattlesnakes in the state, and rattlesnakes occur in every part of the state. Arizona is a paradise for herpetologists.

Altogether, the Audubon Society lists 93 species of birds native to Arizona, including several very rare species. Native game birds include the wild turkey, blue grouse, wild pigeon, four species of quail and two species of doves. Several other game birds, including the chukar partridge and white-winged pheasant, have been introduced. One native species of quail, the masked bobwhite has been extinct but is being re-introduced in 1969-70. The Colorado and Gila River systems attract significant numbers of migratory waterfowl. Some of these waterfowl species are native, and one, the Mexican duck, is on the list of rare and endangered species.

A total of 290 species and sub-species of mammals are known in Arizona. These species include one marsupial, five shrews (insectivores) 27 bats (chiroptera), three rabbits and hares (lagomorpha), three tree squirrels, 70 other rodents (rodentia), 22 carnivores, and six species in the order artiodactyla (javelina, antelope, elk, deer and bighorn sheep). Big game animals include the black bear, javelina, pronghorn antelope, elk, whitetailed deer, mule deer, and desert bighorn sheep. Bison herds are maintained at Raymond Ranch and House Rock Valley north of the Colorado River.

In general, the prevalence, broad geographic distribution and wide variety of wildlife provide the base for several important recreation activities - fishing, hunting, nature study and wildlife photography - and contribute to the high quality of environment for several others.

## PREHISTORIC, HISTORIC AND SCENIC FEATURES

Evidences of prehistoric man's struggles to adapt to a harsh environment are abundant throughout the state. Artifacts found in the San Pedro River valley and in Ventana Cave on the Papago Indian Reservation show that prehistoric hunters frequented southern Arizona at least 11,000 years ago. The hunters were followed by the first farmers, the Cochise people, whose efforts to collect and grow vegetable food stretched over at least 8,000 years. The Hohokam, who inhabited the Salt River valley and environs from before 500 A.D. to about 1,400 A.D., were real agriculturalists who engineered and maintained an ingenious system of irrigation canals. The Mogollon people, who inhabited the mountain region of central Arizona as early as 2,000 B.C., were the first to make pottery and weave baskets and cloth. The Anasizi (Basketmaker-Pueblo) inhabited the plateau region of northern Arizona, and their culture is abundantly evidenced at Montezuma Castle, Tuzigoot, Tonto and Walnut Canyon National Monuments. Other evidences of prehistoric civilization are preserved at Casa Grande National Monument and Pueblo Grande in Phoenix, and collections are exhibited at many private and public museums throughout the state. Only the most prominent prehistoric sites have been preserved, interpreted and made accessible to the public; however, there are literally hundreds of other sites of lesser importance which are focal points of exploration and study by amateur and professional archeologists and ethnologists.

The Spanish Colonial Period, extending from about 1530 through 1780 in Arizona, left behind several major ruins, some of which have been restored and maintained, notably Tumacacori Mission, Tubac Presidio and San Xavier del Bac Mission near Tucson. These historic buildings are the subject of heavy visitation by both residents and non-residents, particularly since most are located on or near modern as well as historic travel routes within and through the state.

Evidences still exist of routes in and across Arizona used by explorers, California-bound wagon trains, military expeditions and overland coaches. The remains of many military posts exist, marking the early frontier and Apache wars period of state history. Arizona's extensive mining history is still evidenced by many abandoned mines and mining camps, notably the Vulture Mine near Wickenburg, and the towns of Tombstone and Jerome. Other vestiges of Arizona history record the growth of the cattle industry, the development of irrigation and the Mormon settlements. Many of these sites have been preserved and restored to present living exhibits of history, and there are many more which deserve preservation and restoration.

The state of Arizona contains the largest Indian population in the country. There are 14 separate and historically independent tribes, most of which retain their own language and culture. They occupy 19 reservations totalling nearly 20 million acres, 27% of Arizona's land area. While Arizona's Indians are making great

strides toward assimilation and adaptation to modern social and economic conditions, their tribal customs and traditions are still remarkably evident. Consequently, their pageants, dances and craftwork attract many thousands of visitors from all over the world. Non-resident visitor surveys of recreational activities conducted in 1966 show that the preference for visiting Indian reservations was exceeded only by the desire for general sightseeing. There are many museums and other exhibits of Indian culture in Arizona, notable among which are the Museum of Northern Arizona and the Heard Museum in Phoenix.

Arizona's scenic beauty is an outstanding attraction to people from all over the country and the world and an ever-present source of enjoyment to its citizens. It is spectacular scenery, roadside scenery, scenery that provides unparalleled environment for all types of outdoor recreation.

The state contains several outstanding scenic wonders which are the vacation destinations of thousands of recreation trips by non-residents as well as frequent visits by Arizonans. Although such spectacular features as Grand Canyon, Oak Creek Canyon and Salt River Canyon are world renown, they are only a little more impressive than such other lesser known areas as the Havasupai Reservation below Grand Canyon, the Mogollon Rim Country and the White Mountains.

The scenery which is everywhere visible from the highways and the many unusual scenic areas which are easily accessible from main travel routes motivate heavy sightseeing travel. Of perhaps even greater importance with respect to outdoor recreation is the exceptional natural environment afforded all back-country types of recreation - recreation in which Arizonans participate heavily the year around.

Many of the state's outstanding scenic features are administered and made accessible to the public by the National Park Service and the State Park Department. Many are contained in public lands administered by various federal agencies such as the Bureau of Land Management and U.S. Forest Service. Some of the most important scenic resources exist in the Indian Reservations. A few outstanding features are privately owned, some of which deserve acquisition, preservation and management by public agencies for the benefit of all citizens.

Arizona's scenic attractions include a few outstanding man-made features which are the focal points of sightseeing trips by both residents and non-residents, among which are Hoover, Glen Canyon and Roosevelt Dams.

## STATE AND FEDERAL LAND OWNERSHIP

Altogether, the State and the Federal government own 57.3% of all land in Arizona. Of twelve Western states, Arizona ranks seventh in percentage of total land area under federal ownership. Indian reservations, which are under the stewardship of the Federal government but are actually owned by the tribes and not by the public, occupy 27% of the total land area.

Of the 32,439,260 acres under federal ownership, approximately 25,915,000 acres (79.9%) are used for grazing, forest and wildlife purposes and are considered as being open and available for public recreational use. In addition, 1,406,000 acres are specifically designated as parks and historic sites.

Of the 9,274,100 acres owned by the State, approximately 93.6% are leased for grazing and are accessible for public recreational use.

The vast amount of public lands available for recreation exerts a powerful influence on outdoor recreation planning, particularly with respect to apportionment of recreation funds between land acquisition and facility development. There are several other important considerations with respect to public lands:

1. Public land is available for recreation in every county in Arizona.
2. Multiple-use management principles of the two principal administering agencies, Bureau of Land Management and U.S. Forest Service, encourage recreational use of federal land. This approach is significant not only with respect to incidental, informal and widely scattered recreation, but also in terms of areas designated and improved for specific types of recreation.
3. These state and federal lands generally embrace the types of topography, vegetation and other natural features which provide very desirable environment for outdoor recreation.

## WESTERN TRADITIONS AND ATTITUDES

Arizona's history of cowboys, Indians and prospectors - of man's adaptation to and conquest of a harsh environment - is reflected in its preferences in outdoor recreation. The old-West environment persists, probably tempered no more by man's impact than man himself has been softened by changes in his society.

Arizonans are outdoor people. Climate and easily accessible public lands make outdoor recreation easier, less expensive and more enjoyable. This greater motivation toward the out-of-doors is particularly noticeable among the older people, who, in other climes, are more inclined to stay indoors.

The working cowboy - who still exists in surprising numbers - retains a strong hold on the imagination of young and old alike. Both participants and spectators at team ropings, rodeos, gymkanas and horse shows, include oldtimers and newcomers, ranch families and apartment dwellers.

The traditions and Western way of life have been retained by those born to them, and adopted by those transplanted from more sophisticated, less adventuresome backgrounds. For many migrants, moving to Arizona is a practical expression of their desire for a broader perspective, for a simpler, less formal way of life, for more space to live and play in. These desires are nowhere more strongly expressed than in outdoor recreation habits and preferences.

There are still many who are willing and ready to challenge the wilderness in their own way, as evidenced by heavy participation in back-country types of recreation - camping, fishing, hunting, trail riding, hiking and exploring. Many seek out the most remote, untrammelled areas of the state - traveling roadless areas and camping without developed facilities, and enjoying it. Added to these are the thousands who willingly accept primitive roads and facilities as part of the recreation environment and opportunity.

At the same time, many people living in the state's metropolitan areas demand the same choice and quality of more sophisticated outdoor recreation facilities as do their Eastern or Northern counterparts.

## CHARACTERISTICS OF THE RESIDENT POPULATION

The mild winter climate of Arizona's desert regions is directly and largely responsible for the concentration of nearly three-fourths of the state's population in Maricopa and Pima Counties where the Phoenix and Tucson metropolitan areas are located. These areas, then, represent the major sources of outdoor recreation demand - a demand which requires satisfaction in terms of both urban and non-urban recreation space and facilities.

The Arizona Employment Security Commission, (ESC), the agency designated by the Governor in 1967 to develop and publish official annual population estimates, indicates that the state's 1965 population totalled 1,585,000, and that a population of 2,308,000 is projected for 1975. Table 1 compares county population estimates made by the ESC with those of the AOR Plan. Significant differences are apparent in estimates for Apache, Greenlee and Mohave Counties. However, when taken as a whole, AOR Plan estimates appear satisfactory for statewide recreation planning.

Table 1  
COMPARISON OF 1965-66 COUNTY POPULATION ESTIMATES

County	AOR Plan <sup>1/</sup>		ESC <sup>2/</sup>		Difference	
	Pop.	Percent	Pop.	Percent	Pop.	Percent
Apache	38,000	2.3%	42,400	2.6%	+ 4,400	+11.6%
Cochise	61,000	3.7	61,200	3.8	+ 200	- - -
Coconino	49,000	3.0	52,000	3.2	+ 3,000	+ 6.1%
Gila	30,000	1.8	28,100	1.8	- 1,900	- 6.3%
Graham	16,000	1.0	15,900	1.0	- 100	- - -
Greenlee	12,000	0.7	10,400	0.7	- 1,600	-13.3%
Maricopa	894,000	54.0	850,500	52.8	-43,500	- 4.9%
Mohave	17,000	1.0	15,200	0.9	- 1,800	-10.6%
Navajo	45,000	2.7	47,200	2.9	+ 2,200	+ 4.9%
Pima	326,000	19.7	313,900	19.5	-12,100	- 3.7%
Pinal	64,000	3.9	65,400	4.1	+ 1,400	+ 2.2%
Santa Cruz	14,000	0.9	14,500	0.9	+ 500	+ 3.6%
Yavapai	32,000	1.9	34,400	2.2	+ 2,400	+ 7.5%
Yuma	57,000	3.4	58,500	3.6	+ 1,500	+ 2.6%
State Total	1,655,000	100.0%	1,609,600	100.0%	-45,400	- 2.7%

Sources: <sup>1/</sup> A Plan for Outdoor Recreation in Arizona, Table 3-IV, June 1967.  
<sup>2/</sup> Population Estimates of Arizona, Employment Security Commission of Arizona, July 1968.

In terms of population distribution, the Phoenix and Tucson metropolitan areas contain 43.7% and 15.4% respectively of the state population. Other urban communities account for 15.3% and rural residents for 25.6%.

With respect to factors influencing recreation demand, characteristics of the two metropolitan area populations are assumed to be closely similar, differing mainly in relation to proximity of opportunity. It is assumed that recreation demands of rural residents living close to metro areas will tend to resemble those of nearby urban residents more closely than will those of out-state rural residents. There is also a marked difference between the recreation demands of small-town residents and big-city residents. While the existence of these several differences is recognized, they cannot be defined precisely without special research. For purposes of this plan maintenance project, consideration of differences in resident recreation demands related to place of residence must of necessity be limited to urban-rural differences and to physiographic regional differences.

The other principal population characteristic influencing recreation demand is age composition. In Arizona, the under-17 age group represents a significantly higher ratio of the state's total population than in the nation as a whole, and there is a corresponding lower ratio of people in the family-forming, mature family, and retirement age groups. However, comparison of 1960 and 1967 data shows a narrowing of differences between Arizona and U. S. population profiles. This trend is at least partially attributable to the state's high rate of industrial growth and diversification, and to the success of planned retirement communities.

Heavy concentrations of retirees reside in Sun City and Litchfield Park, in the Phoenix metro area, and in Green Valley, near the Tucson metro area. These planned communities have built-in recreation space and facilities as a major sales and design feature; in fact, construction of golf course, pool, game courts and clubhouse often precedes construction of dwelling units. Two additional new towns are proposed in the Phoenix metro area, one on the Salt River Indian Reservation and one adjoining Scottsdale to the northeast. Hence it appears certain that the trend toward concentration of retirees in planned desert-area communities will continue. This type of community will require special attention in the assessment of recreation needs on a local basis.

A quantitatively unknown component of the state's population is represented by the substantial numbers of "early" retirees, particularly retired military people. Since many of these people embark upon a second career, their influence on the recreation demand requires special study.

It is likely that the growing popularity of townhouse and apartment living will exert significant influence on the demand of such residents for recreation space and facilities provided by the public. These "planned" complexes usually in-

clude provision of both active and passive recreation facilities, particularly swimming pools.

The consistently younger retirement age and the mild climate of the desert region combine to make the older age groups in Arizona more physically able and active than is typical in colder regions of the country. They have all the leisure time required to indulge in their choice of recreation, and probably tend toward more participation in outdoor recreation than do their counterparts in colder climates. Furthermore, they tend to participate more heavily in the more active types of recreation than do the same age groups in colder areas. They have amply demonstrated that those with the physical ability to enjoy outdoor recreation also have the financial means to afford considerable travel and investment in equipment to participate in such recreation.

### MOBILITY OF THE POPULATION

The relative mobility of the population exerts important influences on the behavior of people with respect to outdoor recreation. In general, mobility involves consideration of: (1) location and appeal of recreation opportunity in relation to place of residence; (2) relative accessibility of recreation place and efficiency of the transportation system; (3) relative amount of leisure time available; and (4) financial ability to afford recreation travel.

In general, places in Arizona affording some of the most desired forms of recreation tend to be relatively distant from the two metropolitan areas in which most of the state's population resides. It requires a high degree of mobility to take advantage of the state's primary recreation opportunities. Fortunately, this high degree of mobility evidently exists, for Arizonans have regularly demonstrated sufficient desire, leisure time and financial ability to travel relatively long distances for outdoor recreation.

The state's highway network is reasonably direct and efficient as regards desire lines for recreation travel. Beyond the metropolitan areas, the wide separation of communities, together with the relatively straight, wide highways, contribute to higher speed travel than is possible in more densely populated states.

Transportation is almost entirely by personal auto, relieving Arizonans of time and travel restrictions related to mass transit media. The very high per capita auto ownership makes the choice of recreation destination very flexible and affords excellent recreation opportunity to a greater number of urban dwellers.

## NON-RESIDENT IMPACTS

While Arizona's combination of physical and climatic attributes greatly increases its recreation potential and opportunity, it also makes recreation planning and development more difficult in some ways. One of the more serious complications relates to the large numbers of non-residents whose recreational demands must be accommodated.

Non-resident impacts on recreation demand and need are exerted by two rather different types of visitors: (1) those whose visit to Arizona is a part of a longer, multi-state vacation trip, and (2) those who may be considered "part-time" residents since they spend part of the year in Arizona.

Vacation trip visitors are characterized by the family with children traveling by private vehicle who include Arizona in its summer itinerary and whose stay in the state varies from several days to a week. While most of this visitation occurs during the period when children are out of school, there is a lesser group of vacationers which includes Arizona in a winter vacation itinerary. Although summer visitation of desert regions, and particularly the Phoenix metropolitan area, is increasing rapidly, the greater proportion of summer visitation occurs in the mountain and plateau regions of the state. This condition is largely attributable to the tourists' desire to avoid the hot desert areas and to the fact that one of the major east-west transcontinental travel routes crosses northern Arizona. Consequently, those scenic and other features situated fairly close to Interstate 40 receive the heaviest use by non-residents. The majority of winter vacation visitation occurs in the desert regions and involves east-west travel on southern routes.

A very high proportion of summer vacationists travel by private vehicle, and an ever-increasing number are equipped to camp overnight or for a day or two in spots along or near their travel route. This places a heavy burden on nearby public campgrounds. Private facilities for overnight camping have not so far proven adequate to satisfy the need.

Winter visitors typically travel in groups of one or two couples, and are usually of a retired or semi-retired age. Their destination is the desert region of the state, usually the Phoenix or Tucson metro areas, and they arrive by train, bus, plane and private auto. There is probably a direct correlation between mode of travel and length of stay, with the longer-stay visitors preferring the convenience and flexibility of driving their own cars. Although they may cross the northern region of the state en route to their destination, they typically avoid doing so during stormy periods.

While the majority of these winter visitors are housed in commercial lodging, an estimated 36% are accommodated in the homes of friends and relatives. They are avid sightseers and attendants at rodeos, pageants, race tracks and sports events. They frequently make one and two-day sightseeing tours from their chosen bases, visiting historic, scenic and cultural features throughout the desert region. Their impact on active recreation facilities is probably most evident at golf courses.

A third, but lesser, group of non-residents is comprised of people who maintain second homes in Arizona. Most of these are in residence only during winter months, but since they are generally less elderly than the typical "winter visitors", their recreation interests more closely resemble those of the resident population.

## B. RE-ANALYSIS OF RECREATION DEMAND, SUPPLY & NEED

### METHODOLOGY

#### Applicability of NRS Data

The 1960 National Recreation Survey (NRS) collected and developed a large volume of detailed data for comprehensive study of national recreation needs. The NRS approach to research was purposely structured to enable analysts to reach broad, general conclusions as to participation, demand and needs, and to make tentative general projections of future outdoor recreation demands. In developing a standard questionnaire and list of recreation activity categories for collection and comparative analysis of recreation data on a nationwide basis, ORRRC was surely cognizant that not all of the selected activity categories were applicable or pertinent to all regions or all states.

The survey employed a sample of 4,375<sup>+</sup> households in the U.S., of which about 608 were in the Western Region (eleven states having widely varying climatic, population, urbanization and other characteristics). It appears that the actual Arizona sample comprised no more than 29 to 55 households.

It seems apparent that NRS data was not intended to provide more than a broad guide to recreation participation and demand on a regional basis, nor was it intended for direct use in determining participation rates or future demand for specific activities by individual state. The ORRRC made no attempt to analyze NRS data by individual state.

Based on the foregoing assumptions as to purposes of the NRS, the inapplicability of some of the standard survey activity categories, and the meagerness of the Arizona survey sample, it is concluded that the direct application of NRS participation rates does not provide a satisfactory base for determining outdoor recreation demands on an activity-by-activity basis in Arizona. It follows that future attempts of the Arizona Outdoor Recreation Coordinating Commission to quantify participation, demand and need should be based upon data developed through a comprehensive recreation research program designed specifically for Arizona. Such a program should include re-definition of activity categories as necessary to reflect Arizona conditions and to facilitate the direct translation of participation rates into specific facility needs.

Due to the vast deficiencies known to exist in certain high-priority kinds of recreation space and facilities, and to the fact that the expenditure of all available local and state recreation funds over the next few years will not completely overcome this deficiency, it has been concluded that the primary purpose of this Plan Maintenance Project should be to determine the extent of current deficiencies and how best to satisfy current demands.

Hence, the re-evaluation of existing recreation data, conclusions and recommendations contained in the Arizona Outdoor Recreation Plan (AORP) is the central and basic component of this Plan Maintenance Project. Of necessity, this re-evaluation first requires examination of the methodology used in determining Arizona recreation demand, and judgment as to the validity of such methodology.

Based on defining demand as "the desire of people to participate in certain kinds of recreational activities", and on recognition that use is directly related to availability of adequate facilities, the AORP employed the desire-to-participate approach to determining demand rather than the "use" or "standards" approach. <sup>1/</sup> Choice of this approach merely represented acceptance and application for Arizona recreation planning of the approach employed in the ORRRC studies. While the "desire" approach to quantifying demand is appropriate and is most effective for nationwide survey and analysis designed to produce broad, general guides to recreation planning, it is not considered the most appropriate approach for use in quantifying recreation needs in Arizona, particularly in view of the very small Arizona sample taken in the NRS.

In general, the "desire" approach relates future demand to such socio-economic factors as population growth and characteristics, economic activity, income, education, leisure time, vacation practices and mobility. Income was considered the most influential single factor of future change in Arizona, and the projected rise in median income was the major socio-economic factor reflected in the AORP statistical projections of future demand. While a considerable amount of extraneous data on these factors are contained in the AORP, only very general statements of their influence on future demand are provided, and little attempt was made to compare Arizona characteristics with those of other states or the nation. Increased income was reflected through statistical weighting of NRS projected participation rates, but the AORP includes no accounting or rationale for the amount of derivation of such weighting.

In applying the "desire" approach, the AORP made the following assumptions:

1. "... that the annual participation days per capita . . . in Arizona for 1960 were the same as the average of the Western States as found by the NRS".

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<sup>1/</sup> p 3-7, AORP

2. That NRS participation rates developed for persons 12 years of age and older should be applied to the entire population of Arizona regardless of age.

The AORP then employed the following methodology in deriving recreation demand projections in each of the 23 standard activity categories for the average peak season weekend day:

1. The aforementioned basic assumptions, together with a weighting for income increase, were applied to NRS Western Region participation rates to develop the per capita annual participation rate in days for Arizona.
2. Annual per capita participation rates, by activity, were then multiplied by the total existing and projected future population of the state to produce total annual demand in five-year increments to 1985.
3. Total annual demand was then adjusted to reflect total potential demand during a three-month season of peak use, based on assessment of ORRRC studies.
4. Average peak season demand was then adjusted by use of ORRRC data to determine total demand for some 18 activity categories on an average weekend day during the peak season.

While the general approach to projecting recreation demand is undeniably sound, the validity of judgment with respect to applied statistical factors is obviously the key to useful results. Unfortunately, the AORP contains very little and only very general rationale in support of statistical adjustments. Hence, it is impossible to evaluate the quality of judgment applied, any poor judgment being buried in a mass of statistics. It is questionable whether errors in this variety of judgment tend to compensate or compound one another.

The AORP three-day, one-season survey and analysis of non-resident recreation preferences and socio-economic data was too limited in scope to produce meaningful guides as to year-around visitor characteristics, and questionnaires were not structured so that the data could be assimilated statistically along with resident demand data. There is no evidence that non-resident data was used as input in development of the demand projections to 1985.

Table 2 compares the results of ORRRC and AORP demand calculations for 1965.

Table 2  
COMPARISON OF ORRRC & AORP PARTICIPATION RATES AND ADJUSTMENTS

Activity	Annual Per Capita Participation Days				Total 1965 Demand (1,000 Days)	%	'65 Peak Season Demand (1,000 Days)	%	'65 Avg. Weekend Day of Peak Season	
	ORRRC West	% of Total	AORP - Adjustment	% of Total					(1,000 Days)	%
Driving for Pleasure	20.42	21.1%	21.52	21.0%	34,625.7	21.0%	8,829.6	15.3%	183.9	16.2%
Walking for Pleasure	16.67	17.3	17.44	17.0	28,061.0	17.0	6,510.2	11.3	135.6	11.9
Outdoor Games & Sports	14.44	15.0	16.02	15.6	25,776.2	15.6	6,005.9	10.4	125.1	11.0
Swimming	7.63	7.9	8.40	8.2	13,515.6	8.2	9,488.0	16.4	197.7	17.4
Sightseeing	7.46	7.7	8.10	7.9	13,033.0	7.9	4,874.3	8.4	101.5	8.9
Bicycling	4.64	4.8	4.80	4.7	7,723.2	4.7	3,050.7	5.3	63.6	5.6
Picnicking	4.30	4.5	4.43	4.3	7,127.9	4.3	3,457.0	6.0	72.0	6.3
Attending Outdoor Sports	4.07	4.2	4.33	4.2	6,967.0	4.2	1,755.7	3.0	36.6	3.2
Fishing	3.93	4.1	3.99	3.9	6,419.9	3.9	3,068.7	5.3	(Deferred)	
Nature Walks	2.88	3.0	3.03	3.0	4,875.3	3.0	1,160.3	2.0	24.2	2.1
Camping	2.00	2.1	2.10	2.1	3,378.9	2.1	1,763.8	3.1	36.8	3.2
Horseback Riding	1.98	2.1	1.99	1.9	3,201.9	1.9	1,428.0	2.5	29.7	2.6
Boating(exc. Sail/Canoe)	1.78	1.8	1.85	1.8	2,976.7	1.8	1,803.9	3.1	37.6	3.3
Hunting	1.36	1.4	1.12	1.1	1,802.1	1.1	1,802.1	3.1	37.5	3.3
Hiking(Trails-Packs)	.72	.7	.81	.8	1,303.3	.8	890.2	1.5	18.5	1.6
Miscellaneous	.63	.7	.65	.6	1,045.9	.6	(Deleted)	--	(Deleted)	--
Water Skiing	.62	.6	.69	.7	1,110.2	.7	763.8	1.3	15.9	1.4
Attend. Outdoor Concerts	.48	.5	.52	.5	836.7	.5	384.0	0.7	8.0	.7
Sailing	.13	.1	.13	.1	418.3	.3	246.0	0.4	5.1	.4
Canoeing	.12	.1	.13	.1						
Sled/Tobogganing	.12	.1	.12	.1	193.1	.1	193.1	0.3	(6.2)	.5
Mt. Climbing	.09	.1	.10	.1	160.9	.1	111.3	0.2	2.3	.2
Ice Skating	.06	.1	.07	.1	106.2	.1	106.2	0.2	**	--
Snow Ski	.04	*	.04	*	64.4	*	64.4	0.1	**	--
Totals	96.57	100.0%	102.38	100.0%	164,723.4	100.0%	57,757.2	100.0%	1,137.8	100.0%

\* Less than .05%

\*\* Included with Sledding/Tobogganing

Note: Totals may not add due to rounding

Source: Arizona Outdoor Recreation Plan, Tables 3-XXII, 3-XXIII, 3-XXIV, 3-XXV and 3-XXVI

## Conclusions Regarding AORP Demand Methodology

It should be recognized that no valid long-range projection of recreation demand can be made on any basis other than statistical projection modified by use of good judgment. Long-range projections made on any other basis would constitute largely unsupportable estimates subject to excessive interpretation and error. However, in view of the inadequacy of research and data pertaining specifically to Arizona resident demand, together with incomplete inventory data, the 1966 attempt to produce valid statistical projections did not provide a satisfactory base for capital improvement programming.

Due to the general frailty of the demand and supply data which served as the basis of the AORP, accomplishment of the primary purpose of this Plan Maintenance Project will require emphasis on the practical analysis of statistical data existing in the AORP combined with partial dependence on nont-statistical general knowledge pertaining to demand and supply conditions in Arizona. It also requires that sound, hard-headed judgment of current demand and needs be directed specifically toward establishment of a priority list for implementation actions and capital improvements spending which is: (1) related primarily to satisfying current needs, and (2) related secondarily to acquisition of certain lands which, if not acquired when timely, may jeopardize the state's long-term ability to satisfy future demands and realize maximum potentials.

## ACTIVE RECREATION PURSUITS

### Playing Outdoor Games & Sports

Definition. This activity is described as embracing competitive participation in team sports such as baseball, football, polo and rodeo, as well as in such non-team sports as tennis, golf, archery, etc. (The standard ORRRC definition categorically limits consideration to persons 12 years of age and older.)

Characteristics of Participation and Demand. Findings of the 1960 NRS are summarized as follows:

1. Participation is directly related to age, with heaviest rate in 12-17 year age group, only a slight drop between 18 and 24 years in the West, and a higher rate in the over-65 group in the West than in the nation.
2. It is mainly a summer activity over most of the nation.
3. Participation is highest in metro areas, fairly high in urban places under 50,000 population, and lowest in rural areas.
4. Participation increases with user income, with a variable rate of increase recorded in the West.
5. Non-white participation is markedly higher than white.
6. Participation by those over 25 years is directly related to educational attainment.

It is judged that while Arizona recreationists generally follow national and regional patterns with respect to income, race, education, occupation and place of residence, participation differs significantly with respect to season. In desert areas, high temperatures depress summer activity below national and regional averages, while mild winters extend participation over most of the year. Also, participation is probably somewhat heavier in the older age groups than typical in the West and the nation due to favorable climate and earlier retirement age.

Since 88% of Arizona's population, both metro areas, and nearly all medium-sized cities are located in desert areas, total annual participation and demand in this activity is probably significantly greater than national or regional averages. The AORP assumed that for all activities, with the exception of hunting

and winter sports, the peak three-month season was in summer, an assumption adopted from ORRRC studies. It is noted that the calculated 6,005,900 total days of peak season participation in this activity represent only 10.4% of total peak season participation in all categories whereas this activity accounts for 15.6% of total annual participation. This suggests that demand was understated. While summer participation probably exceeds that of any other season, it is not significantly lower than in spring and fall. High daytime temperatures in desert areas motivate a greater demand for night recreation facilities, a major consideration in terms of space and physical design criteria as well as costs. In other regions of the state, demand appears fairly similar to that in colder regions of the country. It is apparent that urban residents dominate the participation in this activity, and that the primary demand is for space and facilities located within urban areas.

Characteristics of Supply. The AORP indicates a total supply of 225 acres of land for outdoor games and sports, exclusive of golf courses. 1/ One of the principal suppliers - public and parochial schools - was not inventoried. AORRRC's October 1967 Interim Report subsequently estimated a total of 1,714 existing acres (not including space provided by schools) in 32 municipalities, devoted solely to tennis, baseball, football and soccer. Since there are 63 municipalities in the state, the total acreage actually devoted to outdoor games and sports in 1967 was substantially greater even than the Interim Report indicated. It is obvious that the supply of land and facilities for this activity was grossly understated in the AORP.

Planning Standards. The AORP cited and used standards of the California Committee 2/ pertaining to acreage of urban parks. Since these particular standards include space for passive as well as active urban recreation, they are not directly applicable to the category outdoor games and sports. While these standards are based on inclusion of space for picnicking, golf, nature walks, etc., the same standards were not applied in determining the space required for these individual activities. In view of the vast deficiency known to exist in this activity category, any special concern as to detailed standards is not appropriate at

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- 1/ Altogether, the AORP and AORCC's An Interim Report on the Recreation Opportunities in Arizona's Urban Areas identified 3,648 acres in golf courses, including 1,233 acres in public ownership.
  - 2/ California Committee on Planning for Recreation, Park Areas and Facilities, Guide for Planning Recreation Parks in California, 1956.

this time. Therefore, it is recommended that selection of proper and specific standards be postponed pending thorough study as part of a future plan up-dating project. Since both needs and standards vary according to climate, location, and size and type of urban area, several levels of standards are required to determine needs in the several different types of Arizona communities — free-standing small towns, free-standing medium-sized cities, large central metro cities, and suburban cities.

Current Deficiencies and Needs.

The AORP derived the 1965 acreage need for outdoor games and sports by dividing the calculated average peak season weekend day demand, by a use standard of 16 participants per acre. Since golf course acreage was not included in the AORP inventory but golfing was included in participation rates used to calculate needs, it is apparent that the 7,819 acres of need calculated by the AORP was grossly excessive. As a rough check, California Committee 1/standards for outdoor play areas in cities and towns similar to those in Arizona were applied to the urban population of Arizona. This yielded a total need for 5,670 acres for conventional sports and games areas (playgrounds, playfields and athletic fields for use by all age groups, including 6-12 years). Comparison of the two approaches indicates that deficiency and need were grossly overstated in the AORP as evidenced by the following figures.

	1965			% Increase Needed
	Supply	Deficiency	Need	
AORP	225 ac.	7,594 ac.	7,819 ac.	3,375%
Re-Analysis	1,714 ac.	3,956 ac.	5,670 ac.	230%

Conclusions and Recommendations. Despite the fact that re-analysis proved existence of a much greater acreage for outdoor games and sports than is indicated in the AORP, a grave deficiency remains. The provision of space and facilities within urban areas for outdoor games and sports represents one of the higher priority recreation needs in Arizona.

Rationale supporting this conclusion includes:

1. The high ratio of persons under 25 years of age in the State's population, combined with the high ratio of total population

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1/ op. cit., Interpolation of standards applicable to "Valley Metropolitan Regions" and "Valley Non-metropolitan Areas".

residing in urban areas, clearly shows that this segment of the population deserves primary consideration in future recreation actions.

2. According to the NRS, participation is heaviest in the 12-17 year age group, closely followed by the 18-24 year group. It is apparent that the pre-12 year age group participates heavily in outdoor games and sports — perhaps as heavily as the 12-17 year group — and that this age group must be accommodated in future recreation actions.
3. Every urban community in the state is notably deficient in provision of adequate playgrounds and playfields to serve the pre-12 year age group.
4. School property, while ordinarily of adequate size for games and sports, is generally underdeveloped and its use during out-of-school hours and days is often restricted.
5. There is a strong demand and need for night-lighted game courts and playfields, as evidenced by their frequent inclusion in L&WCF project applications.

The standard ORRRC definition includes so many unrelated activities as to preclude application of satisfactory use standards. For purposes of this Plan Maintenance Project, it is recommended that the category of outdoor games and sports be re-defined to: (1) place golf in a separate category, (2) place competitive horseback activities in the category of horse activities, (3) place speedboat racing and sailing regattas in the category of boating, and (4) retain competitive swimming and diving activities but re-assign consideration of unorganized and informal swimming to the category of swimming. This re-definition will make it possible in future plan up-dating projects to relate research pertaining to demand, supply and need specifically to these very different types of activities.

It is further recommended that provision of space and facilities within the redefined category of games and sports be considered in the following priority sequence:

1. Space and facilities primarily serving the pre-12 year age group, located within a convenient distance of home.
2. Space and facilities primarily serving the 12-17 year age group.

3. Community-level space and facilities for the highest-demand activities primarily serving the over-18 year age group.
4. Special types of facilities for general use, such as shooting and archery ranges, golf courses, etc.

### Young Children's Outdoor Play

Definition. This proposed new category of active outdoor recreation, not considered in the ORRRC studies or NRS, is defined as including: All non-competitive types of outdoor play activities engaged in by children under 12 years of age which occur at places other than homegrounds.

Characteristics of Participation and Demand. There is little need for statistics to prove the nature of this user group. It embraces all children between the ages of about four and twelve regardless of race, family income and place of residence. The age group begins at the level when the child requires space and facilities for healthful outdoor play which do not exist on his homesite, and extends up to the age at which he no longer requires special play areas and facilities and can safely utilize those available for youths and adults.

While constant parental supervision is needed at the lowest age level, the need for supervision declines as age increases. Play periods range from less than an hour to several hours. Creative play facilities are most needed and most popular in the younger half of the age group, while large, open, run-and-play spaces and fairly sophisticated facilities are most needed at upper age levels. While children in the older half of the age group, particularly boys, spend more time in activities categorized as outdoor games and sports, most of this time is spent in relatively informal, unorganized play.

In Arizona, there were 236,690 children in the 5-12 age group in 1960, approximately 18.2% of the total population. These children were generally distributed among rural and urban places of residence in the same ratios as youths and young adults.

In desert areas, participation is probably fairly even through fall, winter and spring seasons, but is probably less intensive during hot summer months. Demand is probably reversed in the colder regions, with less intensive participation during winter months. Since nearly all play activity occurs during daylight hours, seasonal influence on the number of daylight hours is probably a more important factor than the influence of temperature.

Characteristics of Supply. There is no known statewide inventory of existing space and facilities for this activity. Most of the entire supply exists in urban areas, divided generally between school playgrounds and playgrounds operated by park and recreation departments. A rapidly growing number of tot-lots, or "mini-parks", are being constructed in the more densely populated sections of Phoenix where sufficient space for full-scale neighborhood playgrounds is not reasonably available. Future inventories of space and facilities should include that provided by school districts as well as that operated by public park agencies.

Based on several inventories conducted as part of comprehensive urban planning programs during the past eight years, it is a known fact that play space and facilities for elementary school age children is woefully deficient throughout the state. The rapid-growth areas appear to be no more or less deficient than slower-growing urban places. In small towns and slow growing cities, children still benefit from existence of vacant lots and lower traffic volumes. However, while this relieves some of the pressure for developed play areas, vacant lots and open streets are not an adequate substitute for playgrounds. Nor can public school grounds be expected to satisfy the need until school authorities show themselves willing and ready to make their playground space and facilities readily available for use during all the daylight hours.

Planning Standards. California Committee <sup>1/</sup> standards for a neighborhood recreation center call for 8.13 acres when combined with an elementary school and 18.27 acres when developed as a separate site. After subtracting space and facilities specifically developed for activities categorized as outdoor games and sports, 1.75 and 2.25 acres, respectively, would remain for activities included in this category. The effective service radius of such a site should encompass from 2,000 to 4,000 residents, depending on density of population. A wide variety of other standards are in use throughout the country.

Conclusions and Recommendations. Although there has been no statewide inventory to prove the point, it is common knowledge that there is a grave deficiency in this category of outdoor recreation space and facilities. The provision of space and facilities within urban areas for young children's outdoor play represents one of the high priority recreation needs in Arizona.

It is recommended that provision of space and facilities within the category of young children's outdoor play be considered in the following priority sequence:

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<sup>1/</sup> op. cit.

1. Development of new neighborhood playground sites in densely-populated sections of urban areas, particularly in low-income housing areas, including tot-lots (mini-parks), school sites with agreement for general public use during all daylight hours, and complete neighborhood park-playgrounds; and immediate acquisition of park-playground sites in urbanized areas where the need is critical.
2. Acquisition and development of sites for complete neighborhood parks and playgrounds in areas undergoing urbanization, preferably in conjunction with elementary school sites.
3. Advance acquisition of sites in undeveloped areas where urbanization is imminent.

It is further recommended that since this category of recreation is clearly the responsibility of local communities, municipal parks and recreation departments should take responsibility for leading the development of statewide guides for this kind of recreation use.

### Bicycling

Definition. This activity includes all bicycling done for pleasure, but excludes riding a bicycle to work or to school.

Characteristics of Participation and Demand. On a nationwide basis, only 18% of total participation is by persons over 17 years of age. Boys participate more than girls, and non-whites more than whites. Bicycling is highly correlated with active pursuits such as playing games, swimming and hiking. ORRRC studies suggest that provision of bicycle paths free of traffic, together with hostels or camping facilities, would increase bicycling participation by older age groups and families.

By reason of favorable climate, it is likely that older age groups bicycle more in Arizona and that in general participation is considerably less seasonal than it is nationwide. In all other respects, Arizona demand probably conforms closely to national characteristics. It is assumed that demand is relatively greater in urban places and is progressively greater in direct relation to local population numbers.

The standard ORRRC definition categorically limits consideration to persons 12 years of age and older, whereas the highest participation in bicycling unquestionably occurs in the under-12 age group.

Characteristics of Supply. The AORP lists a total statewide supply of 40 miles of bicycle paths, all located in Maricopa County. Nearly all of this mileage is represented by a single resource — the Sun Circle Trail — which employs irrigation and canal roads for joint use by bicyclists, pleasure walkers and horseback riders. It is known, however, that many additional unlisted miles of such paths exist along the canal system in Maricopa County, but were not inventoried because they have not been specifically designated as bicycle paths. At least one new community — Litchfield Park — has a planned system of bicycle/foot paths providing circulation throughout residential areas. However, most of the statewide demand is presently expressed by the use of city streets, highways, country roads and public parks.

Planning Standards. The AORP employed a standard of 0.03 miles (158 feet) of designated bicycle path per calculated participation day. The source of this standard was not disclosed. This standard, when applied to an "adjusted" participation rate falling between those for the Western Region and Nation, produced a total 1965 need of 1,098 miles of bicycle path.

While the present use of streets and roads for bicycling does not detract from the desirability of providing paths specifically designated and improved for bicycling, we know of no practical, tested standard of measurement for facilities to satisfy bicycling demand. In view of the fact that most bicycling is by under-12 year-old children to whom a bicycle is largely a plaything and a means to other recreation ends, the measurement of supply and need in terms of miles of bicycle path is clearly questionable. In the absence of a practical standard, it seems justifiable to dispense with standards and merely encourage the designation and improvement of bicycle paths wherever the community has an expressed demand for such facilities and the opportunity of providing them.

Conclusions and Recommendations: It is concluded that while Arizona's urban communities should aspire to provide adequate facilities designated and improved specifically for bicycling and related uses, no practical standard exists by which demand and need for such facilities can be quantified. Therefore, it is recommended that proposals for construction of such facilities be considered on their individual merits related to population density, expressed local demand, and capability of multiple-use. On this basis, bicycle paths planned for multiple-use, and particularly those situated either in multiple-use recreation areas or leading to or connecting between such areas, should be given higher priority.

It is further recommended that for purposes of this and future statewide recreation planning projects, the category of bicycling be re-defined to include all bicycling activity which takes place off the homesite, without regard for

the participant's age. It is also recommended that special attention be given to developing a practical standard by which demand, supply and need can be more directly related to physical facilities.

### Motorbiking

Participation in motorbiking has increased many fold during the past ten years; there are thousands of motorized cycles - motorcycles, motor scooters, trail bikes, etc. Participation in motorbiking probably now exceeds that in several other "standard" categories of outdoor recreation. This trend was evidently not sufficiently established in 1960 for ORRRC to recognize its implications. However, at this point of time in Arizona, it is apparent that due to its popularity and special facility requirements, motorbiking must be considered a significant recreation activity.

State law requires a beginner's permit or driver's license, depending on age, to operate a motorbike on public thoroughfares, limiting participation to persons at least 16 years of age. Participation is probably heaviest among the 16-to-24 year age group, and may actually exceed participation in bicycling in the 24-to-48 year group. Motorized cycles are also attractive to the 12-to-16 year group and, although these children cannot operate them on public streets, their numbers are reaching the point where the problem of facilities deserves attention. Participation among older age groups is insignificant.

Due to greater range and higher speed, motorbikes compete more than bicycles with other vehicular traffic on public streets and highways. They are also more hazardous than bicycles when used on sidewalks, a use forbidden by many local ordinances.

The use of motorbikes for traveling to school and work appears to account for a substantial proportion of their total use. Their use for recreation is probably divided three ways: (1) long-distance transportation on trips primarily for other recreational purposes, (2) as short-range transportation connected with hunting, fishing, sightseeing and exploring in rough terrain, and (3) as an exclusive recreation. Surveys are needed to determine the special characteristics of this demand as it relates to outdoor recreation.

The rapid increase and virtually uncontrolled use of motorbikes is proving a source of aggravation, frustration and despair to park officials, and to public and private landowners. Effective restriction of motorbikes to improved roadways or even to undesignated, unimproved country lanes, has proven next to impossible, particularly in the case of trail bikes which are designed specifically for operation beyond established roadways. The fragility of the Arizona

desert is made particularly apparent by scars created by motorbikes and their four-wheeled counterparts, the jeeps and sandbuggies. Experience shows that uncontrolled use of motorbikes in desert recreation areas can virtually destroy the site's natural character — a nearly permanent loss for all other recreationists. They are particularly destructive of primitive riding and unpaved hiking trails.

Despite the current destructive characteristics of this activity, it must be recognized as a legitimate recreational activity of some magnitude. Such recognition, however, also implies that the activity must be controlled in order to retain values associated with other activities. Preliminary discussion with leaders of motorcycle organizations indicate that the first and most positive step toward control would be to develop space and facilities specifically for their use. The appropriate extent, distribution and design of such space remains to be determined.

Recommendation. It is recommended that a high priority be given the first proposal to establish and develop space and facilities specifically for this activity.

#### Horse Activities

Definition. The ORRRC definition of the activity "horseback riding" includes only recreational riding and excludes riding to work or school or in relation to a job.

In Arizona, horse activities encompass a broad spectrum of activities, including riding for pleasure, horse training, horseshows, gymkana (horseback games), rodeo, steer and calf roping, as well as trail riding. The category should be renamed horse activities and include all of the foregoing interests regardless of the fact that some are competitive and would therefore be regarded by ORRRC as outdoor games and sports.

Characteristics of Participation and Demand. Principal findings of the NRS were that:

1. Participation in the West is double that nationally.
2. Male participation is somewhat greater than female nationally.
3. Participation is much the highest among the 12-17 year age group while the over-65 rate is insignificant.

4. Percentagewise, participation is highest in rural areas, while urban rates vary inversely with population size.
5. Non-whites ride more than whites, nationally, and nearly six times as much in the West, the latter reflecting the large Indian segment of the population.
6. Horseback riding is generally a status symbol in urban areas.

Arizonans appear to depart widely from both national and Western patterns in most respects. The percentage participation rate is judged to be generally higher in all age groups, reflecting several factors, including:

1. The climate in the populous desert region makes year-round horse activity enjoyable.
2. A larger percentage of adults are or have recently been working horsemen.
3. The broad distribution of public and private grazing lands affords ample open space for riding.
4. Participation is not closely related to income level since the cost of acquiring and maintaining horses is relatively low.
5. The rate of urban participation is higher due to the facts that most urban areas permit the keeping of horses within the corporate limits, lot sizes are large, and horse-privilege residential areas are common.

While participation is probably highest in the under-17 group, it is not as much limited to youths as are most other activities classified as active youth pursuits. Participation by young children is considered sufficiently great to warrant broadening of the category to include the under-12 group. Participation in horse activities is not so much a status symbol as a symbol of Western tradition and adventure; interest in horses is an inherent characteristic of long-time residents and a purposely-acquired characteristic of many newcomers.

The AORP assumed a participation rate very slightly higher than the NRS found for the West. The foregoing judgments, based on observation and experience, indicate that the AORP rate is appreciably understated.

Characteristics of Supply. AORP data indicates a supply of 2,274 miles of designated riding trails, 91% of which are located in national forest lands. It is unfortunate that the thousands of miles of ranch roads, logging roads and undesignated horse trails, which are suitable and commonly used for trail riding, cannot be inventoried. These roads and trails form a vast network covering much of the state and presently represent the major supply. There also exist a number of designated sheep driveways — strips from one to several miles wide extending as much as a hundred miles across federal lands. Negotiations by the Arizona State Horsemen's Association and the State Trails Committee appointed by the Governor are underway whereby these driveways, which were originally created and reserved for trailing sheep from wintering grounds to summer mountain pastures, may be opened and permanently reserved for use by horsemen and hikers as a matter of right. Since the AORP inventoried only designated trails, the effective supply of riding trails is grossly understated and the practical need is correspondingly overstated.

It should be recognized that trail riding represents only a relatively small segment of horse activity, and it is wholly improper to limit consideration of horse activities to trail and "pleasure" riding. Large, unrestricted-use open spaces near population centers are widely used for pleasure riding, and so long as access to open land prevails, much cross-country riding requires no trail at all. While continuing population growth and urban expansion will force more and more riders to trailer their horses to open land, this kind of recreation opportunity will never be far distant from the areas in which horses are commonly kept. Public, quasi-public and private training rings and arenas are needed to serve the needs of participants in horse training, horse shows, rodeos, steer and calf ropings, and gymkana. Too often, zoning has failed to recognize this need and has maintained pressure for elimination of such existing facilities in urbanizing areas without providing for their replacement in more suitable areas.

Planning Standards. In calculating riding trail needs, the AORP assumed the Maricopa P&R Department's standard of 20 persons per trail mile, which produced a statewide need which was 789 miles less than the existing supply of designated horse trails. However, concern about deriving a proper standard for trail use seems untimely in view of the present supply of open land and undesignated trails. Trail location, particularly in relation to place of origin of demand, is a far more critical factor than mileage.

So far as we know, no standards exist for measurement of demand and need in terms of arenas for horse events, and it is questionable whether a technical standard would prove desirable. It would seem most practical merely to encourage the acquisition and development of such public facilities for which there is an expressed local demand and which cannot be provided by quasi-public and private organizations.

Conclusions and Recommendations. With respect to assurance of adequate riding trails to satisfy current and short-range future demand, three different types of actions are proposed:

1. Improve and extend existing trails, particularly where they are part of a trail system, and to rehabilitate certain abandoned trails where needed to make trail systems more functional.
2. Negotiate with private landowners and public landholding agencies for the permanent right of horsemen (and hikers) to cross private and public lands in designated locations.
3. Maintain surveillance of state and local highway project planning to assure that needs for trail rights-of-way, underpasses and bridges are duly considered in land acquisition, project design and construction.

With respect to provision of arena facilities, it is concluded that:

4. Proposals for acquisition and construction of public arena facilities should be weighed on their individual merits based on density of horse population and intensity of local demand.
5. Quasi-public and private organizations should be encouraged to preserve and maintain existing arena facilities, where suitably located, and to plan, acquire and construct additional facilities where and when needed.

Of the actions listed above, only Items 1 and 4 involve appreciable capital outlay, the former primarily by federal agencies, and the latter by local and county authorities. It is recommended that all listed actions carry the same level of priority, with Item 4 given preference where heavy participation by youths and lack of adequate private facilities create a special need.

## WATER SPORTS

### Swimming

Definition. The ORRRC definition includes swimming, "bathing", wading, scuba diving, surfing, etc., but excludes competitive swimming and diving, which are classified as outdoor games and sports. This definition appears satisfactory for application in Arizona.

Characteristics of Participation and Demand. Principal findings of the NRS with respect to swimming are summarized as follows:

1. Nationwide, it is the third most popular outdoor recreation activity.
2. Swimming ranks first in preference with 42% of the U.S. population.
3. Participation is directly related to the proximity of opportunity.
4. Above 12 years of age, participation rates are inversely related to age and directly related to size of place of residence and income level.
5. Rates for whites and non-whites are closely similar in the West.
6. Swimming is most closely correlated with playing outdoor games and sports, boating, picnicking, bicycling and water-skiing.

The AORP assumed a participation rate slightly higher than NRS found for the West, but included no supporting rationale. No attempt was made to differentiate between swimming in natural waters and swimming in pools.

For most of Arizona's population, swimming is not as seasonal as it is in other states. While swimming is strictly a summer activity in the plateau and mountain regions, participation in the desert region, and particularly in urban areas, probably varies directly with the temperature. In general, the desert swimming season extends over at least five months, and participation by older persons is greater than typical nationally or regionally. Most motel and resort pools are heated in winter and are eagerly used by winter visitors.

Characteristics of Supply. The AORP recorded the existence of eleven beaches totalling 39 acres in area. Sixty-two percent of this acreage existed on the Colorado River and its reservoir lakes, extremely far removed from the state's population centers. In general, the inland rivers and reservoirs are not well suited for swimming — rivers and streams are too shallow, and, due to terrain, the larger reservoirs in the desert region have steep banks and few gently sloping beaches. Nevertheless, wading and other waterplay in streams is popular in summer, particularly in the Verde and Salt Rivers near Phoenix.

The AORP counted 49 municipal swimming pools, while AORCC's Interim Report accounted for 267 such pools, all public except for 2 "private" pools (assumed to be quasi-public or private club facilities). Due to the scarcity of natural waters suitable for swimming, a high proportion of total demand is directed to pools. In general, swimming in pools and swimming in natural waters attract participants of different types and age groups, and the one opportunity supplements rather than substitutes for the other. Due to their relatively low cost, there are a large number of private residence pools; nevertheless, access to a private pool is limited to middle and upper-income people. Private swim clubs are popular at the middle-income level, but there are remarkably few public pools to serve the low-income population. It is interesting to note that the City of Tucson is credited with 162 of the 267 public pools counted in the Interim Report. Identification of this large number as public pools actually represents many school, motel, and quasi-public pools used by the public through special arrangement between owners and the City.

Planning Standards. The AORP used the minimum standard of 100 square feet of beach per person with turnover rate of three per day,  $\frac{1}{3}$ , and a use standard for pools of 30 square feet per person with a three-per-day turnover.

The California Committee recommends provision of a community pool of about 4,500 square feet to serve each area housing 25,000 persons, and also provision of neighborhood pools of about 1,800 square feet to serve 3,200 people within walking distance.  $\frac{2}{3}$

Current Needs and Deficiencies. The annual participation rate assumed in the AORP is undoubtedly low, and this is further complicated by the fact

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$\frac{1}{3}$  California Division of Beaches and Parks.

$\frac{2}{3}$  California Division of Beaches and Parks. Application of this standard to Arizona's urban population yields a need for 891,000 square feet of pool surface compared to AORP's need of 1,977,000 square feet.

that the length of the peak season is actually longer than that reflected in the AORP. Calculated demand was applied to all swimming with no attempt to determine how demand is divided between pools and natural waters. Consequently, the AORP projected its calculated demand both ways, resulting in either-or need and deficiency statements. The resulting statement of statewide deficiency — either 118 acres of beach or 1,541,000 square feet of pool area — is considered excessive due both to understatement of supply and to the high average week-end day of peak season participation figure (197,700 participants) employed in the calculations. As a result, the stated deficiency of pool surface (or beach) equals 353% of existing supply.

Conclusions and Recommendations. A major need for additional swimming facilities exists within and near the state's population centers, particularly for public pools to satisfy the intensive demand by large numbers of lower-income, underprivileged youths — a demand partially supported by participation rates but emphasized by the "desire-to-participate" — of those presently having little or no opportunity. Pending ability to satisfy needs through construction and operation of public pools, maximum public use of all available motel and school pools, and encouragement of additional quasi-public and private club pools, is recommended. There is an accompanying need, of lesser dimension, to provide additional beaches on natural waters close to urban areas as a supplement to pool facilities.

Based on the foregoing conclusions, the following priority sequence is recommended within the category of swimming:

1. Construct community-level, or in major cities, district-level, swimming pools located for service to several residential neighborhoods, with particular emphasis on service to low-income and underprivileged groups.
2. Improve and expand existing beaches, and construct additional beach facilities on existing impoundments and natural waters close to major urban areas.
3. Construct neighborhood swimming and wading pools, particularly when a part of a complete neighborhood recreation complex.
4. Improve and expand existing beaches, and construct new facilities on existing impoundments and natural waters more distant from major urban areas.

## Sailing and Canoeing

Due to the scarcity of flowing streams of sufficient size in Arizona, there is virtually no canoeing, as the term is normally applied. Due generally to the small size and remoteness of most water bodies from population centers, there is very little sailing except on the Colorado River lakes and the larger inland reservoirs near Phoenix. Consequently, it is recommended that this category be combined with "other boating" under a classification called boating, and that facilities for canoeing and sailing be provided coincidentally with other boating facilities.

## Boating

Definition. The ORRRC definition should be broadened and modified to include the use of all boats, canoes, sailboats, houseboats, rafts, floats, etc., including the competitive use thereof.

Characteristics of Participation and Demand. The NRS data shows that:

1. Boating is generally a group, or family, activity, and primarily a summer activity.
2. Participation rates are fairly level in the under-44 year age groups, and decline thereafter.
3. Participation is directly correlated with income; however, time, as well as financial ability, is a limiting factor.
4. Participation varies little by size of place of residence.
5. Participation is directly related to proximity of opportunity.

It is judged that participation in boating in Arizona conforms generally to characteristics of the West as found by NRS. Other conditions and characteristics affecting participation and provision of facilities include:

1. Boating activity in association with fishing, water skiing, swimming and sightseeing probably exceeds participation in boating as an exclusive recreation activity. While boating is known to be an essential companion activity of all waterskiing, there has been no research to determine the proportion of fishing which demands the use of boats. Trips for sightseeing and exploration on the Colorado River depend entirely on the use of boats, rafts and floats.

2. Sailboating is largely limited to the larger inland lakes nearest Phoenix and to Colorado River reservoir lakes. Due to distance, travel time and inadequate mooring and storage facilities, nearly all sailboats are trailered to and from the place of residence.
3. Boat ownership includes many smaller deep-sea craft, used primarily in the Gulf of California, but also used on the larger inland lakes. Most of these boats are trailered back and forth with only a small percentage being regularly stored in Mexico.
4. The use of expensive boats does not appear seriously restricted by relatively long-distance travel to places of opportunity; however, due to travel time, the use of all boats involves a minimum of from several hours to a day per occasion.
5. In the use of most of the state's principal boating waters, seasonal variations are probably most similar to those in Southern region inland waters. While peak demand occurs during the three-month summer season, heavy use extends over eight months in the desert regions.
6. Nearly all boats used in Arizona are transported on each occasion between place of residence and place of use.

Since boating participation, and hence, demand, is closely related to the relative proximity of boating waters to place of residence, it seems obviously improper to assume that the same statewide participation rate is applicable to all local areas in the state. Hence boating demand in the Tucson area is probably substantially overstated in the AORP.

Supply. The AORP inventory of boating waters and facilities is apparently quite complete on an agency-by-agency basis; however, the source of the stated total existing supply of surface acreage and its breakdown as to suitability for the various types of boating are not apparent. Further evaluation of AORP data discloses the following salient facts:

1. With the exception of the Colorado River, virtually all of Arizona's boating waters are impounded for multiple-use purposes including power development, irrigation, livestock water, and flood control in addition to recreation.

2. Inland boating waters are widely distributed throughout the northern two-thirds of the state, and most of the opportunities for major lake development have been exploited.
3. Motorboats are prohibited on 26% of all impounded waters inventoried, but these waters account for less than 0.5% of the total boating water acreage. Only electric motors are permitted on 28% of impounded waters, but these waters account for only 1.2% of total boating water acreage.
4. The five northern counties (Apache, Coconino, Mohave, Navajo and Yavapai) contain 74% of the State's unrestricted boating waters and 89% of total unrestricted water acreage; 84% of waters restricted to electric motors and 82% of this acreage; and 89% of motors-prohibited waters and 75% of this acreage.
5. There are many small bodies of water on which boats are permitted but motors prohibited; these waters are used chiefly for fishing from canoes, rowboats and rafts, but very seldom for exclusive boating.
6. The Colorado River, boundary lakes, and larger inland reservoirs are of sufficient size to afford opportunity for use of relatively large, powerful boats while concurrently permitting the safe use of small craft of many types.
7. Yuma County has the highest per capita boat ownership, followed by Gila, Coconino and Yavapai Counties, in that order.

Standards. The AORP employed an average of boating standards used by the California Division of Beaches and Parks, Maricopa County Parks and Recreation Department and Texas Parks and Wildlife Department. These capacity standards, used to determine water acreage requirements, included number of persons per boat and number of required acres per boat. In addition, the AORP assumed that 80% of all boats are trailered (versus moored) and require 20-foot wide launching ramps; that 60% of all boats require recovery at the two-hour peak period of the day; and that the recovery rate is six boats per ramp per hour. The AORP also deemed it proper to assume that the maximum amount of water area required for boating is the sum of that required for waterskiing, fishing and "all boating", as calculated separately. It was not explained why there is a need to determine the maximum water area required.

Applying the foregoing assumptions to the state 1965 need for 683 launching ramps, we find that this "required" number would, on any peak day, accommodate 67% of all trailered boats registered in Arizona. Test application of the widely used U.S. Army Corps of Engineers' capacity standard of 40 boats per day per ramp showed that the AORP-stated requirement would accommodate all Arizona boats on any given peak day. Test application of various other standards resulted in requirements varying from one-third to double the AORP requirement. Similarly, a checkout using various other standards for surface acreage need merely proved that it is unwise to accept standards without being familiar with the prevailing conditions and purposes under which they were developed.

One conclusion seems clear — most so-called standards have probably been developed to apply either to single bodies of water or to all bodies in a single area having more or less consistent use characteristics. Arizona, should therefore develop its own set of standards based on Arizona conditions.

The AORP made no apparent adjustment of calculated launching ramp requirements to account for other unimproved launching places. The fact that in 1965 154 ramps were presumably accommodating some 24,930 Arizona-registered boats seems to imply that it would be feasible, if not entirely desirable, to make some allowance for existing unimproved launching places. Roosevelt Lake, for example, has many unimproved launching places served by unimproved trails. It is also apparent that in many areas the use of unimproved launching places is prevented by lack of access resulting from steep terrain, implying that the need for improved access to launching places is at least equal that for launching ramps.

Needs and Deficiencies. According to the AORP, there is a statewide surplus of water area for fishing, waterskiing and all boating, and relatively major deficiencies in these categories exist in zones within two hours driving time of Phoenix and Tucson. While it is believed that current needs are overstated in the case of the Tucson area, it is unlikely that current deficiencies in water area can be overcome or that increases in supply can ever be expected to keep pace with increasing demands. The only significant prospects of relieving these deficiencies lie in construction of relatively small impoundments in southern Arizona and of the several reservoirs and flood control facilities planned as part of the Central Arizona Project. It does not seem possible to reduce these deficiencies through improvement of access routes or further reduction of driving time, particularly in the Tucson two-hour zone. For the immediate future, it will obviously be necessary to satisfy more of the demand by making more efficient use of existing facilities.

Conclusions and Recommendations. While the greatest demand is for boating opportunity within two hours driving time of home, it is unlikely that this growing demand can ever be wholly satisfied. Existing boating waters near metro

areas will certainly receive increasingly heavy use. Therefore, it is recommended that:

1. Agencies having development control over existing boating waters and adjoining lands plan jointly with local and state agencies toward improving the efficiency of use through:
  - a. Zoning water areas for various types of boating and boating-related activities, and enforcing such zoning.
  - b. Improving access to existing and entirely new boat launching areas.
  - c. Gaining maximum launching efficiency through improvement of existing ramps and construction of new, well-designed launching facilities.
  - d. Applying the foregoing recommendations first to the largest lakes nearest the metropolitan areas.
2. Every current and future potential for development of new lakes in Southern Arizona be exploited.
3. Additional access and/or launching facilities be provided at existing lakes most immediately beyond the two-hour driving zones wherever inadequate access or launching facilities are responsible for below-capacity use.

Further Recommendations. In view of the aforementioned lack of accurate data and applicable standards regarding boating participation, demand and use in Arizona, it is recommended that the next statewide planning project include:

1. Thorough research and analysis to determine the proportions of various types of watercraft, kinds of recreational use of boats, and correlation of boating to other outdoor recreation activities.
2. Restructuring of boat registration forms to provide greater detail concerning size, weight, type, power and other factors useful in determining the nature of boating demand.
3. Regular keeping, assembly and analysis of records regarding use of launching facilities for the purpose of developing planning and capacity-of-use standards for boating facilities.

## Waterskiing

Definition. This category includes all sports involving towing a person behind a boat.

Characteristics of Participation and Demand. NRS studies show that:

1. Participation rate is highest in the 12-17 year age group, and declines steadily to practically zero in the over-44 group.
2. Participation in waterskiing is directly and positively related to family income. In terms of both frequency and length of time, participation increases consistently with increased annual income to the \$15,000 class.
3. Participation is highest in the over-\$15,000 income classes in cities over a million population, with peak participation reached in the \$6,000-\$8,000 class in cities between 50,000 and 1,000,000 population.
4. Waterskiing is a relatively high status activity.
5. Waterskiing is always a group activity, and is most closely correlated with boating, swimming, camping, fishing and picnicking, in that order.

The AORP assumed a slightly higher participation rate than the NRS rate for the West, probably based on the longer waterskiing season in the desert areas.

Supply. The AORP accounted for a statewide total of 201,943 acres of water surface suitable for waterskiing, but includes no explanation as to criteria used to determine suitability. However, proximity of opportunity to population centers is clearly the most important criteria with respect to satisfying demand. No opportunity exists within two hours travel time of Tucson, and the supply within two hours of Phoenix equals only 22% of AORP-calculated need in that zone.

Space Standards. The AORP indicates a wide variation in use standards — from 2 to 40 acres per boat and from 1 to 14 acres per skier. No rationale is provided for assuming the standard of five acres per skier and 1.2 persons per boat skiing at one time.

Current Needs and Deficiencies. The AORP statewide need figure of 38,160 surface acres could not be substantiated from the data presented. Application of AORP methodology to available data and assumed standards actually produces a calculated statewide need of 66,250 surface acres.

Based on observation rather than statistics, it seems apparent that errors in AORP assumptions as to participation rate, peak day, use standards and/or other variables, were compounded, and produced an exceedingly high calculated need. In waterskiing, as in boating, it seems improper to apply a statewide participation rate to the Tucson area wherein no opportunity for waterskiing exists within two hours travel time.

Conclusions and Recommendations. Based on the foregoing analysis, it is concluded that:

1. Current demand within two hours travel time of Tucson and Phoenix can probably never be satisfied, at least during peak demand periods.
2. The combination of Phoenix and Tucson pressures on water areas within two hours travel time of Phoenix could easily result in domination of available surface acreage by waterskiing.
3. The travel time for waterskiing must increase as demand increases.

It is also concluded that future research and analysis of waterskiing demand must be structured in a way that will produce more accurate data on an area-by-area basis related to proximity of opportunity.

Based on the foregoing evaluation, it is recommended that:

1. More efficient use of available water areas closest to metropolitan areas be achieved through improvement of launching facilities.
2. The use of available water areas in zones of heaviest demand be zoned to prevent undue hazard and the reduction of enjoyment and domination of other water sports by waterskiing.

#### Fishing

Definition. This category includes all noncommercial fishing.

Characteristics of Participation and Demand. The NRS shows that:

1. Next to swimming, fishing is the most popular of water-oriented summer activities.
2. Fishing by males decreases with age, while the reverse is true of females.
3. Participation rates vary inversely with the population of place of residence and is the highest among rural residents.
4. Participation among middle-income classes is higher than in upper and lower classes.
5. Fishing is most closely correlated with camping, hunting, boating and waterskiing, in that order.

No data is available and the AORP provides no judgment as to the division of fishing participation between stream and lake fishing, or between "warm" waters and "cold" waters. The AORP assumed a participation rate slightly higher than the NRS found typical for the West. It seems certain, however, that Arizona's annual participation rate is significantly higher than that in the Western region, due to the year-round fishing season, the large number and broad distribution of fishing waters, and the participation by a larger ratio of elderly people. Detailed research is needed to determine when the peak season actually occurs in Arizona. While it may be assumed that the fishing waters in the desert regions bear the heaviest activity in terms of total hours of participation, it should not be assumed that the peak demand occurs during a three-month summer season. In fact, research will probably prove that fishing pressure on these lakes is not particularly heavy during the hottest period of the year since much of the demand during that period is directed to more distant waters in the mountain and plateau regions. This slackening of fishing pressure on warmwater lakes during the heat of summer occurs for several reasons: (1) None but the most avid fishermen will bear the direct sun and intense reflection for the several hours required for a satisfactory fishing trip; (2) While night and early morning fishing is popular, participation does not equal that in daytime fishing; and (3) Warmwater lake fishing is less productive during the hottest months when fish seek greater depths and are harder to locate.

Correlated with this assumed summer reduction of fishing pressure on warmwater lakes is the increased travel to the cooler regions on multi-purpose trips which include fishing. Thus, the mid-summer transfer of fishing demand from hot areas to cooler places is contributory to increased camping, boating and other water-oriented activities on coldwater lakes and streams.

Supply. Altogether, the Colorado River, its reservoirs, and the inland reservoir lakes provide a total of about 217,590 surface acres of water. Of this total, the AORP indicates that 189,762 acres are suitable for fishing, but fails to justify this allocation of supply.

While the AORP accounts for 2,831 miles of streams suitable for fishing, it does not evaluate current versus potential utilization of this resource. It could not be determined whether the Colorado River was included in the stream supply. its inclusion would tend to confuse the characteristics of streamfishing demand due to the prevalent use of boats in Colorado River fishing.

Current Needs and Deficiencies. According to AORP calculations, the supply of lake surface will be adequate through 1985 on a statewide basis as well as in each metro area travel-time zone except the Tucson two-hour zone. Calculations of need were expressed in terms of acreage of lakes averaging 100 acres in surface area, with no attention given to demand for streamfishing. This approach appears faulty on at least two counts:

1. The Arizona Game and Fish Department study of the recreation use of selected lakes showed that in terms of man-days per surface acre, fishing pressure was greatest on lakes of 100 acres or less, not on lakes averaging 100 acres in area. Aside from the obvious distortion of fact, this approach treated pre-ferred fishing place as being the supply of fishing places.
2. Fishermen who prefer streamfishing, in addition to those who divide their attention between stream and lakefishing, cannot logically be counted as part of the demand for lakefishing. The allocation to streamfishing of some volume of calculated demand for small-lake fishing would have served to increase the surplus of lake surface, particularly during the hottest months when coldstream fishing is most attractive.

Conclusions and Recommendations. Detailed research is needed to determine:

1. When the peak fishing season actually occurs in Arizona.
2. The division and/or overlapping of preference between streamfishing and lakefishing in Arizona. Only then can it be determined how improvement of access to streams might affect pressure on small lakes.

3. The extent to which lack of adequate access and shortage of improved launching facilities affect participation in lake-fishing.

Within this category, the following sequence of action is recommended:

1. The development of small fishing lakes in southern Arizona in the Tucson two-hour travel zone.
2. The construction of additional supporting facilities, such as campgrounds, at lakes in the mountain and plateau regions of the state, and improvement of launching facilities wherever it can be shown that existing facilities are a limiting factor for fishing.
3. The improvement of access to streams in the mountain and plateau regions, where required.

In addition, there is a need to improve fishing safety and enjoyment through the limitation of the areas open to waterskiing.

## BACKCOUNTRY RECREATION

### Camping

Definition. ORRRC described this activity as involving overnight stay and living out-of-doors, but excluding group camping.

The category of camping includes two rather different kinds of activities — "destination" camping and "en route" camping — which involve different types of campers and facility requirements. Destination camping may be described as including both vacation and shorter-stay trips wherein camping is either the exclusive objective or an essential part of a multi-activity outdoor experience. En route camping may be described as an ancillary activity of vacation travel and multi-purpose trips, and a necessary adjunct of freeway, highway, and parkway planning and construction.

Characteristics of Participation and Demand. The NRS produced the following basic facts:

1. Residents of the West camp at nearly three times the rate of other regions.
2. The younger age groups camp most frequently and the rate declines steadily to a very low level in the over-65 group; however, in the West, males of 45 to 64 years continue to participate at a significant rate.
3. Participation in camping is directly related to income level.
4. Non-whites camp very little. While the non-white rate is highest in the West, it is still only about one-half the white rate.
5. In the West, rural residents camp more than urban residents.
6. Participation in camping is strongly correlated with preference for water activities and hunting.
7. Slightly more than one-half of all camping days occur during summer.

The AORP pointed out that the camping season in Arizona is one of the longest in the West. While camping occurs somewhere in Arizona during all months of the year, it is inclined to be seasonal on a locational basis. In the cool north-

land, camping occurs mainly from May through November, with heaviest activity periods coinciding with high-temperature periods in the desert areas. In desert regions, camping is mainly a spring and fall activity, with very little participation during June through September, and relatively little in January and February.

It is judged that Arizona campers and camping conform generally to other ORRRC patterns for the West, except that most characteristics are extended or intensified. Arizona's participation rate probably exceeds that of other Western states significantly. There is more camping among older age groups, due partially to greater opportunity and the assumed better physical condition of elderly residents.

A destination camping trip most frequently involves other related activities in addition to camping. The volume of en route camping is directly related to Arizona's attractiveness to tourists making a multi-state sightseeing vacation trip. En route camping occurs primarily in the northern part of the state near US 66 and the major national parks and nationally famous scenic areas. However, en route camping also occurs in some volume along all routes leading to the state's metro areas, since these areas are also a major objective of the tourist's itinerary.

Winter season camping in desert regions is more likely to be an exclusive trip activity. Much fall season camping is adjunctive solely to hunting, while most resident summer camping occurs in the cooler mountain and plateau regions, and is most commonly a part of multi-purpose trip including fishing, boating, swimming, and just "being out-of-doors and away from people."

The close correlation of camping with hunting, fishing and other backcountry activities is probably responsible for the ready acceptance of, and often the preference for, relatively primitive camping facilities. This may be less related to desire to rough-it than to acceptance of the primitive as an essential part of the environment normal to the much-desired ability to "get away from it all." With these campers, the location is more important than sophisticated facilities — another factor in ready acceptance of primitive conditions.

Arizonans are extraordinarily well equipped for primitive camping, due, primarily, to a self-sufficiency bred by broad, unpeopled open space and the rugged mountain and desert conditions prevalent in Arizona. Arizona campers lean heavily toward camper vehicles and use ground tents chiefly as auxiliary shelter. Travel distances from metro areas to hunting and fishing places, and to lakes and cool summer areas, are such that the average weekend camping trip is likely to involve at least 100 miles of one-way travel. Evident willingness to travel considerable distance for a camping weekend suggests caution in the planning of extensive camping facilities in areas close to major population centers.

Supply. The AORP data indicates a statewide supply of 3,189 acres of campgrounds with 11,617 camp spaces. Despite the fact that the AORP definition of camping specifically excludes organized group camps, the AORP totals include group camps. In view of AORP's calculated camping needs and deficiencies, particularly those within the Phoenix and Tucson two-hour travel zones, it was considered essential to restudy inventory data in detail to identify and locate existing supply exclusive of group camps.

Re-evaluation of AORP inventories shows the existence of approximately 330 campgrounds and 5,575 camp spaces. In addition, there are approximately 3,957 dual-purpose picnicking/camping spaces listed. Inventories indicate that many of these campgrounds may be used for either tents or trailers.

Approximately 40% of the state's campgrounds and 37% of its camp spaces are provided by the U.S. Forest Service, of which about four-fifths are located in the northern part of the state. Approximately 10% of total campgrounds and 29% of total spaces are provided by the National Park Service, of which all but about one-seventh are in the north. About 12% of the campgrounds and 8% of the spaces are located in Indian reservations, virtually all in the northern portion of the state.

Table 3  
INVENTORY OF GROUP CAMPS IN ARIZONA

Agency	Location	No. Camps	No. Acres	No. Persons
<u>National Park Service</u>				
	Canyon de Chelly NM	1	1	75
	Grand Canyon NP	1	9	300
	Lake Mead NRA	3	12	65
	Navajo NM	1	1	?
		<u>6</u>	<u>23</u>	<u>440+</u>
<u>U.S. Forest Service</u>				
	Coconino NF	4	46	465
	Coronado NF	8	224	2,040
	Prescott NF	9	126	650
	Sitgreaves NF	2	41	92
	Tonto NF	2	38	1,500
		<u>25</u>	<u>475</u>	<u>4,747</u>
		<u>31</u>	<u>498</u>	<u>5,187+</u>

Source: A Plan for Outdoor Recreation in Arizona, Tables 4-III, 4-V, 4-IX & 4-XIX.

Since AORP inventory data indicates the location of U.S. Forest Service group camps only generally as to individual national forest, it is necessary to make certain general assumptions as to how many are located within the Phoenix and Tucson two-hour travel zones. It is apparent that of the eight group camps located in Coronado National Forest, those in Santa Cruz County and Santa Catalina Mountain sections of the forest are in the Tucson two-hour zone. It seems reasonable to assume that as many as one-third of the group camps are located in these two sections and account for approximately 75 acres and 640 persons of capacity. Many of the camps in Tonto National Forest are probably beyond two hours travel time from Phoenix. It is also likely that at least four of the Prescott National Forest camps are within the Phoenix two-hour zone.

Subtraction of the above-assumed acreage and spaces from stated supply figures 1/, for the two-hour travel zones yields a supply of 1,838 spaces and 324 acres in the Phoenix zone and 183 spaces and 97 acres in the Tucson zone.

Although California's 1960 Public Outdoor Recreation Plan 2/, indicates a strong demand for camping opportunity within 75 miles of place of residence and recommends provision of as many campsites as possible near urban centers, there is some reason to believe that such demands and needs may not apply to Arizona. In the main, two-hour travel zones around Phoenix and Tucson comprise desert areas which in summer are unattractive for camping.

The AORP included no inventory of camping facilities fitting the "en route" description. However, it is known that some commercial recreation enterprise campgrounds have been developed at key points on the interstate highway system, and that the U.S. Forest Service has a number of public facilities planned and/or underway. In accordance with the December 1968 policy statement of the American Association of State Highway Officials, camping is prohibited in state highway roadside rest areas, but stays of several hours, often extending through the night, are permitted.

Planning Standards. In calculating camping requirements to fulfill the need, the AORP used a standard of three persons per camp unit and four units per acre, with no distinction between tent and trailer camping.

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1/ A Plan for Outdoor Recreation in Arizona, Table 5-VII.

2/ California Public Outdoor Recreation Plan Committee, California Public Outdoor Recreation Plan, Part I, 1960.

Selection of the single, most appropriate, standard for statewide application is complicated by the several different types of camping to be accommodated and the several basic combinations of terrain, vegetative cover and general campground environment.

Current Needs and Deficiencies. The AORP assumed a statewide camping participation rate 5% higher than the NRS figure for the West. In the absence of participation data developed specifically for Arizona, it is judged that the Arizona rate is probably more like 10% to 20% higher than the NRS rate.

On a statewide basis, the AORP calculations produced a minor deficiency in spaces and an insignificant surplus in acreage. On the other hand, the stated space deficiency in the Phoenix two-hour travel zone was slightly greater than existing supply but was double the supply in terms of acreage. In the Tucson two-hour zone, the stated deficiency equalled 90% of existing spaces and 79% of existing acreage.

As mentioned heretofore, the AORP included group camp acreage and capacity in the supply figures used to calculate camping deficiencies. When group camps are excluded from the state supply in the manner previously described, deficiencies are shown to be substantially greater in the two-hour travel zones. Deficiencies in the Phoenix zone for spaces and acres are 1-1/2 times and 2-1/2 times greater respectively, while deficiencies in the Tucson zone are 7-1/2 times and 3 times greater respectively.

The AORP made no attempt to analyze camping needs and deficiencies on the basis of environmental preference or separation of en route and destination types, nor to analyze group camping needs and future requirements.

Conclusions and Recommendations. Several conclusions can be drawn from the re-evaluation of camping activity:

1. Future research should give particular attention to the correlation between camping and other recreation activities in order to reach sound conclusions on the type, environment, and extent of improvements which it is most appropriate to plan for.
2. Camping demand by metro area residents should be studied in detail to better determine the influence of travel time and environment on campground location.
3. The only practical purpose served by a single standard for campground planning is to facilitate analysis of supply and need on

a statewide basis. The greater need is for a set of flexible standards to guide development of the several kinds of camping facilities and environments prevalent in Arizona.

4. Overnight camping as differentiated from "day" camping, and excluding "en route" camping, is not considered an appropriate function of any but the most extensive municipal parks.
5. There is need for careful study of group camping as a separate activity. While major responsibility for development of adequate facilities may be assigned to private organizations, it would seem important to take advantage of the highly desirable camping environment on state, federal and Indian lands through ground leases by quasi-public and by private groups.
6. En route camping demand, supply and needs should be thoroughly researched and analyzed before final determinations are made concerning the proper relationship between public and private development in this category.

The following priority sequence is recommended within the category of camping:

1. Provision of new campgrounds, and expansion of existing facilities to increase capacity or efficiency of use where appropriate, within the Tucson two-hour travel zone, with emphasis on water-oriented facilities.
2. Same as above, within the Phoenix two-hour travel zone.
3. Same as above, within the Phoenix 2-4 hour travel zone.

In considering proposals of the kind defined above, it is recommended that first preference be given those which will provide rudimentary facilities for short stays; e.g., campsites which provide no electrical, water or sanitary hook-ups, and general campgrounds which do not include installation of water, electricity, and sanitary sewerage but are arranged for addition of such utilities at a later date.

## Hiking

Definition. The ORRRC definition limits hiking to "on trail with pack", thereby eliminating casual walking and nature study walks.

It is recommended that for use in Arizona the definition be expanded to include the ORRRC definition of mountain climbing. Mountain climbing would then be considered merely a more strenuous type of hiking.

Characteristics of Participation and Demand. The NRS found that participation is heaviest in the 12-to-17 year age group, and approximately three times greater among boys than girls; participation in the West is double the national rate, and residents of metropolitan areas hike more than others.

There is no evidence that participation in Arizona varies significantly from that found by NRS for the Western region. The AORP assumed a somewhat higher demand rate for Arizona; however, no supporting rationale was provided.

Two factors affect consideration of proposals to construct hiking trails and supporting facilities: (1) Hiking is probably most often a companion activity of nature study, sightseeing, exploring, rockhounding, etc., and (2) Criteria for pleasurable hiking and trail riding are closely similar; dual use of the same trail does not cause significant conflicts.

Current Supply, Needs and Deficiencies. The AORP data indicates a statewide supply of 850 miles and a statewide deficiency of 75 miles of hiking trails. It is assumed that these totals are limited to designated and maintained hiking trails which do not include horseback riding. However, there exist a tremendous number of undesignated, multiple-use trails, including logging roads, ranch roads and abandoned national forest trails, which afford high-quality hiking opportunity. Hence, the statewide supply of hiking trails is considered ample for all future needs, particularly since trail use need not be limited to hiking. On the other hand, deficiencies undoubtedly exist in some local areas, and voids do exist in trail systems which should be filled in to make existing trails more functional and satisfactory.

Planning Standards. The AORP employed a standard of 20 persons per trail mile. In view of existing conditions of use, supply and need, there is presently no reason to give special attention to the propriety of the planning standard.

Conclusions and Recommendations. Accepting the very specific ORRRC definition of hiking, it is concluded that the statewide supply of hiking trails is ample to accommodate demands within the foreseeable future. This does not

mean, however, that local deficiencies do not exist nor that there are not special opportunities to make existing trail systems more functional by filling in existing voids or constructing links between systems.

In general, it is recommended that hikers and riders be expected to share the same trails and trail systems. More specifically, it is recommended that those proposals for construction of trails exclusively for hiking which are supported by expressed local demand be considered on their individual merits, with particular attention to making existing trail systems more functional and enjoyable.

### Mountain Climbing

Mountain climbing is a highly specialized activity involving a very small number of people who are willing to travel long distances to undertake their special kind of challenge. Although ORRRC selected mountain climbing as one of its 23 standard activity categories, the NRS proved national participation rates to be extremely low. Although several of the rugged mountain ranges contain promontories offering some degree of challenge to the enthusiast, there is little known mountain climbing activity in Arizona except in the Grand Canyon area. In Arizona there are a number of activities unclassified by ORRRC which far exceed mountain climbing in popularity. It is recommended that no further planning consideration be given this particular activity.

### Hunting

Definition. The ORRRC defines hunting as the search for animals in order to kill them for recreation purposes.

Characteristics of Participation and Demand. The NRS found that:

1. Hunting is largely a male sport.
2. Participation rates vary indirectly with the size of the place of residence.
3. Non-whites participate heavily in the West.
4. Income level has little effect on participation rates.
5. Hunting enjoyment seems to be based as much on associated pleasures as on a successful kill.

Due to the broad distribution and accessibility of public lands, the wide variety of game, and the long open seasons, participation in Arizona is judged to be at least equivalent to that of the Western region. However, for reasons unexplained, the AORP assumed a participation rate well below the average for the Western states.

Due partly to the scarcity of commercial lodging and dining facilities close to Arizona's hunting areas, and partly to the natural affinity of hunters for all things out-of-doors, camping is probably a more common companion activity of hunting in Arizona than elsewhere in the nation.

In several respects, hunting is unique among recreation activities:

1. It is dependent upon a natural resource which is vulnerable to certain ecological and environmental changes created by man, such as urbanization, water impoundment, flood control measures, irrigation, timbering, mining, etc.
2. Public facilities are seldom required except under special circumstances.

Responsibility for maintenance of the wildlife resource is placed with a single, highly specialized and traditionally strong state agency which for the most part is funded independently of other state recreation activities. Fundamentally, the demand for hunting is directly related to: (1) the availability of game to hunt; and (2) the availability of places in which to hunt. While maintenance of an adequate quantity and quality of game birds and animals is clearly essential to hunting success, success in terms of kill is not essential to hunter enjoyment. The availability of challenging places to hunt is undoubtedly a powerful motivator. Thus, the extent and distribution of public lands open to hunting, as well as the broad variety of game and its wide distribution throughout Arizona, provide a high level of hunting opportunity and enjoyment which it seems possible to maintain through careful management.

Training of hunting dogs and participation in field trial events are recreation activities which are growing in popularity and are directly dependent upon the continuous presence of game species.

Private or club shooting preserves, which offer relatively expensive opportunity to hunt water fowl and certain species of upland gamebirds, are becoming available in some areas of the State. However, various factors indicate that such facilities will never accommodate more than a very small percentage of total hunting demand.

Studies of hunting in other states generally indicate that due to its dependence on a more-or-less fixed resource, per capita participation rates will probably decrease as urbanization and population growth continues. In view of the configuration of urbanization and the vast supply of public land in Arizona, this decline will probably occur at a slower rate than typical in the nation as a whole.

Characteristics of Supply. By regulation, virtually all Federal lands administered by the Forest Service, BLM and other federal landholding agencies, except the National Park and Fish and Wildlife Services, are open to public hunting. However, in some locations, access to federal land is blocked by private lands or by state lands which are closed to access by the lessee. Whereas the lessee of state-owned land may prevent and eject trespassers, hunting and access for hunting are not legally considered to be trespass. The proper management of public lands is essential to production of sufficient quantities of game to better satisfy future hunting demands. Since wildlife is truly a public resource, both traditionally and by law, it is imperative that public access to state as well as federal lands be protected and enforced.

Conclusions and Recommendations. Progressive and innovative wildlife production and management is essential to maintaining a reasonable level of hunter success in the future. It is assumed that the Arizona Game and Fish Department will continue to receive sufficient allocation of authority and funds to achieve this basic objective.

In order to maintain a satisfactory level of wildlife resources in support of hunting as an important recreation activity, and to provide a high-quality habitat through support of multiple-use principles, it is essential to maintain constant surveillance of all natural resource actions in the state.

With respect to assurance of public access to hunting lands, it is recommended that:

1. Wherever necessary to assure continued public access to important hunting areas, non-public lands be acquired or leased for access purposes.
2. Existing statutes be amended or expanded as necessary to assure access to state-owned lands for public hunting and to prevent the de facto prohibition of hunting access due to misinterpretation of the meaning of "trespass".
3. In all transfers of federal or state lands to private ownership, transfers of federal lands to the state, and land exchanges

between public agencies and private owners, special consideration be given the protection of right of public access to adjoining hunting lands, either through careful selection of such lands for transfer, deed restrictions, or suitable lease agreements.

4. Key wildlife habitat areas be acquired when timely.

## WINTER SPORTS

### Ice Skating, Sledding & Tobogganing, and Snow Skiing

Definitions. The standard ORRRC definitions include only non-competitive participation; amateur competition is categorized as playing outdoor games and sports.

As a matter of convenience in the direct application of demand and supply data to implementation actions in Arizona, these separate categories should be combined, and winter sports should be re-defined to include all amateur participation, competitive and other.

Characteristics of Participation and Demand. The NRS found that participation rates in winter sports are very low. The AORP assumed Western regional rates to be applicable to Arizona.

In Arizona, participation in winter sports is largely limited to people living in or close to areas receiving enough snowfall for the purpose. Only the plateau region and the highest elevations in the mountain and desert regions receive sufficient snowfall for skiing. Only a very small segment of the desert population, probably comprised entirely of recent migrants from colder climes, will drive long distances to ski. Residents of the plateau and mountain regions participate periodically to some extent in other winter sports based on the intermittent presence of snow and ice.

Supply. The AORP listed a total of 749 acres devoted to winter sports — a calculated surplus of 603 acres over actual need.

Planning Standards. Since, in Arizona, snow "is where you find it", no applicable use standards exist and it is doubtful whether they could be developed. In view of the insignificant participation, the matter is not worthy of effort.

Conclusions and Recommendations. It is concluded that the presence of adequate snow cover for skiing and sledding, and of consistent ice for skating, is so intermittent and undependable that public assumption of responsibility for providing winter sports facilities should be subject to very careful scrutiny of special local needs. It is therefore recommended that public funds be expended for additional winter sports facilities only where and when special local demand is proven to exist.

## PASSIVE RECREATION PURSUITS

### Picnicking

Definition. The ORRRC defines picnicking as an away-from-home activity with the primary purpose of preparing and/or eating a meal out-of-doors. This presumably includes eating lunch by individuals while on hunting, fishing, hiking, or trail riding trips, as well as the family meal or organizational affair more commonly recognized as a picnic.

Future survey and analysis of picnicking demand would be facilitated by modification of the standard ORRRC definition to exclude the incidental eating of lunches by individuals primarily engaged in such activities as fishing, hunting, hiking, and trail riding.

Characteristics of Participation and Demand. The NRS found that:

1. Participation is higher in large urban places than in smaller urban areas, but is also higher in rural areas.
2. Participation rates increase through the first three income groups, but are fairly stable throughout the rest of the income range.
3. In age groups 25 years and over, participation varies directly with educational attainment.
4. Health impairments do not limit participation.
5. Motivation to picnic is essentially social.
6. Picnicking is most closely associated with swimming, boating, waterskiing, camping, horseback riding, driving for pleasure and sightseeing, in that order.
7. Picnicking ranks second in order of nationwide preference.

The AORP assumed Arizona demand to be somewhat higher than the NRS found for the West, and calculated demand on the basis of average peak weekend day of a three-month summer peak season. While there is no question but that among residents of the mountain and plateau regions the peak picnicking season is summer, it is highly questionable whether this holds true for residents of the desert region. In desert areas, picnicking occurs throughout the year, with the lowest

level of activity probably occurring in December and January, and the most activity occurring during spring and fall months.

Most of the demand for picnicking, except that occurring on a multi-purpose recreation trip, is exerted in or close to the locality in which it is generated.

Due to the prevalence of scenic areas and vast public open lands, Arizonans are not as demanding of sophisticated picnicking facilities as is typical nationally. A great deal of picnicking occurs on a random, stop-where-you-like basis in areas having either no improvements or very rudimentary facilities.

Characteristics of Supply. AORP inventory data was very inconsistently structured and reported — to the extent that even reasonably accurate totals could not be determined. Nevertheless, the AORP somehow derived a statewide total of 1,480 acres and 5,723 picnic units.

Re-analysis of the same data disclosed an approximate total of 6,175 picnic units plus those existing in 57 other picnic areas wherein the number of units was not reported. Many of the 783 units provided on Indian reservations serve both picnicking and camping interchangeably. A typographical error in the AORP, which stated 3,190 national forest units as 1,390 units, was responsible for a large share of the discrepancy in total unit counts.

The total is increased to something greater than 9,770 units by addition of the 3,019 units in municipalities accounted for in AORCC's October 1967 Interim Report. Of this total, approximately 4,020, or 41% of all units, were located in urban areas, 636 were highway roadside rest areas, and 5,115 were located elsewhere. National forests accounted for 3,190 units (33% of the statewide total), of which 945 (30%) were situated in Coronado National Forest in southern Arizona.

Hence, it may be concluded that the AORP inventory of existing picnic facilities was grossly inaccurate, and that the stated total supply was close to 100% low. Any calculation of deficiencies based on such supply figures is worthless even as a guide to programming.

Available data provides no basis for qualitative judgment of existing facilities. It is very likely that due to poor quality or location many existing units possess only limited value in meeting demand. With respect to sophistication of development, picnic areas operated by municipalities, counties, the State Highway and Parks Departments, and the National Park Service are probably the most completely developed. Areas operated by the BLM and Indian reservations are probably relatively primitive, while those provided by the Forest Service range from relatively primitive to relatively sophisticated.

Planning Standards. In converting its assumed participation rate to facility needs, the AORP used a standard of four persons per unit, eight units per acre, and a daily turnover rate of 1.5. Substitution of mid-level standards for these very high standards reveals quite a different picture of Arizona's demand/supply relationships. While the standard of four persons per unit, eight units per acre, and 1.5 daily turnover rate is probably appropriate for rural area facilities, a more realistic standard for most urban area facilities would be six persons per unit, 12 units per acre, and 2.0 daily turnover.

Needs and Deficiencies. According to the AORP, there was a 1966 statewide need for 12,000 picnic units, of which 6,088 and 2,234 were needed in the Phoenix and Tucson two-hour travel zones respectively. Applying the AORP participation rate to corrected supply estimates and revised standards, the recalculated statewide need ranges between 9,000 and 9,500 picnic units (about one-fourth less than the AORP figures). Based on the suggested revised standards, existing urban area units will accommodate about 48,250 persons on a peak day, and existing rural area units will accommodate 34,500 persons. Thus, existing facilities will conceivably accommodate about 10,750 persons more than the 72,000 person peak day demand, and there exists a statewide surplus judged to be in the neighborhood of 750 units.

Conclusions and Recommendations. In view of the foregoing demand/supply relationship, it is recommended that major statewide expansion of picnic facilities be delayed, pending results of an intensive program of research and analysis designed to provide answers to the following questions:

1. What effects does local climate have on peak season of demand, on location of facilities in relation to place of residence, and on development and use of local facilities?
2. How far will people typically travel to picnic, and what effect does site environment have on travel distance?
3. To what extent is picnicking the primary objective of a day's outing, and with what other recreation activities is picnicking most closely associated? How does this association influence the most desirable location of facilities?
4. What is the need for picnic facilities in connection with tourism, interstate and other highway travel, and how do development criteria for tourist picnic facilities differ from those designed to meet resident demand?

5. How much need is there for facilities designed especially for large group and organizational picnicking, and where would such facilities best be located?

Until better answers are found to the foregoing questions, it is recommended that picnic area development be generally limited to projects of the kinds and in the locations most needed to overcome localized or special deficiencies, and to those designed to make existing facilities function more effectively and better satisfy user desires. The first aim of agencies now providing picnic facilities should be (1) to evaluate the quality and effectiveness of existing facilities, and to improve or replace substandard units, and (2) to establish a maximum, safe level of use which will protect against overuse and exorbitant maintenance costs.

### Walking for Pleasure

Definition. The ORRRC definition includes all walking other than "hiking" and "nature walks".

Characteristics of Participation and Demand. The NRS found that:

1. In annual participation rate, walking for pleasure is second only to driving for pleasure; however, it ranks fifth in order of preference.
2. Participation is distributed fairly evenly throughout the year, with the winter rate slightly greater than that for other seasons in all regions except the West.
3. Popularity of walking is due to the fact that it can be done without expense, at any time and for any length of time, facilities are always available and accessible, and it is good for one's health.
4. Females participate more than males, but the rate drops fast with increasing age. Males participate more heavily at young and old ages and less in middle ages.
5. Participation rates vary directly with the size of the place of residence.

Arizona's favorable climate probably combines with the higher ratio of retirees to produce greater participation in walking over a longer span of years than is typical elsewhere in the region and nation. In desert areas, walking is some-

what restricted by high temperatures in summer, and encouraged by warm, sunny winter weather.

Supply, Needs and Deficiencies. Appropriately, the AORP made no attempt to consider supply, needs or deficiencies.

Conclusion. No further consideration need be given this activity since no special facilities are required.

#### Recreation Travel (Driving for Pleasure and Sightseeing).

Definition. Driving for pleasure includes both driving and riding in automobiles; the key word in the definition is pleasure. The ORRRC classified sightseeing as a separate activity and defines it as "intentionally looking at something of interest", but excludes casual looking from the car window on a trip unless the route was selected specifically for scenery.

The ORRRC probably separated these two activities with the thought that characteristics of demand could thus be studied more effectively. However, the AORP as well as many other statewide outdoor recreation studies have combined the two activities in a single classification, and it is considered desirable to continue to do so in this and future recreation planning projects in Arizona.

Characteristics of Participation and Demand. With respect to driving for pleasure, the NRS found that:

1. Driving or riding ranks first in participation rate and third in preference.
2. Driving is a year-round activity spread fairly evenly among the seasons.
3. Auto ownership is an important conditioning factor; ownership varies directly with income and inversely with size of place of residence.
4. Available time and money are the most frequent deterrents; availability of facilities and skill required are only minimal barriers to participation.
5. The positive appeal of driving reinforces the location of other recreation facilities at reasonable distances from home.

With respect to sightseeing, the NRS found that:

1. The West has a heavier annual rate than other regions, and there is a slightly higher participation in summer than in other seasons.
2. Sightseeing increases consistently as income rises.
3. Sightseeing is among the most desired vacation and weekend trip activities, but has less appeal for a two or three-hour period of leisure.

Travel is fundamental to sightseeing, and while sightseeing is a normal and enjoyable subsidiary activity of hiking and trail riding, and to some extent of travel by plane, bus, and train, the principal mode of sightseeing travel is the automobile. Hence, in a state abundant in natural scenery and interesting places to see and visit, pleasure driving and sightseeing tend to be inseparable.

The single category of recreation travel embraces activities ranging from an hour or two of casual driving to several weeks of family vacation travel. While vacation travel in Arizona involves a large number of out-of-state tourists and winter visitors, Arizonans are great sightseers themselves, largely due to the fact that so many are fairly recent migrants from less scenic areas and there are so many new things to see and do within the state. The small number and distances between urban areas, which otherwise would impede travel, are also contributing factors. The vast abundance of natural and man-made attractions in Arizona, coupled with the ability of desert area residents to escape the summer heat by vacationing in the cool northlands, tends to encourage a high percentage of residents to vacation within the state.

Vacation travel occurs throughout the year, but is extremely heavy during summer months, particularly in northern Arizona. The many nationally significant scenic and man-made features in the state are the objectives of heavy destination travel as well as key points in the itineraries of longer, multi-state vacation trips. In addition to the several national parks, monuments and recreation areas, there are outstanding man-made attractions such as dams, reservoirs, observatories, and museums. Indian reservations and pageants attract heavy visitation from residents and non-residents alike.

Pleasure drivers and casual sightseers probably constitute the largest group numerically. While the predominant sightseeing group is the younger family with children, older adults and retirees are also important participants. Weekday and weekend sightseeing occurs throughout the year, the volume varying widely with

local weather conditions. The Sunday drive and weekend trip are highly favored by residents and winter visitors.

The AORP assumed separate participation rates for pleasure driving and sightseeing which are somewhat higher than the NRS found for the West. This assumption is considered appropriate for reasons outlined above.

Characteristics of Supply and Need. The AORP discussed the need for preserving and enhancing Arizona's natural scenery and man-made attractions for long-term public enjoyment. It also attempted to quantify needs in terms of miles of scenic road, based on an assumed standard of 0.05 miles of scenic road per 2.6 participation days. Inasmuch as the demand for pleasure driving and sightseeing does not lend itself to quantitative measurement, the AORP attempt is considered to have been merely an academic exercise.

The highway plays a strategic role in displaying and interpreting the state's natural, historic and cultural features. Nearly all of Arizona's primary and secondary highways are scenic, and this omnipresent scenery constitutes a statewide economic as well as natural resource which must be protected. Excessive commercialism and increasing competition for land suggest that the preservation of highway scenery will require intensive and continuing effort, particularly in areas within day-use range of population centers.

Arizona also has many splendid opportunities to supplement highway scenery by developing new parkways and reconstructing existing substandard roads of high scenic quality. These opportunities, which exist both within and near the metropolitan areas as well as in more remote sections of the state, can be easily lost through continued failure to exert proper land use controls.

The more remote but highly perishable scenic resources — wilderness areas and desert landscapes — are under increasing pressures for utilization for other purposes. Representative examples of natural landscape (tree-lined bottoms) and unique ecological communities (Guadalupe Canyon on the New Mexico border and Sycamore Canyon near the Mexican border) are not receiving adequate protection.

Historical areas, artifacts and other education and cultural resources are abundant and widely distributed throughout the state. Many of these areas and resources are in jeopardy due to population growth, increasing tourism, and lack of identification and protection. Also, the very abundance of such resources has contributed to public apathy toward their preservation.

Conclusions and Recommendations. Several kinds of action are required to preserve, enhance, and extend Arizona's recreation opportunities related to

pleasure driving and sightseeing. These will involve increased staffing of existing agencies, formalized interagency coordination, and new, or strengthened, State legislation. These actions include:

1. Development of more stringent regulations with respect to controlling billboards, junkyards, and other eyesores, plus a strengthening of local land use control enabling legislation.
2. Initiation of detailed studies at all governmental levels identifying, evaluating, and recommending scenic, man-made, historic and other features which merit acquisition, preservation, and/or development for their long-term scenic and sightseeing value.
3. Development of criteria, standards, plans, guidelines, and policies for scenic roads and parkways, and supporting facilities.
4. Establishment of state and metro area quality control boards to evaluate ecological and esthetic impacts of proposed highway construction programs in proximity to identified recreational value areas. This would represent application of requirements similar to those of the Bureau of Public Roads to all non-Federally-assisted highways.
5. In general, strengthen the coordination between recreation agencies and road building agencies.
6. Establish enforceable regulations which will assure protection of scenic corridors and preservation of scenic, historic and other features, and provide for the effective enforcement thereof.

#### Nature Study (Nature Walks)

Definition. According to the ORRRC, nature walks have the purpose of observing birds, animals, plants, rocks, minerals, etc., the collection of specimens, and the photography of natural objects. It is assumed that this activity generally embraces all types of outdoor study of natural, historical and archeological objects and phenomena.

Characteristics of Demand, Supply and Need. It seems apparent that when the ORRRC named this activity it really meant nature study rather than nature

walks, and that by using the word walks it inadvertently implied that demand could be expressed quantitatively in terms of miles of footpaths developed specifically for nature study. In any event, the AORP and other BOR-assisted statewide recreation plans have attempted to measure demand in such quantitative terms. The fact is, nature study is very often a very informal, unorganized and casual activity which does not lend itself to quantitative measurement any more than do pleasure driving and sightseeing.

Whereas some of this demand may be expressed in terms of man-made trails, this activity also embraces the use of outdoor study and interpretive centers and a wide range of outdoor nature displays including natural history museums, cactus gardens, arboretums, geological exhibits, mineral and rock exhibits, etc. The AORP indicated that there were no nature walks in the state. Evidently the Phoenix and Tucson Zoos, Arizona-Sonora Desert Museum, Boyce Thompson Southwest Arboretum, and various desert botanical gardens, among other areas, were not considered as providing nature walks.

A third and perhaps the most important component of this activity in Arizona involves completely informal, unorganized "wandering" in search of specimens and natural, historic and archeological objects.

The NRS found that:

1. The participation rate is relatively low, as is the preference rating.
2. Participation is relatively equal with respect to region, and its relation to season varies directly with the climate.
3. It is mainly a youthful activity with the 12 to 17 year age group accounting for one-third of all participation; however, adults over 45 years are also frequent participants.
4. Size of place of residence and income class have little effect on participation rates.

The AORP assumed a slightly higher participation rate in Arizona than the NRS found for the West. The actual Arizona rate may be even higher considering the vast abundance and range of natural objects and phenomena readily accessible to the public and the enthusiasm for this activity displayed by persons of retirement age.

Conclusions and Recommendations. It is concluded that while nature study may be relatively low on the participation scale, it is nevertheless one of the

essential elements of both youth and adult education, and should be encouraged, rather than merely satisfied, through provision of such facilities as it may require. It is recommended that proposals for constructing nature study centers, natural history museums, zoos, arboretums, and outdoor geological, mineral and rock exhibits, and supporting facilities such as trails, teaching stations, etc., be considered on their individual merits related to expressed local demand and strength of organizational sponsorship.

### Attending Outdoor Sports Events

Definition. This activity embraces attendance as a spectator, but not as a participant or official, at any outdoor sports event.

Characteristics of Demand, Supply and Need. The NRS found that this activity:

1. Is primarily a summer and fall activity, with the winter rate about one-third of the peak summer rate.
2. Usually involves two to three hours, occasionally five or six.
3. Has major appeal to middle and lower income groups.
4. Attendance usually requires payment of admission fee, but these are usually scaled to be within reach of lower income groups.
5. Participation is deterred, in order of importance, by (a) lack of sufficient time during period when desired events take place, (b) lack of money, and (c) unavailability of events.

Outdoor sports events fall generally into several distinct groups, each of which tend to attract spectators having different interests and characteristics:

1. Elementary and high school age athletic events.
2. College and university athletic events; community and semi-pro events.
3. Sports organization events, such as regattas, rifle meets, etc.
4. Professional sports events, usually regularly scheduled.

In Arizona, the availability of events to attend has probably been the primary factor influencing participation rates. During the 1960's there has been a rapid and substantial increase in the frequency and range of major spectator events, particularly in professional sports; e.g., dog racing, horse racing, sailing regattas, speedboat racing, auto racing, minor league baseball, and major league baseball spring training. While many of these are night events popular with spectators unable to attend during the day, such daytime events as horse races and spring training baseball are heavily attended by retirees, long-stay visitors and tourists who have ample leisure time.

Hence, attendance at outdoor sports events is increasing in direct relation to growth of the urban population and increased availability of a broad range of events. The Arizona participation rate is probably higher than NRS found for the West due to more retirees in the urban population and to seasonal influx of winter visitors and tourists. Spring and fall participation probably exceeds that in summer months, and the winter rate is higher than for the nation due to mild climate and prevalence of long-stay visitors.

In the school-oriented and community playfield sort of amateur events, spectator attendance is both directly and indirectly related to provision of adequate opportunity for participation in outdoor games and sports, as discussed previously under that activity category.

There are no known standards by which to measure demand, supply or need in this activity.

Recommendations. It is recommended that provision of spectator facilities by the public be limited to construction of seating, parking and comfort stations when and to the extent justified in connection with provision of space and facilities for playing outdoor games and sports. In general, higher priority should be given those facilities which will, (a) receive the most consistent use, and (b) serve a number of different uses.

#### Attending Outdoor Concerts, Drama, Etc.

Definition. The ORRRC definition includes outdoor musical, dramatic, artistic and similar non-sporting events, but excludes attendance of drive-in movies. Attendance at Indian pageants and ceremonials clearly falls within this category.

Characteristics of Demand, Supply and Need. The NRS found that:

1. Participation rates are very low and participation is very infrequent in all regions. In general, participation is directly related to proximity and frequency of opportunity.

2. Participation is highest in the 12-24 year age groups, and declines thereafter; beyond age 24, participation increases with educational attainment and is highest among professional persons; participation is lowest among rural residents.

The AORP assumed a participation rate slightly higher than the NRS found for the West. No further consideration was given the activity aside from comment that in view of the normal practice of charging admission fees, the private sector could be expected to provide adequate facilities "when an opportunity for profit is present".

The scarcity of existing facilities, together with the assumed low demand, appears to indicate a general lack of statewide need for outdoor theater facilities. However, consideration of these factors alone may lead to false conclusions. Demand is clearly a product of educational attainment and interest in cultural matters. While citizen interests have always been more action-oriented in Arizona and the West, and such demand can be expected to continue strong, this pattern is gradually changing with increasing urbanization and immigration of people from more culture-oriented metropolitan areas of the Midwest and East.

Large audiences are presently drawn to special outdoor programs, and the motivation for regular programs is undoubtedly depressed by inadequacy of facilities. Consequently, pressing needs may exist and will probably develop on a localized basis as the relative sophistication of the local population increases. Where such conditions exist, local recreation agencies and quasi-public organizations have a prime opportunity to facilitate interest in the arts.

Contrary to the opinion expressed in the AORP, this activity is essentially public or quasi-public (non-profit) in nature, and the private sector cannot be expected to contribute significantly to provision of facilities.

Recommendations. On a statewide basis, this should be considered a low-priority activity with respect to provision of specialized facilities; however, in some instances, local demand may prove sufficient to justify expansion of existing facilities or construction of new, multi-purpose facilities. Anticipated frequency and regularity of program presentation should be considered the prime factor in judging need. Unless events can be presented on a regular and frequent basis, the need for facilities may be best satisfied by use of existing community facilities.

## SPECIAL OUTDOOR RECREATION NEEDS

### Recreation for the Handicapped

Definition. The Bureau of Outdoor Recreation defines handicapped persons as adults and children who suffer from one or more of a variety of physical and emotional disabilities. <sup>1/</sup> While this definition covers elderly persons whose disabilities are the products of advanced age, it may often be desirable to treat the aged separately. Both types benefit from recreation in association with able persons of similar age.

Characteristics of Demand, Supply and Need. The AORP failed to consider the outdoor recreation needs of the handicapped. It contains no statistics regarding the numbers or other characteristics of disabled persons in Arizona, nor an inventory of existing facilities for the disabled.

The special recreation problem has received little or no attention by public recreation agencies in Arizona. It is assumed that the various public, quasi-public and private institutions for the handicapped provide some amount of outdoor recreation for both institutionalized and out-patient persons. However, it is extremely doubtful whether the total of all such recreation programs and facilities presently satisfy more than a very minor proportion of the demand.

While it is clearly the responsibility of the public to assure adequate outdoor recreation space and facilities for the handicapped, it is less clear how this responsibility may be best discharged. Non-profit organizations concerned with the handicapped are best informed in all aspects of this special problem and should be expected to assist public agencies in planning and provision of adequate facilities. It is essential that all organizations, whether public, quasi-public or private, collaborate as closely as possible in a common effort to serve the handicapped. The responsibility for sponsorship, financing, and operation of recreation space and facilities should be shared by these several groups. Planning, coordination and administration should be the responsibility of the State, assisted by the U.S. Department of Health, Education and Welfare.

The following observations and ideas may serve to assist the initiation of a full-scale planning effort toward adequate outdoor recreation for the handicapped:

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<sup>1/</sup> Bureau of Outdoor Recreation, Outdoor Recreation Planning for the Handicapped, April 1967.

1. Part of the handicapped segment of the population is institutionalized and part is independently housed, mostly at home. The latter group is widely scattered, requiring a completely different approach to organization and distribution of services. Any general distribution of facilities on a geographic basis would probably be inefficient and excessively costly in relation to benefits derived. Therefore, it might be most appropriate initially to plan for centralization of fairly sophisticated facilities on a regional basis.
2. The several special foundation and other quasi-public organizations could join with the appropriate state and federal agencies in developing a system of regional recreation centers which would supplement and extend institutional facilities.
3. It seems doubtful whether any but the least handicapped could be well served through modification of standard facilities in existing or proposed recreation areas. However, in view of the fact that disabled persons benefit greatly from recreational association with the non-handicapped, the possibilities of such modifications should be thoroughly studied in future system planning.
4. It might be most efficient and least costly to organize, construct and operate facilities for the handicapped on a combined indoor-outdoor regional center basis. A community recreation center for the handicapped, including both indoor and outdoor recreation, might be constructed and operated on a cooperative basis similar to that of other types of community service centers.
5. It is evident that from the very specialized nature of certain handicaps, and the extensive knowledge of the limitations and needs of special types of disabled persons possessed by certain quasi-public and private organizations, such organizations should provide much of the technical guidance and motivation required in this kind of recreation plan and program.

Recommendations. A thorough study of the special characteristics and needs of the handicapped, including inventory and evaluation of existing special outdoor recreation facilities, is an essential first step in solution of the problem. It is recommended that the AORCC, in cooperation with the State Department of Health and with the assistance of the Department of Health, Education and Welfare and the various non-profit organizations concerned

with the handicapped, take responsibility for conduct of such a study and for preparation of a comprehensive Statewide Outdoor Recreation Plan for the Handicapped.

#### Recreation for the Elderly

The AORP gave no consideration to the demand and need of elderly persons for outdoor recreation. Special consideration in both public and private recreation projects should be given to persons whose age makes it more difficult to participate in the outdoor recreational activities provided for the majority of the population. All elderly people can be better served through minor modification of existing and future facilities, and every neighborhood, district, community and city park should provide space, facilities and activities suitable for their use and enjoyment.

Built-in safety features, convenient location in relation to place of residence, ease of access and attractive surroundings are major considerations in providing for the needs of elderly people. In areas having unusual concentrations of elderly people, special recreation areas are customarily provided by private or non-profit organizations. This tends to relieve, but does not substitute for, public responsibility for recreation space and facilities suitable for this age group.

SUMMARY OF RECOMMENDED ACTION PRIORITIES WITHIN ACTIVITY CATEGORIES

Activity Category	Recommended Priority Sequence			
	1st	2nd	3rd	4th
<b>ACTIVE RECREATION</b>				
Playing Outdoor Games & Sports	Urban - Acq and/or Dev - Neighborhood playgrounds, with preference to joint city-school facilities.	Urban - Acq and/or Dev district- level or community playfields.	Citywide community-level playfields.	Special sports facilities.
	All with preference to facilities serving existing low-income and high-density areas.			
Young Children's Outdoor Play	Urban - Acq and/or Dev - Neighborhood playgrounds and/or mini-parks in existing high-density areas, with preference to low-income areas; immediate acquisition of park-playground sites in urbanized areas where need is critical.	Urban - Acq and/or Dev - Complete neighborhood park-playgrounds in areas undergoing urbanization, with preference to joint city/school facilities.	Urban - Acq - Advance acquisition of park-playground sites in areas where urbanization is imminent.	-----
Bicycling	Urban - Acq and/or Dev - Multiple-use paths within & between multi-purpose recreation areas.	-----	-----	-----
Motorbiking	Urban - Acq and Dev - First proposal (experimental) to develop special facilities.	-----	-----	-----
Horse Activities	Statewide - Acq and/or Dev - Extend existing & rehabilitate abandoned trails as necessary to improve systems; acquire R-O-W's through negotiation; assure safe highway crossings.  Urban & Metro - Acq & Dev - Construct arenas in areas of high demand; encourage & assist quasi-public & private arena facilities.	-----	-----	-----
<b>WATER SPORTS</b>				
Swimming	Urban - Acq and/or Dev - District or community-level pools serving several neighborhoods, with preference to low-income areas.	Metro 2-Hr Zones - Dev - Improve & expand existing beaches; construct new beaches where required.	Urban - Acq and/or Dev - Neighborhood swimming & wading pools when part of neighborhood playgrounds.	Urban - Acq and/or Dev - Community/level swim centers for competition & training.  Rural - Dev - Improve & expand existing beaches; construct new beaches where req'd.
Boating	Metro 2-Hr Zones - Dev & Dev & Admin - Improve use efficiency of existing waters, including zoning, access & launching.	Tucson 2-Hr Zone - Acq & Dev - Develop new lakes accommodating public recreation uses.	Rural - Dev - Improve access and/or launching at existing waters where req'd for optimum use.	-----
Water Skiing	-----	Metro 2-Hr Zones - Dev & Admin - Improve & expand launching facilities at existing waters; zone lake surfaces for safe optimum multiple-use.	-----	-----
Fishing	Tucson 2-Hr Zone - Acq & Dev - Develop new lakes accommodating public recreation uses.	Rural - Dev - Construct additional supporting facilities & improve launching at existing lakes.	Rural - Dev - Improve access to streams where req'd.	-----
<b>BACKCOUNTRY</b>				
Recreation Camping	Tucson 2-Hr Zone - Acq & Dev - Expand existing facilities; construct new campgrounds where req'd, with preference to water-oriented facilities.	Phoenix 2-Hr Zone - Acq & Dev - Expand existing facilities; construct new campgrounds where req'd.	Phoenix 4-Hr Zone - Acq & Dev - Expand existing facilities; construct new campgrounds where req'd, with preference to water-oriented facilities.	-----
Hiking & Mountain Climbing	Statewide - Acq & Dev - Improve & extend existing trails to improve systems.	-----	-----	-----
Hunting	Statewide - Acq & Admin - Assure permanent public access to all public lands preserve public right of access in all public land transfers; acquisition of key wildlife habitat areas as timely.			
<b>WINTER SPORTS</b>				
	Statewide - Acq & Dev - Any public investment should be contingent upon proof of strong local demand which cannot be met by private enterprise.			
<b>PASSIVE RECREATION</b>				
Picnicking	Statewide - Dev - Improve standard existing units and areas.	Metro - Acq & Dev - Construct facilities to overcome high local deficiencies where proven.	-----	-----
	In general, delay any major expansion of facilities and limit new development to basic facilities which are part of multi-purpose areas.			
Walking for Pleasure	Statewide - Acq or Dev - No acquisition or development recommended except as incidental to other recreation area proposals.			
Recreation Travel	Statewide - Admin - Develop & enforce stringent regulations to preserve scenic resources; develop criteria, standards, plans & policies for scenic roads & parkways; establish quality review boards to assure preservation of scenery & ecology in highway construction; strengthen coordination among recreation and road-building agencies.			
Attending Outdoor Urban Sports Events	Urban-Dev-Facilities for consistent spectator use in public sponsored outdoor games & sports.	-----	-----	-----
Attending Outdoor Concerts, Dramas, Etc.	Urban - Dev - Adaptation of existing community facilities.	Urban - Dev - Development of facilities which will receive sustained use.	-----	-----

## C. PUBLIC AND PRIVATE RESPONSIBILITIES

Suppliers of outdoor recreation opportunities in Arizona include federal and state agencies, county and municipal commissions and departments, school districts, quasi-public organizations, and private profit and non-profit groups. One of the AORCC's objectives in striving to achieve its statewide outdoor recreation goals is to place responsibility for provision of adequate outdoor recreation space, facilities and programs at the lowest practicable level of government or with quasi-public or private organizations, as may be most appropriate. Analysis of the current functions of recreation-related agencies is basic to proper division of responsibility and assignment of both short-term and long-term roles in outdoor recreation.

### FEDERAL AGENCIES

Due to both the timing of statehood and the State's exceptional scenic resources, some 44.6% of Arizona's land area is owned by the Federal government. An additional 27% is contained in Indian reservations, wherein the land is actually owned by the Indians with the United States serving as trustee. Indian lands may conceivably be urbanized, industrialized and otherwise developed according to the needs and desires of the Indians, popular misconceptions to the contrary notwithstanding.

Assessment of the varying roles of federal agencies with respect to outdoor recreation is particularly timely in view of the present on-going deliberations of the Public Land Law Review Commission, which was established by Congress in 1964 to:

1. Study all existing statutes and regulations governing public lands;
2. Review policies and practices of the Federal agencies administering these lands;
3. Determine present and future demands on public lands; and
4. Recommend changes in laws and administrative practices which will enable the general public to realize maximum benefit from public lands.

The PLLR Commission's recommendations are due to be reported to the President and Congress by June 30, 1970. Laws relating to public lands date back to beyond the Civil War, and the Commission was established to develop guidelines for resolution of conflicting policy objectives and administrative procedures contained in the present body of law. In PL 88-606, Congress indicated that it is "the policy of Congress that the Public Lands of the United States shall be (a) retained and managed, or (b) disposed of, all in a manner to provide the maxi-

mum benefit for the general public." <sup>1/</sup> Hence, it is timely to develop a sound public land policy and program with respect to the long-range outdoor recreation needs of the State.

#### Bureau of Land Management (BLM)

The BLM is responsible for the conservation, management, and development of 15,000,000 acres of national reserve lands in Arizona, the largest federal land responsibility in the state exclusive of Indian reservations.

Since enactment of the Classification and Multiple Use Act in 1964, the BLM has followed the principles of multiple use with respect to grazing, mining, forestry, wildlife, watershed management, and recreation. This policy has proven extremely beneficial to citizens of the state and nation. As part of its process of inventory and analysis, the agency has identified some 5,600,000 acres of land as having recreation potential, and is proceeding to withdraw the highest value recreation lands from incompatible types of use.

The BLM, in response to growing public demand to make full recreational use of the public domain, has assumed an increasingly important role in providing facilities for such use. Campgrounds, trails, access roads and sanitary facilities represent the primary types of BLM recreation projects. These improvements are mainly intended to accommodate such backcountry types of recreation activities as hunting, fishing, rockhounding, sightseeing, nature photography and hiking. In addition, BLM has recently assumed the functions of the Lower Colorado River Land Use Office, a function formerly administered directly by the Secretary of the Interior. This responsibility involves development of the important recreation potentials of BLM lands along the 200-mile stretch of the Colorado River between Davis Dam and the Mexican border.

Of special significance to outdoor recreation are provisions of the Recreation and Public Purposes Act, which permits leasing or sale of BLM lands for public recreation purposes to the state and its political subdivisions, or to non-profit associations. Under provisions of the R&PP Act, Maricopa County has leased 70,000 acres of land for the purpose of developing a system of regional parks in the Phoenix metropolitan area. The Act has one major deficiency in that purchase acquisition by entities other than the state are limited to a maximum of 640 acres annually. This limitation is unrealistic and inappropriate considering the scale and character of recreation needs, as evidenced by the very long period required for Maricopa County to acquire all of the land it presently has under lease.

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<sup>1/</sup> Excluded from this definition are Indian reservations and National Parks established from acquired lands.

The main body of BLM lands are located in the less populous counties, particularly in the west one-half of the State. BLM lands represent a major resource for county park development in those counties wherein the recreation function has so far proven slow in developing. In addition, the law permits various non-profit outdoor recreation organizations to utilize this means for expanding recreational opportunities in the State.

### U.S. Forest Service

This Department of Agriculture agency administers more than 11.4 million acres in seven national forests located in the central and southeastern parts of Arizona. Two of these national forests, Apache and Coronado, extend into New Mexico. In accordance with the National Forest Multiple Use Act of 1960, the Forest Service's management policy embraces multiple use, including timbering, grazing, watershed protection, wildlife enhancement and outdoor recreation.

National forest lands in Arizona support a wide range of recreation facilities operated by the Forest Service and its concessionaires to serve residents and tourists. These facilities include ski areas, improved hiking and riding trails, campgrounds, swimming beaches, boat landings, vista points and picnic areas. Several important wilderness areas are also located within the State's national forests. In general, Forest Service lands and facilities are close to the State's population centers, with Tonto National Forest less than one hour's drive from Phoenix and Coronado National Forest equally close to Tucson.

While developed recreational sites occupy only 2,276 acres of total forest land, all of the lands are essentially open and available for hunting, fishing, and other backcountry recreation. The Forest Service has prepared long-range recreation development plans through the year 2000, partially in response to the over-use of existing facilities.

Arizona's seven national forests are administered by the Regional Forester in Albuquerque, New Mexico, through local forest supervisors. This organizational arrangement has been the source of occasional problems in the coordination of federal, state and local policies regarding development and maintenance of recreation sites.

National forest visitations increased from approximately 5,000,000 in 1960 to more than 7,725,800 in 1964. Tonto National Forest east of Phoenix attracted 2.4 million visitors, Coconino National Forest (Flagstaff area) was visited by 1.9 million persons, and Coronado National Forest in southeastern Arizona counted 1.5 million visitors. Continuing expansion of parking, picnicking, camping, and marina facilities is needed to keep pace with both non-resident and resident demands in Arizona.

## National Park Service

The presence of some 21 National Park Service areas in Arizona occupying 1.4 million acres, more than in any other state, attests to the wealth of scenic and historic features in the State. Attendance at the 16 national monuments, two national parks, two national recreation areas, and one national memorial increased from 5.4 million persons in 1960 to 8.2 million in 1965.

The long-established purpose of the National Park Service is to preserve the country's heritage in historic, scientific, scenic and recreation resources for the enjoyment and inspiration of its citizens. Due to adherence to rigid criteria, NPS areas embrace only those areas and features which have national significance. In addition to proposed expansion of picnicking, camping, and boating facilities in existing National Park Service areas, the following Arizona sites have been identified by the NPS as being eligible for registration as National Historic and Natural Landmarks: <sup>1/</sup>

### Historic Landmarks

Awatovi, Navajo County; Hopi Reservation.

Casa Malpais, Apache County; 2 miles north of Springerville.

Desert Laboratory, Pima County; on Tumamoc Hill just west of Tucson.

\*Double Adobe, Cochise County; 12 miles northwest of Douglas on west bank of Whitewater Creek and 250 yards west of bridge on Double Adobe - Lowell Road.

Gatlin Site, Maricopa County; 3 miles north of Gila Bend.

Hohokam - Pima Irrigation Sites, Maricopa and Pinal Counties;

Park of the Four Waters, Phoenix.

\*Jerome Historic District, Yavapai County; Jerome.

\*Kinishba Ruins, Gila County; Fort Apache Reservation, 15 miles west of Whiteriver on Ariz. 73 and secondary road.

\*Lehner Mammoth - Kill Site, Cochise County; Lehner Ranch, 10 miles west of Bisbee, 1.5 miles south of Hereford, and .4 mile west of San Pedro River.

\*Lowell Observatory, Coconino County; Mars Hill, 1 mile west of Flagstaff.

\*Merriam (C. Hart) Base Camp Site, Coconino County; 20 miles northwest of Flagstaff at Little Springs private enclave in Coconino National Forest.

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<sup>1/</sup> National Parks and Landmarks, National Park Service, January 2, 1968 and addendum, January 20, 1969.

\* Participating site has either received an NPS plaque or filed papers preparatory to receiving a plaque.

Old Oraibi, Navajo County; Hopi Reservation, 31 miles west of Keams Canyon on Ariz. 264.

Point of Pines, Graham County; San Carlos Reservation, 40 miles north of Safford.

Pueblo Grande Ruin, Maricopa County; Pueblo Grande City Park, Phoenix.

\*Roosevelt Dam, Maricopa and Gila Counties; on Salt River, 80 miles northeast of Phoenix on Ariz. 88.

San Bernardino Ranch, Cochise County; 17 miles east of Douglas.

\*San Xavier del Bac Mission, Pima County; west of U.S. 89, 9 miles south of Tucson.

Sierra Bonita Ranch, Graham County; southwest of Bonita.

\*Snaketown, Pinal County; Gila River Reservation, 30 miles south of Phoenix and northwest of Sacaton.

\*Tombstone Historic District, Cochise County; Tombstone.

\*Ventana Cave, Pima County; Papago Reservation, 11 miles west of Santa Rosa.

\*Winona Site, Coconino County; Coconino National Forest, 5 miles northeast of Winona on U.S. 66.

\*Yuma Crossing, between Yuma County, Arizona, and Imperial County, California.

#### Natural Landmarks

Barringer Meteor Crater, Coconino County; 15 miles west of Winslow.

Hualapai Valley Joshua Trees, Mohave County; 45 miles north of Kingman.

\*Ramsey Canyon, Cochise County; 7 miles south of Sierra Vista.

Willcox Playa, Cochise County; 4 miles south of Willcox.

Altogether, 23 historic landmarks and four natural landmarks are listed above. The foregoing areas are not administered by the National Park Service; however, their designation accompanied by placement of an identifying plaque serves the worthwhile purpose of recognizing, and hopefully preserving, significant historical and national landmarks.

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\*Participating site has either received an NPS plaque or filed papers preparatory to receiving a plaque.

### Bureau of Reclamation

This agency's first project was the Salt River Project, authorized in 1903. This system of dams and lakes east of Phoenix represents a pioneer effort in multi-purpose conservation, including as it did consideration of flood control, water storage and conservation for irrigation, municipal and industrial uses, hydro-electric power generation, fish and wildlife preservation, and recreation.

The Bureau of Reclamation is not a recreation agency, per se, preferring to transfer those of its project areas containing recreational values to appropriate federal, state, or local governments. Only as a last resort will the agency manage the recreation resource itself. Nevertheless, conservation activities of this Department of the Interior bureau have an obviously important bearing on the recreational resources of the State. The recently enacted Central Arizona Project legislation will create new water-oriented recreation opportunities in the State, including development of new reservoirs close to Phoenix and Tucson.

Unfortunately, it is in the nature of dam construction to both create and destroy. A lake is created at the expense of a river, and it is at this basic point where issues are joined with respect to proposed reclamation ventures. The AOR Plan reflects the AORCC's opposition to development of the proposed Marble Canyon Dam in order to preserve a five-to-six day "run" on the Colorado River. In future reclamation proposals, a careful case-by-case consideration of proposed benefits versus existing recreation values is required.

### U.S. Fish and Wildlife Service

Landholdings of the Bureau of Sports Fisheries and Wildlife of the Fish and Wildlife Service in Arizona comprise some 1.4 million acres concentrated along the Colorado River and in southwestern Arizona, and include two game ranges (operated in cooperation with the BLM and Game & Fish Department), two wildlife refuges, and three national fish hatcheries.

The BSF & W has responsibility for managing federal fish hatcheries and wildlife refuges; preserving and protecting migratory birds; controlling rodents and predators; coordinating with state agencies in the administration of the Dingell-Johnson (fishing resources) and Pittman-Robertson (wildlife resources) Acts; providing technical assistance to other Federal agencies, the State, and Indian tribes; conducting land and water development project studies; and conducting research in the field of fish and game preservation.

The Dingell-Johnson Act of 1950 provides a 3/4 - 1/4 Federal-State cost-sharing program in partnership with the Game and Fish Department to enhance fishing opportunities in Arizona. This program includes acquisition of land, creation of new waters, determining fish harvests, increasing fish productivity of existing

lakes and streams, and maintenance of Dingell-Johnson improvements. Each state's allocation is based on a formula relating to land and water area and number of fishing licenses sold.

The Pittman-Robertson Act of 1937 also involves a 3/4 - 1/4 cost-sharing arrangement between Federal and State governments and participation by the State Game and Fish Department. Money is allocated among the states based upon the ratio of land area to hunting licenses sold, and these funds may be used for stocking and improvement of game bird or mammal habitat, wildlife management research studies, upkeep and repair of structural improvements acquired or constructed under the Act, and management of all wild birds and mammals.

In addition to the Bureau of Sports Fisheries and Wildlife, the Fish and Wildlife Service also is active in the State through a Bureau of Commercial Fisheries pilot project involving the Game and Fish Department and Arizona State University. The present scope of the project entails assessing the commercial feasibilities of catching and marketing "rough fish" (i.e., carp and buffalo fish) from the Verde and Salt River lakes. Success of this effort would provide a strong parallel benefit to sports fishermen by relieving competition with the game fish population.

#### Bureau of Indian Affairs

Arizona contains more than one-half of all Indian lands remaining in tribal ownership in the country. In 1960, some 16% of the total Indian population of the United States resided in Arizona, the largest concentration in the nation.

The BIA, while not essentially a landowning agency, is responsible for a wide range of activities designed to conserve and utilize natural resources on Indian lands. Tribal lands are held in trust by the United States, but may be developed for a wide range of uses designed to strengthen the reservation's human resources.

In terms of outdoor recreation, Indian tribes are just beginning to tap the potential of their diverse and dramatic land and water resources. The Economic Development Act is providing a vehicle whereby tourist development projects can be funded jointly by tribal councils and the Federal government. The BIA, working in conjunction with such recently established entities as the Indian Development District of Arizona, has played a catalytic role in recreational resource development.

#### U.S. Army Corps of Engineers

This agency of the Department of the Army, authorized by the Continental Congress in 1779, is probably the oldest and largest construction organization in the nation. Corps of Engineers projects in Arizona relate primarily to construction of flood control facilities and related hydroelectric, water conservation, fish and wildlife, and

recreational improvements. The Corps will construct basic improvements of recreation areas but attempts to secure sponsorship of more elaborate developments from appropriate Federal, state, or local agencies or non-profit organizations, or, as a last resort, private recreation organizations or concessionaires, the latter on a charged-lease basis. The Corps owns 33,600 acres in the State in conjunction with flood control projects.

#### U.S. Army, Air Force, and Marine Corps

Some 3.6 million acres in Arizona are in military reservations, including three Air Force bases (Luke near Phoenix, Williams near Chandler, and Davis-Monthan near Tucson); three Army facilities (Fort Huachuca, Navajo Ordnance Depot, and Yuma Test Center); and a Marine Corps Air Station at Yuma. The overwhelming majority of these lands are in the southern deserts, with the air facilities, particularly gunnery ranges, utilizing the most land.

The recreational implications of armed forces installations are two-fold. First, the location and function of the facilities will affect, to some degree, physical planning for various types of nearby recreational areas. Secondly, while the population housed in military quarters is provided selected active recreational opportunities on base, it also seeks other forms of recreation elsewhere in the State. Thus, military personnel, like retirees, create special types of recreation demands not representative of a normal resident population.

#### Soil Conservation Service

This Department of Agriculture agency was established in 1935 in response to the dust bowl and the squandering of our nation's land and water resources. At present, 95% of the agricultural land in the United States is within a Soil Conservation District, which is a self-governed, legally constituted unit of government created to administer soil and water conservation work within their boundaries. There are presently 33 such districts in Arizona and they encompass over 80% of the area of the state.

This agency relates to the provision of recreation in several respects. Under the Watershed Protection and Flood Prevention Act, up to 50% of construction and the full cost of engineering services can be provided for watershed improvements, which may include recreation developments as a secondary benefit. District Assistance Programs may also include farm ponds as a by-product. Since 1962, moreover, the U.S. Department of Agriculture has encouraged resource conservation and development projects which are generally multi-entity organizations with a scope of interest far broader than soil erosion and water runoff. These include air and water pollution, water supply and management, solid waste disposal, recreation resource development, and related activities. A Resource, Conservation & Development project must be sponsored by a legal entity that has authority

to undertake resource development activities (including soil and water conservation districts), be approved by the Governor, and forwarded by the SCS to the Department of Agriculture for review and action on request for project planning assistance. Upon plan completion, the sponsors submit it to the governor of the state and, upon approval, the SCS state conservationist sends copies to the various USDA agencies in Washington and to the House and Senate subcommittees for agricultural appropriations. The Secretary of Agriculture authorizes various line agencies to assist those phases of an individual sponsor's plan for which they have authority. These could include the Farmers' Home Administration (which may lend money to individuals or associations for recreational enterprises), the Forest Service, the Rural Electrification Administration, and the Soil Conservation Service. Essentially, the effort involves developing a coordinated program for a local area that draws on the expertise of various Federal agencies and seeks assistance from local, state, and Federal sources and programs. Objectives involve both prudent use of land and water resources and economic benefits to private landowners. The Navajo and Hopi Indian Reservations have made application for the first RC & D program in Arizona.

#### Bureau of Outdoor Recreation

The BOR was created within the Department of the Interior as a result of ORRRC's recommendation that a federal agency be established to focus attention upon and coordinate recreation programs of Federal, state, and local agencies. In seeking to meet the nationwide demand for outdoor recreation, the Bureau of Outdoor Recreation has three major assignments:

1. To promote coordination of Federal outdoor recreation programs.
2. To formulate a nationwide outdoor recreation plan.
3. To offer technical assistance to the states in preparation and maintenance of comprehensive statewide outdoor recreation plans.

In addition, the BOR administers the Land and Water Conservation Fund Act, which provides 50% Federal matching funds for state, county, and local units of government for planning, acquiring, and/or developing outdoor recreation areas. Part of the total L&WC Fund is apportioned to federal agencies for land acquisition only. The AORCC is responsible for preparing and maintaining the State Outdoor Recreation Plan and for administering state and local L&WC Fund applications to BOR.

#### Other Federal Agencies

A number of other Federal agencies have programs which deal both directly and obliquely with the provision of outdoor recreation in Arizona.

The Department of Housing and Urban Development (HUD) provides matching monies to the states, counties, municipalities and Indian reservations for preparation

of both general and specific development plans, including recreation, open space and community beautification elements. Moreover, matching funds for acquisition and development of open space and beautification projects are available. Under various programs, new recreation sites can be developed as part of urban renewal and public housing projects. Currently, only Tucson is actively engaged in urban renewal and has been designated as a Model City. This will enable Arizona's second most populous city to dramatically improve its park system.

The Bureau of Public Roads, among other responsibilities, engages in the construction of roads within national parks, forests, and other federal areas. It is also the federal agency responsible for administering provisions of the Highway Beautification Act, providing for scenic development and beautification of the Federal Aid Highway System.

The General Services Administration is responsible for disposal of surplus Federal property, which should be evaluated by various levels of state and local governments as to recreational potential. Both the Farmers' Home Administration and the Small Business Administration provide loans for private recreational development. The Farmers' Home Administration may make loans up to \$60,000 to farmers proposing to develop income-producing recreational enterprises. The SBA provides counsel and financial assistance to small businesses, including commercial recreation businesses.

### STATE AGENCIES

With the notable exception of the Game and Fish Department, the State of Arizona has not, until fairly recently, committed itself to playing a pivotal role in the provision of outdoor recreation. For many years, the very extensive and broadly distributed Federal lands and improvements tended to obscure the need for a comprehensive system of state recreational facilities. However, as the result of Arizona's rapid population growth during the early 1950's, the 1957 Legislature created the State Parks Board. Subsequently, congressional enactment of the Land and Water Conservation Fund Act in 1965 prompted creation of the Arizona Outdoor Recreation Coordinating Commission in 1966.

#### Arizona Outdoor Recreation Coordinating Commission

By statute, this three-member commission, appointed by the governor, is composed of the Director of the Game and Fish Department, the Director of the State Parks Board, and a director of a county or municipal parks and recreation department.

Under terms of the enabling legislation, the AORCC shall:

1. "Prepare, maintain and keep up to date a comprehensive plan for development of the outdoor recreation resources of the State.

2. "Initiate and carry out studies to determine the recreational needs of the state, counties, cities and towns.
3. "Coordinate recreational plans and developments of federal, state, county, city and town and private agencies.
4. "Receive and allocate in the name of the State monies from the federal government in accordance with Public Law 88-578, 88th Congress, and such monies as may be appropriated by the legislature, from other agencies of the State, political subdivisions thereof, or other source, to carry out the recreation program in the State.
5. "Establish criteria for the administration of the plan and disbursement for funds allocated to the State of Arizona under Public Law 88-578.
6. "Adopt rules for the conduct of its meetings which shall be open to the public and a record shall be kept of all proceedings and transactions."

In addition, the Commission is enabled to enter into contracts, establish administrative charges for project processing, and employ a staff. Under the AORCC enabling legislation, then, the Commission has two basic functions: (1) on-going statewide recreation planning, and (2) processing of L&WCF project applications. To this is added responsibility for administration of the State Lake Improvement Fund Act, transferred from the State Parks Director by the Legislature on June 20, 1968.

Hence, the AORCC is charged with the key role in statewide recreation planning and with administration of development projects involving both L&WCF and SLIF monies, but it is not a landholding, development or recreation operating agency.

SLIF monies are received from boat license fees and state motorboat fuel taxes and may be used only for improvement of lakes where boats are permitted. This important state program permits 100% state funding or matching with such sources as L&WCF for the following types of public improvements: lake construction or improvement; marking buoys and other safety facilities; launching ramps, piers, marinas, and marine stadia; toilets, sanitation facilities and domestic water; picnic tables and facilities; and parking areas. Eligible SLIF participants include the State Parks Board, Game and Fish Commission, county boards of supervisors, and municipal governing bodies.

Since enactment of the original enabling legislation, the SLIF program has been re-structured to some extent to permit greater flexibility in terms of project sponsors and funding arrangements. The original requirement that priorities be established for projects involving matching funds has been liberalized to permit 100% funding by SLIF.

### Arizona State Parks Board

The Arizona State Parks Board is composed of five members appointed by the governor and the State Land Commissioner and State Parks Director. The Board's duties under its 1957 enabling act are "to select, acquire, preserve, establish and develop areas of natural features, scenic beauty, historical and scientific interest, zoos and botanical gardens for the education, pleasure, recreation and health of the people."

Since its creation, the State Parks Board has established some nine recreation areas totaling over 15,500 acres, including recreation parks, historic parks and a scenic park. More than half of the public beach acreage in Arizona is provided in state recreation parks.

In its 10-year program, the Board has also identified 25 proposed recreation areas which meet its criteria. Of these proposed sites, Tonto Natural Bridge — an outstanding, privately owned scenic wonder in Gila County — has recently been approved by the Legislature for acquisition. The State Parks Board gave the acquisition of this site top priority due to the owner's intention to sell.

A primary shortcoming of enabling legislation creating the State Parks Board was the inclusion of a 160-acre limitation on the size of state recreational sites. Special authorization by the Legislature is required to acquire sites exceeding 160 acres in area. Under the Recreation and Public Purposes Act, a state is permitted to acquire 6,400 acres annually from the Bureau of Land Management for recreation purposes, provided that not more than three sites are involved — other than small parks and rest areas not exceeding 10 acres each. The requirement of special authorization by the Legislature for sites exceeding 160 acres in size represents an unreasonable restraint on the Board in carrying out its assigned responsibilities.

### Arizona Game and Fish Commission

The Commission is composed of five members appointed by the governor. Functions of the Commission, carried out by its director and the department staff, are:

1. To be responsible for control of wild animals, birds and fish.
2. To control all hatching stations, rearing ponds and game farms.
3. To regulate and license all other hatching stations, rearing ponds and game farms.
4. To regulate and control the seasons for hunting and fishing.
5. To regulate and control the licensing of all watercraft.

Financing for the extensive operations of the Commission, acting through the Department, derives from the especially-designated game and fish fund, Federal funds,

and boat license fees collected. There are extensive cooperative arrangements with various Federal agencies, particularly the Bureau of Sports Fisheries and Wildlife and the U.S. Forest Service. State law provides for local jurisdictional control over lakes, and the Department has developed some 17 fishing lakes on National Forest lands through arrangements whereby the Department obtains a water right, constructs the dam, and manages the lake. The USFS complements this development by providing campgrounds and other essential recreational facilities.

Through a combination of deeds, leases, easements and agreements including those connected with the USFS and BLM, the Game and Fish Commission controls over 170,000 acres of land and 4,516 acres of water resources.

#### Arizona Highway Commission

The Highway Department is another state operating agency which provides recreation facilities. The Department is under the administration of the Highway Commission which is composed of five members, each representing a district based on combinations of the state's fourteen counties.

Assigned functions of the Commission are to "exercise complete and exclusive control and jurisdiction of the state highways and prescribe such rules and regulations to govern the use of state highways as it deems necessary for public safety and convenience, and to prevent the abuse and unauthorized use of the highways."

The AORP listed 660 roadside rest areas and scenic overlooks provided by the Highway Department throughout the state. In addition, two major parkways have been established by the Highway Commission, i.e., the Pinal Parkway north of Tucson, and the Joshua Tree Forest Parkway northwest of Wickenburg.

The Highway Beautification Act of 1965 provided the means and impetus for spending "highway money" for greater driving enjoyment. The Act represented a major national breakthrough in terms of recognizing that there is more to travel than provision of road pavement between points of origin and destination. The Act provides funds for scenic development and road beautification of the Federal Aid System for control of outdoor advertising, control of junkyards, and acquisition and development of public rest and recreation areas.

Recreational opportunity on a statewide basis is manifestly related to accessibility. In addition, the AORP estimated that driving for pleasure and sightseeing represented 28.9% of the annual resident participation days in 1965. Hence, an adequate system of roads — Federal, state and local — is a basic necessity to support an adequate recreational system. Conversely, route selection so as to enhance, and not destroy, natural wildlife and recreational values is of paramount concern.

The Bureau of Public Roads directives require that "when a state highway department begins considering the development or improvement of a traffic corridor in a particular area, it shall solicit the views of that state's resources, recreation, and planning agencies . . ." In regard to social, economic, and environmental effects to be considered with respect to proposed route locations, the directive specifically cites recreation and parks, aesthetics, conservation (including erosion, sedimentation, wildlife, and general ecology of the area), natural and historic landmarks, and multiple use of space. Provided there is no impairment of the full use and safety of the highway, portions of rights-of-way not required for operational purposes may be devoted to public or private use, with certain specific uses designated as being eligible for Federal fund assistance.

Hence, the BPR recognizes the vital interrelationship between highways and outdoor recreation, but there remains a need to establish the mechanics of coordinated planning of scenic highways, parkways, rest areas, overlooks, and highway traveler camping sites.

#### Department of Economic Planning and Development

Since publication of the AORP, the Arizona Development Board has been replaced by a more comprehensive Department of Economic Planning and Development. Enabling legislation for the Department provides for a planning division responsible for economic planning, economic research and scientific and technological planning, and a development division responsible for industrial and tourism development, advertising and publications.

Enabling legislation provides for a nineteen-member Economic Planning and Development Board and two advisory councils, the Inter-Agency Economic Coordinating Council and the Scientific and Technological Planning and Advisory Council. The Inter-Agency Economic Coordinating Council is composed of the administrative heads of all major state departments dealing with the full spectrum of state services and physical improvements, including the Game and Fish Department and the State Parks Board.

The Department is assigned the following responsibilities:

1. Stimulate, encourage, and cooperate with all local, state, regional, and private groups having purposes related to planning and development of Arizona's resources.
2. Provide information and advice on request by local, state, federal, and private groups on matters within the scope of economic planning and development.
3. Advise with and make recommendations to the governor and the legislature on all matters concerning economic planning and development.

4. Undertake a comprehensive research program designed to:
  - (a) Establish the Department as the central repository and clearing-house for all data relating to Arizona's economy and resources as related to economic planning and development.
  - (b) Maintain a current inventory of the state's resources.
  - (c) Investigate potential opportunities for development of industry, tourism and other commerce throughout the state.

Hence, the new Department is responsible for a comprehensive and coordinated statewide planning program. Implementation of its planning program was begun on September 1, 1969.

#### Arizona Interstate Stream Commission

While the Interstate Stream Commission is not a recreation agency, it has played an important role in preparations for the Central Arizona Project which offers a substantial potential in recreation opportunity. The Commission is composed of seven members appointed by the governor, together with two ex-officio members, the State Land and Water Commissioner, and the Chairman of the Arizona Power Authority.

The Commission has the power, jurisdiction, and authority to:

1. Prosecute and defend all rights, claims and privileges of the State respecting interstate streams.
2. Formulate plans and development programs for the practical and economical development, control and use of the water of interstate streams.
3. Initiate and participate in conferences, conventions, or hearings, including congressional hearings.
4. Apply for and hold permits and licenses from the United States or any agency thereof for reservoirs, dam sites and rights-of-way.
5. Attend and participate in proceedings before any court, commission or other competent judicial or quasi-judicial department, agency or organization.
6. Negotiate and cooperate with agencies of the United States, or of any state or government concerning matters within its jurisdiction, subject to federal consent, if required.
7. Investigate works, plans, or proposals pertaining to interstate streams, and acquire, preserve, publish and disseminate information relating thereto which the Commission may deem advisable.
8. Recommend to the governor and Legislature action to be taken on proposed contracts or agreements with other states, governments or representatives.

9. Employ personnel and fix their salaries.
10. Distribute Colorado River water.

The Central Arizona Project was authorized by Congress in 1969 but will require subsequent appropriations to bring Colorado River water to Phoenix and Tucson in the years ahead. Recreational benefits will be realized from the development of aqueducts, canals and reservoir lakes; however, there may be considerable difficulty in reaching agreement between utilitarian interests and recreationists as to the allocation of water for recreation uses.

#### State Land Department

The functions of the State Land Commissioner are vitally important to a sound statewide recreation program since they include:

1. Administering all laws relating to state-controlled land.
2. Administering all laws relating to the control, supervision, distribution and appropriation of the waters of the State.
3. Performing those duties formerly performed by the Board of Appraisers, Arizona Land Settlement Commission, and the State Water Commissioner.

The scope of interests of this Department is reflected by the fact that the State Land Commissioner also serves as the State Water Commissioner, the Soil Conservation Commissioner, and the State Forester.

According to AORP, the Department is the trustee for approximately 9,300,000 acres representing 12.8% of the State's total land area. Some 90% of these State lands are leased, primarily for grazing. With respect to state land, the Department is charged with classification for use, appraisal and survey for resources, leasing, and conservation of natural resources. Under existing state law, the Department is encouraged to realize a maximum dollar return on the sale and lease of state lands. It is further specified that state land may be sold only at public auction in the county where the lands are located, thus requiring the public to compete with private interests for use of public lands. However, in 1967 the U.S. Supreme Court ruled that the State Highway Department could acquire state land for highway purposes at its appraised fair market value without public auction, eliminating the requirement of competitive bidding by state agencies. Unfortunately, the legal framework within which the State Land Department presently operates does not generally encourage the transfer of State land to other state agencies or jurisdictions for recreational purposes.

#### Other State Agencies

There are a number of other state agencies whose functions and assumed prerogatives

are such that they could conceivably affect the achievement of outdoor recreation goals and objectives herein established by AORCC. These agencies and their basic purposes are summarized as follows:

1. Department of Mineral Resources was established to promote development of the State's mineral resources with powers and duties including cooperation with other agencies to promote mining, listing of mining properties, assisting buyers of minerals, and making surveys or investigations to interest investment capital in development of mineral resources.
2. Oil and Gas Conservation Commission regulates production of gas and oil in the State, and has the power to make rules and regulations necessary to enforce oil and gas conservation laws.
3. State Mine Inspector is an elected State official responsible for enforcing rules and regulations pertaining to mining safety.
4. Arizona Copper Tariff Board is empowered to encourage the copper mining industry and development of new copper mines.
5. Arizona Resources Board, composed of five appointed members, has the function of devising plans for the development, conservation and control of all water resources within the State.
6. Real Estate Department regulates the real estate business, including review and approval of subdivision plats.
7. Arizona Power Authority is authorized to plan, construct, operate and maintain power projects named in the State Water and Power Act of 1967 (with the CAP's facilities the most certain). Its duties include taking electricity developed from the Colorado River by the state or federal government and making it available to marketing areas of the State.

#### REGIONAL AGENCIES

Two major large-scale regional agencies which have become operational since preparation of the Arizona Outdoor Recreation Plan are concerned with outdoor recreation as a factor in their planning and programs.

##### Four Corners Regional Commission

This agency represents a Federal - Multistate partnership to promote economic growth in a 92-county region of Arizona, New Mexico, Colorado and Utah. This area was designated as an Economic Development Region under the Public Works and Economic Development Act of 1965, with membership of the Commission composed of the governors of the four states who annually elect a state co-chairman, and a Federal Co-Chairman appointed by the President and confirmed

by the U.S. Senate. The nine Arizona counties included in the region are Mohave, Coconino, Yavapai, Navajo, Apache, Gila, Pinal, Graham and Greenlee.

The goal of the Commission is "to boost the region's economic activity by providing opportunities on a scale sufficient to retain and attract young citizens." Toward this end, their program seeks to identify economic opportunities and foster growth with broad consideration to tourism and recreation, natural resources, transportation, industrial development, human resources, education, and health.

The purpose of regional planning is to initiate action programs and projects, involving both private and public investment, which will increase jobs and income in the region. With respect to outdoor recreation, it is presently undertaking a comprehensive research program involving exhaustive investigation of tourism, recreation and retirement resources. The proposed work program will involve evaluation of existing conditions, projection of markets, and a project support strategy to realize the major opportunities uncovered. These three study phases are due in June 1969, December 1969, and May 1970, respectively. This study will be of particular interest to the on-going comprehensive planning of AORCC.

#### Indian Development District of Arizona

IDDA is a non-profit state-chartered organization with a membership of 15 Arizona and two California reservations. The organization was formed in 1967 with the support and encouragement of the governor and the Bureau of Indian Affairs for the purpose of assisting sound economic planning and development on member reservations in conjunction with adjacent non-Indian areas.

The IDDA Articles of Incorporation include the following purposes:

- "To coordinate and facilitate the preparation of an Overall Economic Development Program within each IDDA Planning Area for long-range growth which includes adequate land use and transportation planning and contains a specific program for planning area cooperation, self-help, private and public investments."
- "To formulate, develop and administer a program for planning and development in order to improve economic conditions in the District and in each planning area in respect to unemployment, underemployment and distressed economic conditions."
- "To coordinate overall economic planning and development in each Planning Area and non-Indian areas adjacent to the reservations in each Planning Area."

IDDA is organized with a central office and sub-offices serving five planning area committees, and they have been instrumental in assisting several tribes in developing recreational facilities to attract tourists and expand local employment opportunities.

### COUNTY AGENCIES

Arizona's 14 counties range in area from Coconino's 18,573 square miles to Santa Cruz's 1,246 square miles. In terms of population, the contrast is even greater with Maricopa County having 895,100 persons compared to Greenlee's 10,600 persons. With this range of scale and population, it is not surprising that some counties do not have Parks and Recreation Commissions or Boards. Seven counties have Parks and Recreation Commissions — Maricopa, Pima, Pinal, Yuma, Gila, Navajo, and Coconino — and four of these counties — Maricopa, Pima, Pinal and Yuma — support full-time departments.

Arizona counties have the important power to enact zoning ordinances for unincorporated areas and their affinity for comprehensive planning and zoning is greater than that evident for recreation agencies. Counties having both Planning and Zoning Commissions and staffs include Maricopa, Pima, Pinal, Yuma, Coconino, Mohave, and Santa Cruz.

Although one-half of the counties have neither Parks and Recreation Commissions nor Planning and Zoning Commissions, a large majority of the State's population resides within counties which have assumed such responsibilities. The remaining counties have limited financial resources and utilize federal, state and municipal facilities for outdoor recreation experiences together with private lands.

### METROPOLITAN ORGANIZATIONS

Maricopa, Pima, and Coconino Counties contain established regional organizations which are, or may likely be, concerned with open space and outdoor recreation. These metropolitan groups have made varying degrees of progress in establishing organizations and programs aimed at providing coordinated solutions to common, areawide problems.

#### Maricopa Association of Governments

MAG began as a voluntary association of local officials in the built-up areas of the Phoenix metropolitan area.<sup>1/</sup> In 1967, it was incorporated as a non-profit

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<sup>1/</sup> Avondale, Chandler, El Mirage, Gilbert, Glendale, Goodyear, Mesa, Paradise Valley, Peoria, Phoenix, Scottsdale, Surprise, Tempe, Tolleson, Youngtown and Maricopa County are member governments.

corporation to enable it to enter into contracts; however, it still has the philosophy of serving as an advisory organization governed by local public officials. The Demonstration Cities and Metropolitan Development Act of 1966 provided the incentive for creation of MAG by requiring establishment of a regional entity to coordinate efforts to solve areawide problems.

MAG is governed by a regional council composed of elected officials together with the District Highway Commissioner, whose vote is restricted to transportation matters. In addition, a management committee administers MAG under the direction of the regional council. Membership of the management committee is composed of city and town managers or clerks plus the State Highway Engineer and State Highway Director, who serve as ex-officio members for traffic and transportation matters. At present, standing committees include Valley Area Traffic and Transportation Study, Water and Sewers, Building Code Interpretation, Criminal Justice Advisory, Health Planning, and Planning. The program of the Association has been funded by the Department of Housing and Urban Development and has included a Program Design, which is under review, and special studies — both completed and in process — dealing with such matters as solid waste disposal, water and sewers, and criminal justice planning. Their current HUD program includes updating of the open space plan for the region.

The day-to-day administrative functions of MAG are performed by the staff of the Arizona League of Cities and Towns under a contractual arrangement. Studies and recommendations on a wide range of topics are developed by both special and standing committees, and include retention of consultants. In terms of recreation, MAG reviews applications for open space grants made to the Department of Housing and Urban Development together with L & WC Fund applications where acquisition is involved.

#### Tucson Urban Area Regional Reviewing Committee

Pima County's local jurisdictional situation is simplified by the fact that there are only two municipalities in the county, Tucson and South Tucson, which — together with Pima County — have formed the TUARRC.

TUARRC, composed of the mayors of the two cities and the chairman of the County Board of Supervisors, acts on all matters brought before the Committee under Section 204 of the Administrative and Model Cities Act. Funding is provided solely by the participating entities, with the staff consisting of a part-time Executive Coordinator and Secretary. No standing committees presently exist and so far there has been no involvement in recreation programs per se.

#### Coconino Association of Governments

The recently formed CAG is composed of the cities of Flagstaff, Williams, and

Fredonia, and Coconino County. Day-to-day administrative duties are assigned to the County Planning Director. The Association is presently awaiting approval of a 701 Program application to the Department of Housing and Urban Development.

### MUNICIPALITIES

Arizona contains 63 incorporated cities and towns ranging in population from Jerome's 243 people to Phoenix's recently estimated 540,000 persons. Approximately 75% of the population of the State resides in municipalities, and a large percentage of the population living in unincorporated areas is located either in the urban fringe or clustered in unincorporated new communities such as Lake Havasu City, Litchfield Park, Sun City, and Green Acres.

Municipalities have the power and responsibility to provide active and passive recreation areas for their citizens. Visitors and residents of adjacent unincorporated areas contribute to the use pressures on local facilities. As a rough measure of the degree to which recreation is a recognized function of government, the 1968 Directory of Arizona City and Town Officials, published by the League of Arizona Cities and Towns, listed only 26 communities as having a Recreation Director. In most instances, these individuals are laymen or elected officials and not recreation professionals. Notwithstanding the number of communities without professional staff, however, there is evidence of general recognition of recreation's importance in municipalities containing 1,064,000 of the 1,179,000 persons living in incorporated areas.

Planning a system of recreation sites requires coordination with overall land use planning if it is to be effective. Hence, it is important to assess the extent to which cities and towns in Arizona maintain a planning and zoning function. The League's directory indicates that 30 cities have either a Planning Commission Chairman or Planning Director, or both. Again, lay commissioners serve as directors in many communities, which communities contain 1,098,500 of the population of municipalities in the State. Unfortunately, only 18 communities have both Recreation Director and Planning Commission Chairman/Director, but this affects a total of 1,046,000 residents of municipalities.

The foregoing discussion does not evaluate the quality of programs, but it would be fair to say that aside from the professionally-staffed operations, the calibre of the recreational and city planning activities is generally marginal. For example, few municipalities have flood plain zoning or attempt to acquire open space through subdivision procedure, either in advance of or at the time of development. Most zoning ordinances are obsolete and the State has no enabling legislation for planning at the municipal level.

## SCHOOL DISTRICTS

The existing and potential recreational role of the public schools in the State has not received adequate attention in the assessment of statewide outdoor recreation needs. In fact, schools are the only supplier of developed recreation sites in many small Arizona municipalities.

Arizona contains an excessive number of school districts in relation to the communities served, a condition which frustrates efforts to coordinate local municipal planning and school planning. While the State contains 63 incorporated cities and towns, there are 221 elementary school districts and 76 high school districts. In effect, this represents an additional 297 local special-purpose units of government superimposed on the political structure of the State.

School districts vary in terms of grade system organization, and kindergartens are a local option not assisted by the State. At the time the AORP was prepared, there were 566 elementary schools and 104 high schools in Arizona. The trend has been towards adoption of a junior high or "middle school" system wherein seventh and eighth grades are most commonly accommodated in a separate facility.

Several progressive communities provide coordinated school-city recreation programs enabling local residents to realize maximum return for their tax dollar. However, these are still in the minority. Properly planned school locations offer a natural focal point for neighborhood and communitywide recreational sites in urban areas. Moreover, school facilities relate directly to the distribution of population, presenting a special opportunity for local recreation systems to keep abreast of urban growth.

Public colleges and universities also provide facilities in terms of both curricula and intramural programs. Private and parochial schools represent a third important component of education in the State and provide recreational facilities supplementing those provided by public schools.

## INDIAN RESERVATIONS

The 19 Indian reservations in the State presently contain 104,000 residents. These reservations vary widely in terms of both acreage and population. The Cocopah Reservation near Yuma contains less than one square mile and only 99 inhabitants, while the Arizona portion of the Navajo Reservation encompasses almost 9,000,000 acres and 69,600 people. However, regardless of their geographic extent, all but the Navajo Tribe number less than 7,000 persons. The State's Indian tribes vary as widely in characteristics as does its physiography. Indian activities on reservations are not subject to Arizona taxes or laws, nor do they benefit directly from State

services. This relationship derives partially from the historical fact that the tribes were once treated by the Federal government as domestic, dependent nations.

The State has recently formalized its interest in enhancing the economic well-being of the Indian population, and all parties have become more cognizant of the vast outdoor recreation potentials of the reservations which encompass some of the major scenic reserves of the country. Hence, the expansion of outdoor recreation opportunities on Indian reservations, particularly camping, hunting, fishing, sightseeing, attending pageants, hiking, riding, rockhounding, and possibly winter sports, will produce economic and aesthetic benefits of mutual advantage to Indians and non-Indians.

### PRIVATE AND QUASI-PUBLIC ORGANIZATIONS

While the full extent of the involvement of private enterprise and quasi-public organizations in provision of outdoor recreation was not thoroughly studied in the AORP, it is known to be significant. The private sector inventory conducted by the Soil Conservation Service in 1966 identified 73 golf courses, 46 country clubs, 15 shooting preserves, 54 fishing sites, 46 campgrounds, 23 picnic areas, 100 riding ranches, 5 organization camps, and 2 marinas.

Within the non-public sector of recreation suppliers, organizations can be categorized as profit or non-profit. Different types of organizations within the profit-oriented sector include:

1. Commercial recreation enterprises in which the recreation facility is the primary profit-making activity; e.g., amusement parks.
2. Commercial enterprises in which various recreation facilities are provided in support of the primary profit-making activity; e.g., motel and resort swimming pools, shuffleboard courts, etc.
3. Fee-based concession operations on public or Indian lands.

In the non-profit category, such communitywide service organizations as the YMCA, YWCA, Boy Scouts, Girl Scouts, and Boys' Clubs develop and operate outdoor recreation facilities as part of their programs for membership which is open to the public. Charitable organizations, both quasi-public and private, provide outdoor recreation facilities for underprivileged and handicapped persons, and church and fraternal organizations operate camps to serve both their own membership and community service programs. A few private corporations provide recreation areas and facilities, both on-site and off-site, for use of their employees and employees' families.

A third type of non-public recreation supplier is represented by such private

membership organizations as tennis, golf, swimming, polo, and health clubs. This type could be considered as being status-oriented rather than profit-oriented since profits are normally reinvested in expansion of physical plant or services. Some of these organizations operate on a members-only basis while others also serve the public on a selective basis.

Regardless of the motive, all of the foregoing types of organizations effectively provide outdoor recreation facilities, some primarily to tourists and others primarily to residents. However, due to varying accent on profit, the expansion of their services and facilities will be contingent on different factors. The entrepreneur will be limited by the economic potential of his particular enterprise. The concessionaire's role is limited largely by public policy. Community organizations are influenced by the availability of public lands on which to conduct their programs and, to some extent, by their ability to develop facilities on public lands. Private membership clubs tend to expand in relation to the degree that the income-related demand expands for the more privileged types of recreation service.

#### SUMMARY

The preceding summation of agencies and jurisdictions having responsibility for outdoor recreation in Arizona suggests the complexities inherent in developing a coordinated, comprehensive outdoor recreation plan and program. There are 429 governmental entities involved in outdoor recreation in Arizona, as follows:

<u>Entities</u>	<u>Number</u>
Federal	17
State	14
Regional	2
Counties	14
Metropolitan	3
Municipalities	63
School Districts	297
Indian Reservations	<u>19</u>
TOTAL	429

In addition to policy conflicts, various legal restraints have been cited with respect to acreage limitations on State park site acquisitions; the statutory limitation on acreage transferable per year to counties under the Recreation and Public Purposes Act; the State Land Department's interpretation of statutory requirements regarding maximum benefits; and the inapplicability of the R & PP Act to national forests, parks and wildlife refuges. Regional offices of

federal agencies with which communication must be maintained are located in six different cities in three states. It is here worth noting that in the experience of Arizona's governmental agencies, the best rapport and most effective relations have been with federal agencies maintaining responsible offices within the state.

## PART III

### PROPOSED POLICIES AND ACTIONS

This section of the report is concerned with the ways and means of implementing and effectuating the Arizona Outdoor Recreation Plan. Implementation actions include: (1) formulation and adoption of policies, (2) enactment of additional, or amended, enabling legislation, as may be required, and (3) formulation of procedures for coordinating outdoor recreation functions. Effectuation actions include: (1) formulation of administrative procedures for discharging outdoor recreation responsibilities, (2) establishment of priority sequence for capital expenditures, and (3) outlining a five-year capital improvement program.

The term "policy", as employed throughout this report means the definition of the essential ways and means of accomplishing established objectives. Statewide outdoor recreation goals and objectives were set forth in Part I of this report. Policy development involves all of the difficult processes of derivation, exposure, explanation, justification, negotiation and compromise. It is never easy at the municipal level, and becomes increasingly difficult in direct proportion to the level of government and the number of agencies and interests involved. Factors in the development of successful policy include the receptivity of related organizations and interests, the adequacy of enabling legislation, the existing organizational relationships and functions of existing agencies, and the general attitudes of department heads, officials and legislators. Policy development is a process to be entered into firmly and positively, but it is also one which must be approached in a timely fashion if it is to culminate in policy adoption, particularly on a statewide basis.

With respect to policy formulation, this plan maintenance project is primarily concerned with the derivation of policy by the AORCC and with the exposure, explanation and justification of such statements among the recreation-related state agencies and organizations representing local governments, quasi-public groups and private interests. The principal concern of the AORCC at this time is to distribute its proposed policy statements to these entities, to assure that they receive all due official consideration by those entities, and to synthesize and coordinate their comments, recommendations and decisions. Since policy-making at the state level must be an on-going process, this initial effort cannot be expected to produce adopted policy within the time and cost allotted to this plan maintenance project.

It is essential to recognize the following factors influencing the establishment of official outdoor recreation policy in Arizona:

1. The concept of statewide planning is still in its embryonic state in Arizona, and it will be several years before the new Department of Economic Planning and Development can become fully effective. This department is charged with responsibility for developing statewide planning and development policy.
2. Arizona state government is in the early throes of general reorganization and is entering upon a period of adjustment of the responsibility and appropriations among agencies, commissions and interest groups.
3. However essential and timely it may be, recreation is not presently a primary goal or political issue in Arizona. However modest the recent gains in appropriations and responsibility for recreation agencies may appear to outside observers, they do represent very significant advances of the cause.
4. While the "build" on recreation at the official level will be relatively slow, it would be unreasonable to expect it to develop faster than the many other basic and essential elements of statewide need. It is a time to make modest, solid and consistent gains, rather than to contest for attention with the larger, more pressing issues.

It has, therefore, been concluded that the derivation of policy proposals by the AORCC, and their presentation, justification and discussion among other state departments and commissions, regional agencies, and groups of municipal officials, will represent an essential and timely "ice-breaking" step toward achievement of statewide outdoor recreation goals and objectives. The Arizona Outdoor Recreation Plan does not contain, nor has this plan maintenance project developed, the solid background of research, analysis and fact related to Arizona's recreation demands, supplies and needs, which are considered essential to support a program of aggressive statewide policy adoption at this time. Untimely aggressiveness toward policy acceptance and official approval will meet both apathy and resistance, and might very well prove a self-defeating effort.

All of the implementation and effectuation measures hereinafter discussed involve policy proposals. Proposals regarding assignment of responsibility constitute policy proposals, and when they are accepted, modified and agreed upon among agencies and organizations, and appropriate legislation is enacted, they will have the status of adopted policy. Similarly, the establishment of procedures for coordinating recreation programs and plans, and establishment of priorities for recreation expenditures, all constitute policy actions.

## A. ASSIGNMENT OF RESPONSIBILITIES AND ACTIONS NEEDED

Achievement of Arizona's outdoor recreation goals and objectives is contingent upon maximum coordination of the actions of more than 400 governmental entities in the state, plus the many quasi-public and private organizations and individuals concerned with provision of recreation space and facilities. The appropriate division of responsibility and assignment of function among these entities is fundamental to such coordination.

Prior to discussing outdoor recreation functions and responsibilities on an agency-by-agency basis, it is necessary to place responsibility by level of government and/or non-governmental entity.

### GENERAL RESPONSIBILITIES

#### Federal Government

The ORRRC Study Report 17, Multiple Use of Land and Water Areas, recommended that "the Federal government should think and plan in terms of all its land-holdings and not permit each administrative segment to compete one against the other." In view of the large proportion of the State's land area under federal ownership and the growing number of federal agencies whose functions affect outdoor recreation, this admonition is particularly applicable to the State of Arizona.

In 1951, the Federal Interagency Committee on Recreation adopted "A Recommended General Policy of the Federal Government Relative to Public Recreation." This nine-agency committee document provides an excellent statement of federal responsibilities together with policies to facilitate development of adequate and coordinated recreation facilities and services. It states that:

"It is the responsibility of the Federal Government to develop, and to arrange for others to develop, the recreation resources on the Federally-owned lands, and to complement state and local programs in full cooperation with the states and their political subdivisions, without assuming responsibilities that properly rest with the states and their political subdivisions.

"Therefore, it shall be the policy of the Federal Government to promote and to facilitate the development of adequate and coordinated recreation facilities and services throughout the nation, and for this purpose the Federal Government shall:

- a. Recognize and appraise the recreation potentialities on all Federally-owned lands, water areas, and

facilities; and, consistent with the fullest national interests, conserve and make provision for adequate and appropriate facilities for the use of those resources for public recreation.

- b. Set aside or acquire lands needed for public park and recreation purposes, and administer and use them for such purposes in accordance with the basic legislation covering their acquisition and use.
- c. Permit and encourage the states, their political subdivisions and others, to construct and operate recreation facilities and programs on Federal Government land when it is in the public interest to do so, taking into account the long-range recreation plans of the states.
- d. Work with the states and territories on request, and with their political subdivisions with the consent of the states, in planning sound, long-range programs and services for state and local areas to the end that the total recreation provisions by all levels of government shall be cooperatively planned.
- e. Encourage national, state and local leadership, both public and private, to develop recreation facilities and services adequate to meet the needs and desires of the people.
- f. Provide technical leadership and guidance in the planning and development of recreation facilities and services, including the collection and dissemination of necessary and desirable data, pertinent to such planning and development through Federal agencies concerned with recreation.
- g. Develop and maintain in cooperation with state and local governmental agencies and private interests a national recreation plan which will serve as a guide to public and private agencies in integrating their activities into the overall recreation needs of the country."

Following publication of the ORRRC studies and recommendations, the Recreation Advisory Council <sup>1/</sup> prepared General Policy Guidelines for Outdoor Recreation in 1964, which defined the Federal responsibility in the field of outdoor recreation as follows:

- " a. To develop a nationwide outdoor recreation plan, to coordinate action of the Federal agencies, and to promote coordinated action by all other interests in achieving its purpose.
- b. To manage federally owned land and water resources for the broadest recreation use to the extent consistent with other uses of similar importance or priority.
- c. To acquire and provide suitable management for land and water areas that represent an appropriate balance between unique areas without respect to location and areas near population centers. These should include scenic areas, natural wonders, wilderness areas, wild rivers, historic sites, wildlife refuges, wetlands, parks, parkways, scenic roads, shorelines, and National Recreation Areas.
- d. To encourage the use of the concession system, where feasible, to provide services to the public on Federal lands as a means of encouraging private enterprise and reducing government expenditures and personnel.
- e. To consider outdoor recreation one of the primary purposes in planning multiple-purpose water resource developments and to allocate an equitable share of the cost to outdoor recreation, including fish and wildlife enhancement.
- f. To give full consideration to outdoor recreation in the planning and conduct of programs to which the Federal Government makes substantial financial contributions, such as highway construction, agricultural conservation, pollution abatement, open space, and urban renewal.
- g. To assure provision of adequate measures for public health, safety, and pollution control in Federally administered

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<sup>1/</sup> Composed of the Administrator of HHFA and the Secretaries of Agriculture, Commerce, Defense, Interior and Health, Education and Welfare.

recreation areas, and to encourage the adoption of comparable measures by state, local and private organizations.

- h. To encourage continuing, active state and local official responsibility for recreation planning, development and administration.
- i. To provide grants-in-aid to states and local governments for planning, acquisition, and development of outdoor recreation resources and facilities.
- j. To provide in appropriate cases technical and financial assistance to the private sector and to state and local governments.
- k. To promote interstate and regional agreements, including Federal participation when necessary or desirable.
- l. To encourage private and public agencies to sponsor and conduct research in the broad field of outdoor recreation.
- m. To encourage states and their political subdivisions and semi-public and private groups, organizations and individuals to construct and operate recreation facilities and programs on Federal land when, in the judgment of the administering agency it is in the public interest to do so, taking into account the long-range plans of the state and the Federal Government.
- n. To assure that appropriate consideration is given to the recreation potential of surplus real property proposed for disposal by any Federal agency.
- o. To establish criteria for the imposition of reasonable user fees applicable to appropriate classes of Federally administered recreation facilities and areas. A desirable Federal fee structure would take into consideration the variety of recreation opportunities and recognize the recreation requirements of special groups of individuals, while eliminating undue competition with the private sector, thereby encouraging the provision of additional recreation services by the private sector and reducing the burden placed upon direct appropriated funds.
- p. To encourage development of recreation education both in the classroom and through such tools as workshops, interpretive programs, and nature centers.

- q. To encourage state and local governments to adopt liability, zoning, and taxing legislation which would encourage development of recreation areas on private lands.
- r. To encourage the proper use of private consultants who are available to provide expert advice and services in connection with many aspects of recreation."

It would be presumptive to attempt to enlarge upon or improve the foregoing statements of Federal responsibility in outdoor recreation. The essentials of both are consistent and in harmony with the view of the AORCC.

### State Government

Creation of the AORCC in 1966 provided a vehicle for comprehensive, statewide outdoor recreation planning, and the more recently-established Department of Economic Planning and Development provides for doing so within the context of overall statewide development planning. Hence, Arizona now has the basic organizational means of playing a pivotal role with respect to all suppliers of outdoor recreation in the state. The most immediate problem is that of providing AORCC the funding adequate to develop the staff necessary to undertake and maintain a viable, on-going recreation planning program.

The Indian Development District of Arizona (IDDA), organized to promote cooperative development of the state's Indian Reservations, is indirectly effective in outdoor recreation and its recreational planning and promotion activities should be coordinated with those of AORCC and DEPAD.

The Recreation Advisory Council's General Policy Guidelines for Outdoor Recreation indicated that the states should be encouraged to:

- "a. Develop a comprehensive statewide long-range plan for outdoor recreation as a significant element of state development plans, taking into account all Federal, state, local and privately owned outdoor recreation resources and programs within the state.
- b. Cooperate with local and private agencies as well as the Federal Government in the inventory and evaluation of outdoor recreation opportunities, and measuring the need for such opportunities.
- c. Acquire, develop, manage and maintain outdoor recreation resources of state significance.

- d. Provide adequate financing for recreation through taxation, bond issues, user fees, and other means as appropriate.
- e. Devote adequate consideration to zoning, the use of less-than-fee-acquisition such as easements, and regulatory powers in providing outdoor recreation opportunities.
- f. Cooperate with other states and the Federal Government in the acquisition, development and management of outdoor recreation resources having interstate significance.
- g. Assist local governments and private enterprise in planning and developing recreation facilities at neighborhood, city and metropolitan levels, with particular emphasis on comprehensive recreation developments serving metropolitan areas.
- h. Provide legislative authority for local governments to issue bonds for the financing of recreation and give direct financial assistance where appropriate.
- i. Review the effectiveness of state organizations and where necessary designate a central agency within each state to coordinate all state activities in the field of outdoor recreation.
- j. Utilize a concession system, where feasible, to provide services to the public on state-owned lands. Use of such a system would act to stimulate private investment and to reduce government expenditures for recreation development."

The primary state-level impediments to a more effective statewide recreation program in Arizona are statutory and fiscal. The relief of certain statutory limitations and specific improvements needed in enabling legislation are covered on an agency-by-agency basis later in this report. One other general legislative need is clearly evident--a legal means must be found for making state-owned land more readily available for public recreation purposes at nominal cost.

A stable source of annual funding to meet the full spectrum of recreation demand in Arizona is badly needed. The State Lake Improvement Fund provides stable financing for one major element of statewide recreation need. It is equally important to provide consistent, continuing financing for other elements of recreation need. The ways and means of providing such funding deserve serious study by the legislature.

### Interstate and Regional Agencies

The Lower Colorado River Office of the Bureau of Land Management is responsible for the administration of lands in Arizona, California and Nevada adjoining the Lower Colorado, including their use and management for outdoor recreation. The research programs, policies and actions of the two other interstate entities, the Four Corners Regional Commission and the Pacific Southwest Interagency Committee, affect outdoor recreation in Arizona both directly and indirectly.

### County Government

As previously noted, Arizona counties vary substantially in population level and in fiscal ability to support on-going county recreation programs. While it would be unrealistic to expect all of the counties to establish full-time park and recreation departments, every county should organize an official parks and recreation commission and develop a comprehensive recreation plan even though it may presently be unable to support an operating agency. Recreational opportunities and values should be protected through realistic county regulation of private development and a thoughtful approach to other types of public improvement projects. Moreover, county general plans will greatly assist statewide recreation planning and affect federal agency planning.

Every county contains recreation resources having statewide significance, and these resources should be conserved, enhanced and made available for residents of other counties as well. In outlying, less populous counties, the primary suppliers of active play areas such as playgrounds and playfields will continue to be the municipalities and school districts.

### Metropolitan Responsibility

Inter-community regional organizations should continue seeking coordinated solutions to common local problems. Information and proposals for outdoor recreation should be exchanged with AORCC.

### Municipalities and School Districts

American cities and towns have traditionally accepted responsibility for meeting recreational demands of people living within their corporate limits, and public school districts have contributed significantly by providing space and facilities for athletic as well as playgrounds for school-oriented activities.

The Recreation Advisory Council urged that local governments, including urbanizing counties:

- "a. Cooperate with state and federal agencies in the development

of plans and programs for recreation as part of, or consistent with, overall state, regional and local development plans.

- b. Maintain an up-to-date inventory of existing and potential recreation resources.
- c. Give greater consideration to outdoor recreation, playgrounds, municipal parks and open space requirements in developing plans for future urban expansion or renewal and in the construction of schools, highways, water supply and refuse disposal systems and other public projects.
- d. Provide adequate financing for recreation through taxation, bond issues and user fees, as appropriate.
- e. Acquire in fee or through easements those rights in land and water which will permit the protection, development and management of public recreation use areas of adequate quality and carrying capacity conveniently located to major concentrations of people.
- f. Make maximum use of such devices as land-use zoning, subdivision regulations and assessment practices to encourage the provision of outdoor recreation opportunities and the protection of open space.
- g. Encourage industrial firms, service clubs, youth groups, labor organizations and other civic groups to invest in recreation sites and facilities for the enjoyment of members and their families.
- h. Cooperate with private investors seeking to establish new commercial recreation enterprises consistent with the development plans for the area, by assisting in the search for suitable sites, negotiating to assure provision of utilities and services, securing road connections, providing buffer zones and similar constructive measures.
- i. Review internal organization and where necessary appoint or designate a central agency or person to take responsibility for coordination of all recreation interests."

Arizona seriously needs adequate enabling legislation for municipal planning and

subdivision regulation together with a strengthening of zoning statutes <sup>1/</sup>. Floodplain zoning and mandatory provision land or in-lieu monies for schools and recreation areas in new subdivisions are among the major recreation-related needs deserving attention by the Legislature. Expansion of the improvement district as a financing vehicle for recreation space and facilities in developing urban areas is a matter worthy of the Legislature's consideration.

Municipal cooperation and coordination with school districts and quasi-public and private recreation suppliers needs to be strengthened, if not initiated, in every Arizona community. The movement toward developing associations of local governments offers promise of greater coordination of recreation efforts between municipalities and counties.

### Indian Reservations

The tremendous recreation resource represented by Arizona's Indian Reservations, as well as the accelerated pace of tribal development of commercial recreation and tourism projects, prompts consideration of the responsibilities of Indian Reservations as suppliers of land and facilities for outdoor recreation. The Indian tribal government is unique with respect to its outdoor recreation responsibilities. Its responsibility for providing active and passive recreation for reservation residents closely parallels that of municipal government. On the other hand, it must be recognized at this point of time that the Indian tribes are primarily concerned with producing the kinds of development and use of reservation lands which will result in increased employment for Indians and increased income for the Tribes. In this latter respect, the Tribe more closely resembles the private supplier of recreation space and facilities.

The State Attorney General has found that an Indian tribal council may participate in the Land and Water Conservation Fund program provided that the particular tribal government has an organizational structure similar to that of municipal government and one which can meet the contractual guarantees required by the program.

Aside from actions to provide outdoor recreation for its Indian citizens, wherein an Indian Tribe has the same responsibilities as other types of local government, Indian Reservations are already providing recreation facilities for use of non-Indians in a commercial and limited public use sense. Indian facilities for such activities as hunting and fishing, trail rides and pack trips, camping, picnicking,

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<sup>1/</sup> A draft of such proposed legislation has been prepared by the Desert Southwest Chapter of the American Institute of Planners and is under review by municipal officials, professional groups and legislators.

boating, winter sports, summer home colonies and pageants, are being expanded in response to high demand by non-Indians. However, it will benefit both Indian needs and state outdoor recreation objectives if tribal councils will coordinate their recreation planning with that of state and federal recreation agencies.

Eventually, Indian Reservations will afford splendid opportunity for long-term private investment and concessionaire operations in many outdoor recreation activities. The development and operation of organized group camps for a wide variety of purposes, either directly by the Indian Tribes or by lessees of reservation sites, should be encouraged.

#### Quasi-Public Organizations and Clubs

Foundations, institutions and other quasi-public organizations operating in health, welfare, education, religion and similar fields should be expected to accept a large measure of responsibility for outdoor recreation of special types and/or for special categories of participants. Organized group camping, day camping, nature study, recreation for the handicapped and recreation for the elderly, represent major categories of recreation need which quasi-public organizations are best equipped to provide.

Membership clubs should be expected to accept an increasing responsibility for provision of space and facilities for special kinds of outdoor recreation, particularly golf, tennis, swimming, motorbiking, horse activities, sailing and other boating. Their development and operation of facilities for such activities should be encouraged and facilitated by governmental entities through assistance in location planning, demand research, zoning support, low-cost leasing of public sites, etc. Since recreation facilities provided by membership clubs serve a different segment of the demand than do public facilities, they should be expected to supplement, but not to substitute for, public facilities of the same general types.

In addition to the role of quasi-public organizations as suppliers of recreation, these groups can provide valuable assistance in statewide recreation planning in terms of both technical advice and an audience for testing tentative plan proposals. For example, the Arizona State Horsemen's Association can provide important input toward development of a State Hiking and Riding Trails Plan; Civitans should be involved in a State Plan for Recreation for the Handicapped; The Water Sports Council has a direct interest in boating safety; Scenic values are a primary concern of the Commission on Arizona Beauty. There are many statewide organizations whose expertise should be recruited in the development of credible outdoor recreation plan elements.

## Commercial Enterprise

Private enterprise investment in outdoor recreation has increased tremendously in Arizona during the past few years. This category of recreation supplier provides all types of professional sports facilities and a wide range of very special facilities, including horse, dog and auto racing, minor league baseball and major league training, hunting and shooting preserves, amusement parks, and trailer campgrounds. Some of these activities occur on public lands and sites leased to concessionaires, as well as on private property.

Private enterprise development and operation of outdoor recreation space and facilities, motivated strictly by potential profit, occurs in direct relation to expressed demand. Investment is seldom made in low-profit kinds of facilities and, from an economic standpoint, should not be encouraged. Mid-level profit enterprises tend to develop only in response to very high demand. Investment in high profit types of recreation enterprises, such as amusement parks, is largely speculative and sometimes based more on optimism than on realistic evaluation of demand.

In general, private enterprise should be expected to supply space and facilities for the types of outdoor recreation which are profit-making; i.e., attendance or participation fees exceed the level required to cover maintenance and operation.

The ACORCC endorses the following recommendations of the Recreation Advisory Council with regard to encouraging private suppliers of outdoor recreation:

- "a. Government agencies should promote greater public recreation use of private lands--both large industrial holdings and smaller areas such as farms. In this connection, a well-considered system of reasonable user fees for certain classes of public recreation facilities would tend to encourage the provision of additional private facilities.
- b. Government agencies should stimulate diversified commercial recreation investments on private lands and waters. Technical and financial assistance, in appropriate cases would help new enterprises to start and established ones to improve their operations.
- c. Wherever feasible, all levels of government should utilize the concession system of private operation of recreation facilities on public roads. This would serve the dual purpose of encouraging private enterprise and conserving public funds.

- d. Encouragement should be given to the efforts of non-commercial private groups, such as charitable, service and civic organizations, to acquire and conserve outdoor recreation resources that serve public needs.
- e. All levels of government should encourage and stimulate donations of recreation resources to appropriate public agencies by private individuals, foundations and other groups.
- f. Educational institutions and foundations should be utilized in recreation studies and research. Such organizations should also be encouraged to expand their educational efforts in the field of outdoor recreation."

#### SPECIFIC RESPONSIBILITIES AND ACTIONS NEEDED

One of the stated objectives of the Arizona Outdoor Recreation Coordinating Commission is to "place responsibility for provision of adequate outdoor recreation space, facilities and programs at the lowest practicable level of government or with quasi-public or private organizations." Another objective is to "coordinate the planning of outdoor recreation facilities by towns, cities, Indian Reservations, counties, state and federal agencies, and non-governmental organizations, so as to develop a unified, well-balanced statewide system . . ."

The responsibility for assuring provision of adequate space and facilities to meet the outdoor recreation needs of the people must be shared by federal, state and local governments, and quasi-public and private organizations. It will require the determined and coordinated efforts of all public agencies and non-public organizations to overcome current deficiencies and keep abreast of growing needs. To achieve maximum effectiveness of effort at minimum cost in time and money, it is essential to determine how responsibility should be divided and to define the appropriate role of each agency and organization.

It will be noted that the following assignments of responsibility do not in all cases conform to current concepts of agency functions nor to existing enabling legislation. However, in the preparation of a comprehensive plan as a long-range as well as short-range guide, policies and proposals should not be limited unduly by existing financial, legal, physical or political resources, structures or constraints. Therefore, the following policy statements include recommendations as to needed administrative and legislative changes.

## FEDERAL RESPONSIBILITY

At least 17 agencies of the Federal Government are involved to some extent in the provision of outdoor recreation space and facilities in Arizona. Altogether, these agencies exert a very pervasive influence on Arizona's present and future ability to meet the recreation demands of its citizens. While it is necessary that the AORCC assign responsibility for a wide range of recreation efforts as well as provide coordination of those efforts, it should be evident that the AORCC has no authority to assign responsibility to Federal agencies. It can only determine for itself how each Federal agency can function most effectively in the total effort to achieve Arizona's outdoor recreation goals and then encourage the agencies to function accordingly. Therefore, the following statements should not be regarded as assignments, but rather as AORCC's recommendations to Federal agencies based on its considered judgment as to how Arizona's outdoor recreation needs can best be satisfied.

### Bureau of Land Management

The BLM should continue on its own initiative to reclassify certain lands as "natural areas" and "primitive areas". These should be areas having distinctive features worthy of permanent protection but which are less extensive in scale and which require less restrictive regulation than areas in the National Wilderness Preservation System. In the reclassification of such lands, the BLM should give full consideration to the possibility that these lands might more appropriately be transferred to the State Park Board or Game and Fish Department for control and administration. The Park Board, in turn, should enlarge its classification system by adding categories called "state primitive area" and "state natural area", and should develop the necessary criteria, standards and regulations for selection, control and management of such areas.

The Recreation and Public Purposes Act should be amended by Congress so as to remove the 640-acre limitation on annual purchase acquisitions by entities other than the state.

The BLM can assist AORCC in its coordinating responsibility by informing it as early as possible regarding applications for transfer of leases and patented land to local governments for recreation development under the R & PP Act.

### Forest Service

Long-range recreation development plans, annual construction programs, and other matters pertaining to recreation policy, should be referred by the Forest Service Regional Office to AORCC for use in keeping the AORP current.

Since the Forest Service controls most of the non-urban land in Arizona having important potential for outdoor recreation, and since much of this land exists close to or within the day-use range of the state's metro areas and other population centers, the USFS should adopt the policy of giving highest priority to meeting metro area recreation needs within day-use zones, second priority to satisfying statewide needs, and third priority to national (non-resident) needs.

By Act of Congress, or by administrative action, whichever is required, the US Forest Service should be empowered to classify lands for management primarily for recreation and/or wildlife use, wherein non-recreational uses would be limited to those which are compatible with such primary use.

Whenever and to the extent that USFS recreation funds may be inadequate to satisfy local and statewide demands exerted on National Forest lands, the USFS should coordinate its recreation development program with the AORCC and make forest land and sites available through special use permit for development by state and local agencies and quasi-public and private enterprise organizations.

Forest Service recreation programs should be coordinated with those of the National Park Service so that by development of such facilities as campgrounds, picnic areas, and overnight accommodations on adjoining forest lands, the USFS can help to relieve overcrowding and loss of intrinsic park values within National park areas.

#### National Park Service

The NPS should assiduously resist national pressures for construction of additional facilities to satisfy the increasing visitor load wherever such construction will result in overuse and loss of important national park values. Every effort should be made to facilitate the construction of visitor accommodations outside but adjoining park boundaries by other federal agencies, state agencies and private enterprise. A comprehensive study should be conducted to determine where such development would be facilitated by adjustment of common boundaries with other Federal agencies and the state.

#### Fish and Wildlife Service

In general, the Bureau of Sports Fisheries and Wildlife of the Fish and Wildlife Service should expand its recreation role in activities directly related to the fish and wildlife resource. Interpretive programs and facilities should be expanded to enhance the public's enjoyment of established federal fish and wildlife areas. To the extent commensurate with good wildlife management, the F&WS should encourage managed hunting and fishing on federal refuge lands and should provide such supporting facilities as may be justified.

### Bureau of Reclamation

Bureau of Reclamation funded recreation projects in Arizona, including "in-lieu" monies allocated to adjoining counties, should be planned and constructed in accordance with the ACRP. Adjoining counties should be enabled to use such "in-lieu" funds as matching funds for Land and Water Conservation Fund projects.

Phreatophyte clearance projects of the Bureau should be carefully planned so as to avoid the loss of important ecological, wildlife habitat and scenic values. A concerted effort should be made by the Bureau as well as other federal and state agencies working in the phreatophyte program to adopt standard criteria and methodology for evaluating all resources so that important "other" values are identified and are not sacrificed for lesser benefits in terms of water salvage.

### Army Corps of Engineers

In preparation of plans for flood control projects, the C of E should make sure that such projects are designed to gain maximum public recreational benefits on lands in and adjoining flood control facilities. Such plans should reflect coordination with federal, state and local recreation agencies toward providing for the multiple use of floodplain areas and, to this end, should be referred to the AORCC for review and comment.

Phreatophyte clearance projects promulgated by the C of E should take full cognizance of other resource values in relation to water-saving benefits, and assure that "other" values are not sacrificed for lesser benefits in water salvage.

### Soil Conservation Service

In its preparation and promulgation of plans for flood control/soil conservation projects, the SCS should seek to gain maximum recreational benefits on lands in and adjoining such projects.

Individual districts function as local units of government and have recently broadened their scope of interest, raising the likelihood of potential conflicts of policy between SCS and local and state planning and operating agencies. In assisting the resource development of soil conservation districts, SCS planning for recreational development should be guided by the statewide outdoor recreation plan and fully coordinated with the plans of other agencies and organizations. To this end, the Governor's Office should make sure that such plans are referred to the AORCC for its information and comments.

### U.S. Army, Air Force and Marine Corps

U. S. Department of Defense establishments, under provisions of PL 84-46,

PI 84-446 and 42 USC 1855-1855g, should assist local communities financially and otherwise to meet demands placed on local recreation facilities by off-duty servicemen and/or their families.

Military establishments should examine and evaluate their landholdings to determine what recreation, wildlife and other values may exist, and to determine the extent to which permission of other uses will not conflict with the military use. This evaluation and classification process should then be followed by appropriate management of suitable portions of military reservations for public hunting and other forms of public recreation.

#### Bureau of Indian Affairs

The BIA should encourage Indian tribes to assist and coordinate with state and federal recreation agencies in meeting statewide recreation demands for the types of activities for which Indian reservations have special potential.

#### Bureau of Outdoor Recreation

The BOR should expeditiously carry out its responsibility for providing to the states those data, research results and guidelines which affect the planning and provision of statewide recreation facilities and which are beyond the capability of the individual states to provide themselves.

In administering the statewide planning requirements of the L&WCF Act, the BOR should place foremost the production and maintenance of a statewide outdoor recreation plan which is comprehensive, viable and credible to the individual state. To this end, BOR regulations should be flexible enough to accommodate varying conditions of recreation need, financial resource, organizational structure and political reality, and they should be administered with greater understanding and sympathy for special state conditions and problems.

BOR administrative policy should be amended as necessary to specifically permit and encourage state and local public agencies and non-profit organizations to spend L&WC matching funds on national forest and other federal lands wherever federal appropriations are inadequate and such lands are needed to satisfy state and local recreation demands.

#### Other Federal Agencies

Congress should amend legislation governing the Department of Housing and Urban Development, Economic Development Administration, Farmers Home Administration and Small Business Administration as necessary to assure that assisted recreation-related projects are coordinated with the statewide outdoor recreation

plan. Surplus government property being disposed of by the General Services Administration should be appraised for its potential value to recreation agencies, and such agencies given preference in the acquisition of property having such value, generally in accordance with the proposed "Federal Lands for Park and Recreation Act of 1969" (S. 1708).

### STATE RESPONSIBILITY

There are some 14 state agencies whose actions affect the provision of outdoor recreation space, facilities and programs. Some are recreation operating agencies, some are non-operational planning and coordinating entities, and others are agencies, both administrative and operational, whose primary functions are not recreation. The AORCC is charged with the responsibility of coordinating all outdoor recreation activities in the state, including those of other state agencies.

By statute, the AORCC is composed of the directors of two principal state recreation agencies, the State Parks and Game and Fish Departments, together with a director of a county or municipal parks and recreation department. Both its composition and its designated functions enable the AORCC to exert a strong influence in implementation and effectuation of the Arizona Outdoor Recreation Plan. However, aside from establishment of policies related to its own planning and administrative functions, the AORCC's actions in state policy making are limited to recommendation and persuasion. Only through actions pertaining to administration of L&WCF and SLIF projects is AORCC enabled to exercise specific powers having direct bearing on statewide recreation policy. Therefore, the policies herein proposed by AORCC cannot become official state policy unless and until the Legislature enacts recommended measures and other state agencies accept responsibility for recommended functions.

### Arizona Outdoor Recreation Coordinating Commission

To date, AORCC has not been adequately funded to enable it to discharge its assigned responsibilities. The provision of advice and assistance to political subdivisions in organization of parks and recreation departments, the conduct of local recreation research programs, the coordination of planning and development standards, and the coordination of statewide outdoor recreation planning with activities of the Department of Economic Planning and Development, are examples of important proposed functions of the AORCC which require expansion of staff and operating funds.

In preparing the State Lake Development and Improvement Plan for which it has statutory responsibility, AORCC should establish criteria and standards for the design and construction of lakes and lakesite facilities. The Plan should be

developed in context with total statewide needs for water and water-related recreation, and should be an integral part of a comprehensive, statewide Water Recreation Plan which includes consideration of fishing, scenic rivers, streams and non-boating waters, as well as of boating waters. To assist in preparation, implementation and administration of the Water Recreation Plan, the AORCC should appoint an ad hoc advisory group composed of selected representatives of federal, state and local bodies having legal or administrative jurisdiction of lake and stream surfaces.

Counties and municipalities proposing SLIF projects should be responsible for preparation of plans for such projects. Plans for SLIF projects proposed by state agencies on general purpose lakes should be prepared by the State Parks Department. Plans for SLIF lake construction projects primarily for fish and wildlife purposes should be prepared by the Game and Fish Department.

#### State Parks Board

The staff and program of the State Parks Board should be expanded as necessary to enable it to effectively perform all of the functions delegated to it by law. The Legislature should amend the statutes to release the SPB from the present limitation of its activities to sites not exceeding 160 acres in area.

The Parks Board should assume primary responsibility for the master planning of most elements of the statewide recreation system, including: (1) state recreation, scenic and historic areas, (2) state hiking and riding trails, (3) scenic highways, parkways and supporting facilities, (4) wilderness and primitive areas, and (5) recreation developments associated with the Central Arizona Project. It should also be responsible for preparation of design plans for all state agency-sponsored SLIF projects pertaining to general purpose lakes.

Except as otherwise indicated herein, the site planning and facility construction design of all recreation projects proposed by state agencies could be accomplished most effectively and efficiently by a central recreation design staff. It is recommended that the State Parks Director be designated as administrator of such a central recreation design office, and this office should be made responsible for performing and coordinating all recreation facility design, except as otherwise recommended herein.

#### Arizona Game and Fish Commission

The Game and Fish Commission should continue to emphasize and expand its activities and interests in recreation opportunities related to fish, wildlife and certain boating functions. The AG&F Department should be responsible for the design of lakes primarily for fish and wildlife purposes and other projects requiring expertise in fish and wildlife management. The Department should advise

and assist the central recreation design office in the planning and design of multi-purpose lakes and recreation projects.

#### Arizona Highway Commission

Roadside rest and incidental recreation facilities for the traveling public which are to be located within state highway rights-of-way should be planned and designed by the Highway Department. The beautification of highway roadsides and the preservation of natural scenic beauty to the extent that it is affected by conditions within highway rights-of-way, should also be the responsibility of the Highway Department. The Legislature should enact appropriate legislation to qualify Arizona for Federal assistance funds for junkyard regulation and billboard control.

Due to the functional interrelationship of scenic highways and parkways with state parks, wilderness and other recreation areas, the primary responsibility for planning a statewide system of scenic highways and parkways should be placed with the State Parks Department, with assistance by the Highway Department. The actual design and construction of such facilities should be a collaborative effort by both agencies under direction of a joint advisory group.

#### Department of Economic Planning and Development

As the agency responsible for comprehensive state planning, this Department should play an important role in support of outdoor recreation planning. The state planning process, as defined in the Program Design Study recently completed by the Planning Division, specifies three basic activities: (1) Economic Information and Research Services; (2) Intergovernmental Program and Policy Services; and (3) Services to Support Functional Planning.

Development of appropriate methods of plan implementation is a specific need in all comprehensive planning programs. One such method is to prepare an annual statewide development program which establishes the linkages between plans, programs, and budgets for functional areas and identifies the budget responsibility of each agency. The Department has scheduled the preparation of a prototype annual development program as an aid to establishing the mechanics for determining the relationship of each functional activity to the plans, programs, and budgets of other governmental units and defining the responsibilities of each agency. Because of its intergovernmental and interdepartmental nature, outdoor recreation has been chosen as the subject of this prototype. Following completion of the next up-dating of the state outdoor recreation plan, this prototype will be developed in close cooperation with AORCC and the Department of Finance.

#### Water Resource Agencies

The several water resource agencies and commissions should cooperate with the Parks Board, Game and Fish Department, and AORCC in providing input to the

preparation of master plans for the preservation, improvement, development and use of the State's streams and lakes for recreational uses.

The Legislature is currently studying the overlapping responsibilities and functions of the several state water resource agencies and commissions, and it is possible that some combining of existing agencies may occur as a result. In such event, the Legislature's intent with respect to water project planning and operation should include a strong statement recognizing and providing for the recreational use of water.

#### State Land Department

The State Land Department should be required to examine and classify all state-owned land, including school trust lands, according to their most appropriate long-term use. State land should be considered a resource to be utilized to achieve state objectives--objectives which are social and physical as well as economic. In evaluating the ultimate productivity of state lands, the use which will provide the greatest dollar income should not always be considered the "highest and best" use. Instead, the present and potential values in terms of scenery, wildlife, recreation and other public uses should be given equal consideration with economic return.

Grazing lessees of state land should be required to permit public access for hunting, fishing, riding and similar recreational activities, and this public right should be enforced by the Land Department.

The Legislature should seek a better formula for the transfer of those state-owned lands having special value for public recreation purposes to the state and local governments at minimal cost rather than at appraised value for non-public uses or at public auction.

#### Superintendent of Public Instruction

The Superintendent of Public Instruction should take leadership in assuring the maximum public use of school facilities, not only for educational purposes, but also for recreation and other community uses. He should actively promote and provide guidance for the cooperative actions of school districts and local units of government in the joint acquisition, planning, development and operation of combined school-and-recreation sites, buildings and facilities.

#### Summary of Recreation Activity Responsibilities

The accompanying table summarizes the foregoing assignment of governmental and non-governmental responsibilities for fulfilling outdoor recreation demand. This summary checklist reflects primary supplier roles by recreation activity and does not necessarily exclude the occasional provision of incidental facilities for undesignated activities.

Table 4  
PRIMARY RECREATION ACTIVITY RESPONSIBILITIES, BY AGENCY

Activity Category	Federal				State			Counties	Cities & Towns	School	Indian	Pvt. & Q-P
	BLM	F5	NPS	BSFW	G&F	SPB	SHD					
<u>Active Recreation</u>												
Playing outdoor games & sports								X	X	X	X	X
Young children's outdoor play									X	X	X	X
Bicycling								X	X			
Motorbiking								X	X			X
Horse activities	X	X	X				X	X	X		X	X
<u>Water Sports</u>												
Swimming		X	X				X	X	X	X		X
Boating		X	X		X	X	X	X			X	
Water skiing		X	X			X	X	X				
Fishing		X	X	X	X		X	X	X		X	
<u>Backcountry</u>												
Camping	X	X	X		X	X	X	X	X*		X	X
Hiking & Mtn. Climbing	X	X	X			X	X	X	X		X	
Hunting	X	X		X	X						X	X
<u>Winter Sports</u>												
		X						X	X		X	X
<u>Passive Recreation</u>												
Picnicking	X	X	X			X	X	X	X		X	X
Walking for pleasure	X	X	X			X		X	X			X
Recreation travel		X	X			X	X	X	X		X	
Attend outdoor sports								X	X	X		X
Attend outdoor concerts								X	X	X	X	X

\* Day camping only.

## B. PRIORITY OF ACTIONS

The assignment of priorities is a major policy action, and one which must be re-examined periodically and modified as needed. This section of the report contains: (1) assignment of general priorities for basic types of recreation areas and (2) updated policy for assignment of L&WCF project priorities.

### GENERAL PRIORITIES FOR BASIC TYPES OF RECREATION AREAS

In Part II-B of this report, the recreation needs of the state were discussed generally in terms of recreation activity categories, and priorities within these categories were assigned. As an additional guide for decision making, the following table summarizes acquisition and development priorities for standard types of recreation areas.

In application, these priority assignments will require special assessment to accommodate the particular circumstances of any given recreation supplier's inventory of sites and facilities. While the development of existing sites is generally assigned higher priority than acquisition of new sites, it should be recognized that in some instances acquisition may be the primary need even though development cannot follow immediately. This is especially true wherever deferral of acquisition would likely result in the loss of a sole or outstanding opportunity to provide needed space in a given area.

The specific requirements of various federal assistance programs will also bear importantly on application of these guidelines to specific projects. As an example, HUD open space monies for recreation development are restricted to lands which have been acquired under that particular program. Thus, this requirement tends to promote acquisition with HUD assistance, after which applicants may seek development assistance from either HUD or L&WCF.

Table 5  
SUMMARY OF ACQUISITION & DEVELOPMENT  
PRIORITIES FOR STANDARD TYPES OF RECREATION AREAS

Type of Rec- reation Area	1st Priority	2nd Priority	3rd Priority	4th Priority
Neighborhood- level	Basic development of existing sites in high density urban neighborhoods with preference to low income areas.	Acquisition and basic development of combined park-playgrounds in urbanizing areas.	Advance acquisition of sites in areas under immediate growth pressures.	Advance acquisition of sites in areas less likely to urbanize soon.
Community- level Parks & Playfields (or District-level in Major Cities)	Further development of existing sites in high-density urban areas serving several neighborhoods, including sophisticated development.	Acquisition and basic development of park-playfields in urbanizing areas.	Advance acquisition of sites in areas likely to undergo rapid growth soon.	Advance acquisition of sites in areas less likely to urbanize soon.
Citywide Areas and Facilities	Acquisition of sites for future development for specialized citywide activities, e.g., band shells, zoos, etc.	Development to overcome deficiencies in adjoining high-density service areas.	Basic improvements to existing underdeveloped sites.	Specialized improvements, e.g., band shells, zoos, study centers, golf courses, competition pools, etc.
Metropolitan or Regional	Improvement of existing water sports sites and campgrounds.	Acquisition and development for picnicking and horse activities.	Basic improvements of existing land resource areas; e.g., hiking, trails, scenic parkways, etc.	Specialized improvements, e.g. shooting ranges, cycling areas, study centers, golf courses, etc.
State-level Recreation Parks	Improvement of existing water-based recreation areas closest to population centers, with emphasis on site and water access, beach development, and picnic & camping facilities.	Basic improvement of existing land resource areas closest to population centers.	Acquisition of privately owned resource areas of statewide significance.	Basic improvement of sites more remote from population centers.

Table 5 - continued

Type of Recreation Area	1st Priority	2nd Priority	3rd Priority	4th Priority
Historical, Archeological, Geological or Scenic Areas	Acquisition of sites threatened by neglect, misuse, or potential commercialization.	Basic restoration or preservation measures, as needed.	Improvements where feature is related to conventional recreation areas.	Specialized improvement to either free-standing or park-related features.
Wildlife Areas, Refuges and Fish Hatcheries	Acquisition and development as necessary to protect endangered species and key habitat areas by public wildlife agencies.	Acquisition and development as necessary for proper management.	---	---
Public Fishing and Boating Waters	Development of new lakes accommodating public recreation use, particularly within Tucson 2-hr. zone.	Improvement of access and launching facilities commensurate with the design capacity of existing lakes.	Development of such supporting facilities as campgrounds.	Improvement of access to remote streams.
Recreation Travel Routes	Acquisition of parkway rights-of-way and scenic easements in urban, urbanizing or other threatened areas.	Acquisition of parkway rights-of-way & scenic easements as necessary to complete functional segments of a system; provision of en route campgrounds along recreation travel routes.	---	---
Hiking and Riding Trail Systems	Acquisition of rights-of-way to fill voids in existing systems in urban, urbanizing and other threatened areas.	Improvement and extension of existing trail systems which receive heavy use.	Improvement of existing trail systems which receive light use.	Acquisition of rights necessary to develop new trail systems.
Wilderness & Primitive Areas	Official designation and preservation of outstanding areas.	Provision of peripheral "jumping off" points for hikers and riders.	---	---

## L&WCF PRIORITY POLICY

On December 29, 1965, following completion of the State's initial outdoor recreation plan, the AORCC adopted a policy statement pertaining to L&WCF project priorities. Based upon the re-analysis of the initial plan herein contained, and the Commission's experience in applying its original policy in allocating L&WC funds, the original policy has now been updated. The following revised policy statement has been adopted unanimously by the AORCC.

### POLICIES FOR GRANTING LAND & WATER CONSERVATION FUNDS

Arizona Outdoor Recreation Coordinating Commission

#### PREAMBLE

A concerted effort by all entities concerned with providing outdoor recreation opportunity in Arizona is essential to meeting the State's existing and future recreation needs. Every governmental entity applying for assistance funds under the Land and Water Conservation Fund Program should systematically identify and evaluate its recreation demands, deficiencies and needs as input to the Arizona Outdoor Recreation Plan.

It is the intent of the Arizona Outdoor Recreation Coordinating Commission to allocate available L&WC funds to those types of acquisition and development projects which are identified in the Arizona Outdoor Recreation Plan and which meet pressing existing needs. Moreover, it is the intent of the Commission that L&WC funds shall serve to supplement, rather than substitute for, federal, state and local funds appropriated for provision of outdoor recreation space and facilities.

The following policies are established as a guide to selection of proposed L&WC Fund projects by applicants as well as the allocation of L&WC funds by the AORCC. They have the basic purpose of encouraging the early construction of projects which are directed to overcoming current deficiencies in recreation space and facilities.

#### GENERAL

1. Higher priority shall generally be given to urban projects within urban areas, projects within non-urban, day-use range of population centers, and projects having national, state or regional significance.
2. Where it is judged that needs are relatively equal, new applicants shall receive higher priority than prior recipients of grants.

### TYPE OF PROJECT

1. Development projects shall generally have priority over acquisition projects, except where it can be demonstrated that a significant and/or unique resource would be lost were acquisition delayed.
2. Low priority shall be given to projects involving facilities which can more appropriately be provided by private enterprise or quasi-public organizations.

### USE CRITERIA

1. Multiple-use recreation projects shall generally have priority over single-purpose projects.
2. Facilities for participants shall have priority over facilities for spectators.
3. Year-round use projects shall have priority over seasonal-use projects.
4. Projects serving the general public shall have priority over those serving only a segment of the public.
5. Projects serving many people shall have priority over those serving relatively few people.

### LOCATIONAL CRITERIA

1. Projects in close proximity to population centers shall have priority over similar facilities proposed in more remote locations.
2. Projects in densely-populated urban areas, and particularly those in underprivileged neighborhoods, shall have priority over other urban area projects.
3. Projects providing the sole facility of its type in a given area shall have priority over similar projects located near existing recreation areas providing the same type of facility.

## IMPROVEMENT CRITERIA

1. Basic development improvements shall have priority over more sophisticated or elaborate improvements.
2. Projects providing for the basic access needs of the physically handicapped shall have priority over those which do not.

## C. RESEARCH AND PLANNING NEEDS

The current Arizona Outdoor Recreation Plan was completed and published in June, 1967. Its findings and proposals were based on 1965 and 1966 statewide inventories of recreation land and facilities and application of adjusted participation rates and other data produced by the 1960 National Recreation Survey for the Western Region. Its basic data pertaining to recreation demand was not developed in Arizona and this plan maintenance project has shown that it did not properly reflect Arizona's special conditions, traditions, attitudes or preferences. Hence, the Plan was not well-tailored to Arizona and has not proven a credible guide to the programming of recreation funds and projects by the many agencies, organizations and individuals concerned with providing outdoor recreation space and facilities for Arizona citizens and visitors. The general revision and updating of the current Arizona Outdoor Recreation Plan should be expedited.

### SECOND EDITION, ARIZONA OUTDOOR RECREATION PLAN

The re-analysis of data, conclusions and proposals of the current Plan contained in this report constitutes the first fundamental step toward updating the current Plan. The next major step should be to conduct a thorough, comprehensive program of research and analysis to determine the outdoor recreation demands, aspirations and needs of Arizona's citizens and visitors. This and subsequent steps in the process of updating the current Plan are outlined as follows:

#### General Outline ARIZONA OUTDOOR RECREATION PLAN Second Edition

1. Statement of statewide goals and objectives in outdoor recreation.
2. Identification and evaluation of prevailing conditions and resources affecting outdoor recreation demands, aspirations, needs and potentials, including:
  - a. Physiographic, climatic, ecological, biological, historical, scenic and similar environmental conditions.
  - b. Statewide and regional population characteristics, distribution patterns, growth trends and projections.
3. Conduct of a thorough recreation research program designed to determine with accuracy the nature and extent of current and projected outdoor

recreation demands and aspirations of a state population which has increased approximately 24% since the 1960 Census and National Recreation Survey.

4. A complete and accurate inventory of existing land and facilities devoted to outdoor recreation, and a pinpointing of recreation resources and opportunities.
5. Development of reasonable standards for the measurement and application of recreation demands in terms of physical sites and facilities, including locations, service areas, combinations of uses, site capacities, etc.
6. Synthesis and coordination of the foregoing factors and data into a statewide plan, both short-range and long-range, for acquisition and development of space and facilities to achieve the State's outdoor recreation goals and objectives.
7. Preparation and publication of a written and graphic Plan document.
8. Preparation and publication of a plan implementation and action program setting forth State policy for accomplishment of outdoor recreation goals, identifying and describing agency roles and responsibilities, outlining organizational and legislative actions required, establishing the planning, programming and budgeting linkage between recreation and other elements of the statewide development plan, and outlining methods for continuing improvement and updating of the Plan.

#### MASTER PLANS FOR SPECIFIC ELEMENTS

Reference has been made elsewhere in this report to the need for preparing statewide master plans for specific elements of outdoor recreation. The essence of these element plans should ultimately be incorporated into the general outdoor recreation plan; however, the need for expeditious updating of the current Plan is so great that its initiation should not be delayed pending completion of such element plans. The responsible state agencies for preparation of these element plans should commence their work as soon as possible so that these proposals may be incorporated into the updated Plan at the earliest possible date.

Recommended element plans and agencies responsible for their preparation are shown in the following table.

Table 6  
MASTER PLANS FOR SPECIFIC ELEMENTS OF OUTDOOR RECREATION

Plan Element	Primary Responsibility	Major Contributors and Participants
State Water Recreation Plan Boating Lakes & Rivers Fishing Lakes, Rivers & Streams Wild, Scenic & Recreation Rivers Central Arizona Project	AORCC	G&F, SPB, WAC, ISC, BoR
State Parks & Parkways Plan Recreation Parks Scenic Parks Scientific Parks Historic Preserves Wilderness & Primitive Areas Scenic Parkways Scenic Highways Historic Routes	SPB	SLD, G&F, HAC, FS, BLM, AHD, AORCC, BPR
State Hiking & Riding Trails Plan (Extending and coordinated with National Trails System)	SPB	SLD, FS, BLM, ASHA, AORCC
State Game & Fish Mngmt. Plan Wildlife Mgmt. & Operations Fish Mgmt. & Operations	G&F	SLD, FS, F&WS, BLM, AORCC, SPB
State Plan for Recreation for the Handicapped	AORCC	SHD, HEW, QPO

Legend

- AORCC - Arizona Outdoor Recreation Coordinating Commission
- G&F - Arizona Game and Fish Commission
- SPB - State Parks Board
- SLD - State Land Department
- AHD - Arizona Highway Department
- SHD - State Health Department
- ISC - Interstate Stream Commission, et al
- FS - U. S. Forest Service
- BLM - Bureau of Land Management
- BoR - Bureau of Reclamation
- BPR - Bureau of Public Roads
- F&WS - U. S. Fish and Wildlife Service
- HEW - Department of Health, Education and Welfare
- WAC - Watercraft Advisory Council
- ASHA - Arizona State Horsemen's Association
- HAC - Historical Advisory Commission
- QPO - Quasi-Public Organizations

Note: The Department of Economic Planning & Development should have a coordinating and information input role in each of the master plans.

The State Water Recreation Plan should have first priority. It should comprise the following major parts: (1) Statewide Lake Development and Improvement Plan, fulfilling planning requirements of the State Lake Improvement Fund Act; (2) Fishing Waters Plan; and (3) Wild, Scenic and Recreational Rivers Plan. Ultimately it should also include a comprehensive Plan for Central Arizona Project Recreation Areas.

The State Parks and Parkways Plan should comprise two basic parts: (1) a comprehensive system of scenic and recreation parks, historic preservation sites and markers, scientific parks, including museums, arboretums, zoos and archeological preserves, and wilderness and primitive areas; and (2) a system of scenic highways, parkways, and historic routes fully coordinated with and, wherever possible, connecting feature areas of the park system.

The State Hiking and Riding Trails Plan should record the location, features and jurisdictional agency for a system of existing and proposed hiking and riding trails extending throughout the State. It should be coordinated with the State Parks and Parkways Plan and with the National Trails System. It should include standards for construction, maintenance and marking of trails, and provide for vehicular access routes and terminal facilities.

A Plan for Game and Fish Management, including wildlife areas and fish hatcheries, should be prepared by the Arizona Game and Fish Department.

A special Plan for Recreation for the Handicapped should be undertaken as early as staff and funds permit. A large measure of responsibility for its preparation should be placed with the several non-profit health organizations and foundations.

#### D. SUBSTANTIVE ISSUES

Physical, social, economic and political changes, brought about by a decade and a half of extremely fast population growth and economic development, have created a mounting need and pressure for some far-reaching reforms in Arizona's state government. Several issues confronting the state are so fundamental and pervasive that their resolution cannot be avoided much longer. For the most part, these are issues which have cut across agency lines to the extent that there has been a tendency to either assign closely similar responsibilities to several agencies or to make no assignments at all. As a result, policies in some areas of concern are confusing and unrealistic, while in others they are almost completely lacking.

Very few of these issues can be resolved without change in official policy, attitudes and administrative directives. None can be satisfactorily resolved unless they are given serious consideration and in-depth study at all levels--by citizens, community leaders, governmental officials and legislators. All are critical to sound growth and progressive state government, and all are crucial to the ultimate achievement of Arizona's outdoor recreation goals and objectives.

#### ISSUE: RECOGNITION OF SCENIC, RECREATION AND WILDLIFE VALUES IN WATER MANAGEMENT

The optimum development, use and management of Arizona's water resource has been a major issue since long before statehood, and will always require concerted effort. The very population growth and economic diversification which have created new dimensions in water needs also demand the complete reassessment of earlier concepts of optimum water use. Water is no longer merely a simple, self-evident, statewide need. The time has come for Arizona to decide how best it can divide what will always be a limited supply of water among the many potential users. This decision requires a realistic projection of the optimum size and location of the future population, and determination of the kinds and extent of industry and other economic development which the projected water supply will support. The state should be concentrating on developing an economy which the future water supplies will support, instead of worrying so desperately about where it will get the water needed to satisfy an economy based on a come-hither development approach.

Because the state's economic growth has always been so dependent upon management of a limited water supply, water has come to be valued almost exclusively in economic terms. This tendency to think and plan water use on a measured, dollar-return, cost-benefit basis rather naturally leads to a disregard for those values which cannot be expressed in similar terms. It also leads to the false

conclusion that economic success automatically satisfies public health and welfare needs. While the value of water for agricultural, commercial and industrial uses can be expressed in dollars, its value for such non-materialistic uses as recreation, scenery and wildlife habitat cannot. The intangible value of water as scenery, wildlife habitat, and as a recreation base in itself are nonetheless real or important to the public health and welfare simply because they cannot be expressed in dollars and cents.

These intangible values of water are not receiving due consideration by other water interests in Arizona. They are the first to be compromised wherever there is competition for the limited water supply. Arizona is rapidly losing important ecological, wildlife habitat and scenic values as the result of widespread, experimental phreatophyte clearance projects sponsored by numerous federal, state and local water development agencies. These projects, varying in scope from the selective cutting of mature Verde Valley cottonwoods to the total removal of all riparian vegetation, are either underway, under study, proposed, or authorized to commence along every major river course in the state.

These water agencies are apparently convinced that these other resource values are worthy of serious consideration only when they do not conflict with the economic benefits of water "salvage." The Arizona Game and Fish Department reports that the habitat of literally millions of game and non-game species of wildlife, including several rare and endangered species, will be destroyed if phreatophyte clearance continues at its present rate of speed and carelessness. No central authority has been established to provide unified control, to correlate research, to evaluate practical results, or to mitigate loss of other values.

The Governor and the Legislature should discourage the further proliferation of phreatophyte clearance projects until reasonable procedures and criteria can be developed for selecting appropriate locations for phreatophyte clearance, for measuring scenic and wildlife values, and for adequately protecting the general public interest on a par with the water interests.

The Legislature is presently hearing testimony relative to the need for consolidation and functional realignment of some 18 existing state agencies having some measure of authority in matters concerning the water resource. While there seems to be a general agreement on the consolidation and redefinition of function, the proper organizational structure and enabling laws remain to be established. From the standpoint of Arizona's future capability of meeting the outdoor recreation demands of its citizens, it is essential that the Legislature incorporate in any forthcoming statutory improvements in water resource administration adequate guarantees that recreational, scenic and wildlife habitat values, opportunities and potentials will receive full and consistent consideration in every aspect of water planning, development, use and management.

## ISSUE: PRESERVATION OF ARIZONA'S SCENIC HERITAGE

Arizona has a justifiable reputation as a dramatically scenic state. Unfortunately, few people seem to realize that natural beauty is a very vulnerable resource --that it is subject to a depreciation so subtle and yet so constant that one day it is gone. Arizona's scenic beauty is under intensive pressure by excessive commercialism, vandalism and carelessness--a pressure as remorseless as wind erosion.

Arizona is spending its scenic inheritance. The value of the few scenic preservation measures which have been enacted have generally been negated by the appropriation of insufficient funds. Despite the efforts of the Governor's Commission on Arizona Beauty and many other concerned citizen organizations, the Legislature has failed to enact the legislation needed for billboard and junkyard control. While the Legislature has appropriated funds for acquisition and preservation of such outstanding scenic attractions as Tonto Natural Bridge, it has not shown an interest in acquiring scenic easements along highways, or even in assuring that the scenic values of state lands abutting highways will not be destroyed through careless leasing and land use policies.

Citizens, public officials and state legislators need to take a hard look at what is happening to Arizona's scenic heritage, and then proceed to enact and support progressive legislation which establishes an effective environmental control program.

## ISSUE: AN UP-DATED STATE LAND MANAGEMENT POLICY

The State of Arizona holds title to nearly eleven million acres of land, 90% of which is held in trust for school and institutional purposes. Since statehood, state-owned lands have been managed according to the provisions of the State Enabling Act and the Constitution. <sup>1/</sup> Those provisions, based on land management concepts, economic conditions and social attitudes of the early 1900's, are seriously outmoded and effectively prevent Arizona from using its lands for maximum benefit.

Historically, the State's land laws and administrative policies, in combination, have favored retention over disposal, single use over multiple use, and sale at public auction through competitive bidding. They have generally prevented state agencies and local governments from making optimum use of this major

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<sup>1/</sup> Seventieth Arizona Town Hall on Public Land Use, Transfer and Ownership in Arizona, Arizona Academy, 1965.

public resource in serving the outdoor recreation needs of the citizens.

State-owned lands, plus those additional "in-lieu" lands to which Arizona is entitled, constitute a potentially powerful tool which, if applied with innovative management techniques and progressive administration, could produce tremendous benefits to the state and its political subdivisions in overcoming some of the difficult contemporary problems confronting government at all levels. Some of the added recreational benefits that could derive from state-owned land are:

1. To better plan and guide the location and type of outdoor recreation development;
2. To assist state and local government to provide better public recreation service at lower cost;
3. To preserve and protect natural scenery and other worthy features;
4. To assure preservation of abundant open space near growing population centers.

There is ample reason to believe that the more progressive management which produces the foregoing benefits will also produce greater benefits to the common schools.

Arizona's legislators, officials, community leaders and citizens should carefully assess current state land policies and then decide whether the continuation of these policies will be in the best interest of the majority of the citizens. The Legislature should not be dissuaded from proceeding toward the comprehensive up-dating of state land laws and policies by the fact that such action may ultimately require amendment of the Constitution as well as supporting action at the Congressional level.

From the standpoint of achieving Arizona's outdoor recreation goals and objectives, the following elements of new state land policy could be especially beneficial:

1. All state-owned land should be examined in detail and classified according to its most appropriate use or uses, taking into account the intangible values of scenery, wildlife habitat, natural phenomena, and recreation environment as well as potential dollar return.

2. The concept of multiple use management should be adopted and applied.
3. Provisions for the transfer of state land to state agencies and local governments for public use at nominal cost should be modeled after the Recreation and Public Purposes Act.

ISSUE: COORDINATION OF STATE AND FEDERAL  
OUTDOOR RECREATION ACTIVITIES

In Arizona, at least seventeen Federal and eight State agencies are involved to some extent in outdoor recreation in addition to a large number of regional, metropolitan, county and municipal agencies and quasi-public and private organizations. The Federal government, and particularly the U. S. Forest Service, National Park Service, and Bureau of Land Management, is, and will continue to be, the major supplier of outdoor recreation space and facilities in the state. The Indian Reservations, comprising 27% of the state's land area, also exert a significant influence on the state's ability to meet the outdoor recreation demands of its citizens and visitors.

By statute, the AORCC is responsible for coordinating the activities of all outdoor recreation agencies and organizations, and experience has proven the serious need for such coordination. The AORCC's ability to provide coordination even among State agencies is limited at best, and its power to coordinate Federal agencies is strictly limited to persuasion and leadership.

Coordination of the several federal agencies instrumental in outdoor recreation is complicated by the fact that these agencies are administered by several different cabinet-level Departments, which vary widely from one another as to purpose, approach, administrative policies, and appropriation of funds. The Bureau of Outdoor Recreation should take responsibility for developing the ways and means by which the recreation actions of the Federal agencies can be coordinated, and for assuring the responsiveness of Federal agencies to the efforts of the AORCC toward intergovernmental coordination in recreation programming.

## E. CAPITAL IMPROVEMENT PROGRAMMING

A capital improvements program normally consists of a comprehensive listing of all major physical facilities, including estimated costs, which will be required to satisfy long-term needs of the public. The CIP is a part of the general financial plan required to carry out the physical facility recommendations of any master development plan, and it should cover the same time period encompassed by such master plan. A five-year capital budget is developed by selecting the highest priority items from the long-range capital improvements program. Subsequently, an annual capital budget is developed by selecting the highest priority items from the five-year capital budget. While very approximate cost estimates suffice for the CIP, estimates for projects in the five-year capital budget must provide a much better picture of future construction costs, and should be based on preliminary project plans. More precise estimates for projects included in the annual budget should be based on final construction plans.

Policies for allocating L&WC Funds have been established earlier in this report. In addition, general acquisition and development priorities for standard types of recreation areas as well as for actions in the various categories of recreation activities have also been established. However, with respect to the appropriation of funds required to accomplish such acquisition and development, it must be recognized that: (1) the AORCC functions in an advisory capacity and has no direct influence over appropriations; (2) AC RCC's direct influence is limited to its administrative actions in the L&WCF and SLIF programs; and (3) the appropriation of state and local matching funds for L&WCF projects is directly dependent upon the availability of Federal matching funds, which has varied significantly from year to year.

Unlike the normal planning process, this plan maintenance project simply cannot produce a valid draft of a suitable capital improvements program to carry out the Arizona Outdoor Recreation Plan. Such a draft would necessarily be based on more than 400 separate capital improvements programs prepared by and representing the long-range intentions of federal, state and local governmental and non-governmental entities. However, this report does provide at least a guide to such programming by other entities and, although this guide actually comprises only a compilation of proposed future capital expenditure actions provided by many of the primary recreation suppliers, it may stimulate progress in capital improvements programming for outdoor recreation throughout the state.

A survey to compile five-year schedules for proposed acquisition and development together with budget estimates, was conducted as part of this plan maintenance project. Inquiries were made of the principal federal and state recreation agencies, those counties having a parks and recreation commission and/or department (representing 88% of the state's population), and cities and towns over

10,000 population (representing 86% of the population living in incorporated areas). While the response from federal and state agencies was generally satisfactory, it was usually accompanied by strong qualifications as to the unpredictability of timely appropriations. The initial response from counties, cities and towns was poor, due generally to insufficient time for converting local records to the BCR-desired format. It was also discouraging that as yet relatively few counties and municipalities actually carry out a long-range capital improvements programming process, and their recreation directors were understandably reluctant to venture departmental aspirations as local governmental policy. The local response also evidenced an unwillingness to commit so far in advance to actions and approaches related to L&WCF and SLIF projects. Follow-up telephone contacts of local officials commonly elicited the response that they would try to provide local matching dollars for all available assistance monies, whatever the source. For cities and towns, this generally means either HUD or L&WCF assistance funds. In order to avoid any possibility of prejudicing future actions on local applications for matching funds, the survey information in Table 7 has been stated in aggregate totals without identification of specific governmental units.

Table 7  
SUMMARY OF ANTICIPATED OUTDOOR RECREATION EXPENDITURES  
 State of Arizona

Level of Government	(in thousands)					5-Yr. Total
	1969-70	1970-71	1971-72	1972-73	1973-74	
Federal	\$ 2,150.0	\$ 4,565.0	\$ 3,475.0	\$ 4,147.0	\$ 5,563.5	\$19,900.5
State	3,725.9	3,211.5	3,511.2	3,426.9	4,236.9	18,112.4
County	888.8	1,205.7	1,110.0	1,335.0	1,444.1	5,983.5
Municipal	5,766.5	4,666.8	4,049.0	4,546.7	8,273.0	27,302.1
<b>Totals</b>	<b>\$12,531.2</b>	<b>\$13,649.0</b>	<b>\$12,145.2</b>	<b>\$13,455.6</b>	<b>\$19,517.5</b>	<b>\$71,298.5</b>

Notes:

- Federal - Includes Bureau of Sports Fisheries & Wildlife, Bureau of Land Management, National Park Service and U.S. Forest Service.
- State - Includes Game & Fish Commission, State Parks Board and State Highway Commission.
- County - Responses from 5 counties, containing 83% of the state's population.
- Municipal - Responses from 10 municipalities, containing 85% of the state's population.

## FEDERAL SPENDING

Presupposing affirmative departmental and Congressional action, the four principal federal recreation agencies anticipate spending \$19.9 million in Arizona over the next five years -- \$3.1 million for acquisition<sup>1/</sup> and \$16.8 million for development. By comparison, the current ACRP estimated that these agencies would spend \$28.2 million over a five-year period beginning in 1968, which estimate included an inflated assumption that the National Park Service would spend \$22.5 million during that period.

Table 8 provides a breakdown of anticipated spending by each federal agency over the next five years. The depressed level of short-range recreation expenditures is evidenced by the fact that both the BSF&W and BLM have no monies budgeted for the current fiscal year. Moreover, total spending by the four major agencies for 1969-70 is only \$2.1 million compared to the \$3.5 to \$5.6 million annual levels proposed in subsequent years.

Table 8  
SUMMARY OF ANTICIPATED FEDERAL EXPENDITURES  
FOR OUTDOOR RECREATION, FY 1969-73  
 State of Arizona

Federal Agency	(in thousands)					5-Yr. Total
	1969-70	1970-71	1971-72	1972-73	1973-74	
Bur. Sports Fish & Wildlife	\$ 0.0	\$ 0.0	\$ 20.0	\$ 26.0	\$ 276.5	\$ 322.5
Bureau of Land Mgt.	0.0	144.0	180.0	150.0	198.0	672.0
Nat. Park Service	1,027.0	2,724.0	2,501.0	2,887.0	4,066.0	13,205.0
U.S. Forest Service	1,123.0	1,697.0	774.0	1,084.0	1,023.0	5,701.0
Totals	\$2,150.0	\$4,565.0	\$3,475.0	\$4,147.0	\$5,563.5	\$19,900.5

<sup>1/</sup> All to be undertaken by U. S. Forest Service using L&WC Funds.

## STATE SPENDING

Recreation expenditures anticipated by the Game & Fish Commission, State Parks Board and Highway Commission over the next five years total \$18.1 million, an amount closely approaching the total of anticipated Federal spending. This total includes anticipated matching funds from such assistance programs as Land & Water Conservation Fund, Highway Beautification Act, Pittman-Robertson Act, Dingell-Johnson Act, Historical Preservation Program, etc. Actual anticipated outlays by the State total \$3.9 million, or 22% of the five-year total.

Table 9  
SUMMARY OF ANTICIPATED STATE EXPENDITURES  
FOR OUTDOOR RECREATION, FY 1969-73

State of Arizona

State Agency	(in thousands)					5-Yr. Total
	1969-70	1970-71	1971-72	1972-73	1973-74	
G & F Comm.	\$ 618.9	\$ 232.9	\$ 529.9	\$ 166.9	\$ 181.9	\$ 1,730.5
State Pks. Board	587.0	458.6	461.3	740.0	1,535.0	3,781.9
Highway*	2,520.0	2,520.0	2,520.0	2,520.0	2,520.0	12,600.0
<b>Totals</b>	<b>\$3,725.9</b>	<b>\$3,211.5</b>	<b>\$3,511.2</b>	<b>\$3,426.9</b>	<b>\$4,236.9</b>	<b>\$18,112.4</b>

\* Represents average annual estimate derived from total five-year estimate.

It is noteworthy that proposed expenditures by the Highway Department for roadside rests and scenic overlooks, which are largely federally funded, are far greater than those of the recreation agencies. The anticipated spending shown in Table 9 is substantially lower than that stated in the current AORP, notwithstanding the significant increases anticipated by both the Game & Fish and State Parks Departments.

This is attributable to the failure of the Legislature to authorize participation by the Highway Department in junkyard and billboard control. The ACRP had anticipated that as much as \$18.66 million would be spent under Title I (Outdoor Advertising Control) and Title II (Junkyard Control) of the Highway Beautification Act of 1965, representing a total of \$14 million in Federal monies and \$4.66 million as the State's share.

Table 10  
COMPARISON OF AORP AND CURRENT ANTICIPATED  
STATE OUTLAYS FOR OUTDOOR RECREATION

State Agency	ACRP FY 1968-72	Current FY 1969-73
Game & Fish Commission	\$ 950,000	\$1,095,500
State Parks Board	400,000*	2,044,750
Highway Commission	3,883,500	780,000
Totals	\$5,233,500*	\$3,920,250

\* Represents a correction of assumed figures cited in the AORP.

COUNTY AND MUNICIPAL SPENDING

Counties, cities and towns in Arizona expect to spend over \$33 million for outdoor recreation during the next five years. This anticipates Federal assistance funds amounting to more than \$6.2 million, which may or may not be forthcoming. The remainder of the funds will come from local general funds, bonds, and, in the case of Flagstaff, a special recreation tax. In aggregate terms, then, local governments are presently planning to spend more in Arizona on outdoor recreation than either Federal or state agencies during the next five years.

Although available data was incomplete, it is obvious that acquisition costs represent the more pressing problem for local recreation agencies, particularly municipalities. In addition, facilities for meeting the demands of an urban population, e.g., swimming pools, golf courses, and multi-purpose recreation areas, are more expensive than the kinds of facilities required for backcountry recreation. Hence, the financial needs of localities, particularly those experiencing rapid urbanization, are substantial.

Comparisons with the ACRP in this category of spending are not possible since the ACRP did not survey the planned spending by cities and towns. It was suggested, however, that local government provide \$7.2 million, or 36%, of the \$20 million proposed to be spent over five years for picnicking, trails, camping, scenic roads and roadside rests.

No one can place a realistic price tag on Arizona's current outdoor recreation needs. The AORP indicated that \$200 million was needed for a five-year development program, of which \$177 million was proposed to be spent for lakes.

Moreover, the total estimate was derived from the estimated costs of very few segments of recreation facility needs, as indicated below:

ACRP PROPOSED 5-YEAR DEVELOPMENT EXPENDITURES

Picnicking	\$ 6,000,000
Trails	8,000,000
Camping	6,000,000
Lakes	177,000,000
Scenic overlooks & roadside rests	<u>3,000,000</u>
Total	\$200,000,000

The re-analysis of ACRP data conducted as a part of this plan maintenance project has (1) indicated a substantially lower need for picnic facilities, (2) noted a vast mileage of undesignated trails primarily in need of maintenance and rehabilitation, (3) raised serious doubts as to the extent of boat launching deficiencies, and (4) downgraded the priority of need for scenic highways in favor of coordinated planning and preservation of existing resources through land use and development controls. The most obvious shortcoming of the ACRP proposal was the lack of data regarding urban recreation needs and the low ratio of spending assigned thereto.

PROJECTED L&WC FUND DEMAND

The survey of anticipated state and local spending provides a basis for assessing the demand for L&WC Funds in Arizona. Moreover, it provides a rough state-wide measure of the types of recreational facilities demanded by Arizonans.

The major imponderable in the L&WC Fund program is the amount of funding that can be expected annually. As indicated in Table 11, the funding levels estimated by federal agencies have been lower than the totals authorized, and the actual apportionments less than those predicted. It is ironic that as Arizona's recreation needs have increased, the monies forthcoming under the Land and Water Conservation Fund program have declined.

Table 11  
LAND & WATER CONSERVATION FUND LEVELS, 1964-70  
 State of Arizona

Item	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
1. Authorized Funds	\$ --	\$ --	\$ --	\$ --	\$1,200.0	\$1,200.0
2. Federal Estimate	131.1	1,065.8	827.4	838.1	582.6	360.0
3. Actual Apportionment	131.1	1,052.9	721.4	793.2	419.5	n.a.
4. Annual Shortage	0.0	12.9	106.0	44.9	163.1	--

Line Explanations:

1. Funds authorized by PL 90-401, but not appropriated.
2. Funds reserved by the Secretary of the Interior.
3. Funds actually apportioned to the state.
4. Line 2 minus Line 3.

The AORCC presently has applications for L&WCF assistance for fiscal year 1969 totaling almost \$1.2 million dollars. In contract, only \$360,000 has been predicted as being available to Arizona for assistance. The following summarizes the requests for assistance for 1969-70:

SUMMARY OF CURRENT L&WCF REQUESTS

	<u>Amount Requested</u>	<u>%</u>
State Agencies	\$ 70,792.45	6.0
Counties	287,123.88	24.5
Municipalities	815,767.50	69.5
Totals	<u>\$1,173,683.83</u>	100.0

The predictable effect of an acute shortage of matching monies will be a drastic reduction of outdoor recreation acquisition and improvement activities. Moreover, the priority guidelines developed herein will be severely tested since some

high priority projects will undoubtedly have to be rejected due to lack of matching monies.

The predominant L&WCF requests have been from urban areas, representing a continuation of trends noted in the AORP. At that time, aggregated BCR-approved project monies had been distributed as follows: State Agencies - 19.4%, Counties - 11.6%, and Municipalities - 69.0%. <sup>1/</sup>

A survey of anticipated requests for L&WCF matching monies for the next five fiscal years shows that there will be an unrelenting demand for such funds, as indicated in Table 12.

Table 12  
PROJECTED REQUESTS FOR L&WC FUNDS, FY 1969-73  
 State of Arizona

Level of Government	(in thousands)					5-Yr. Total
	1969-70	1970-71	1971-72	1972-73	1973-74	
State	\$ 70.8	\$ 350.7	\$ 120.7	\$ 345.0	\$ 717.5	\$1,604.7
Counties	287.1	242.3	240.4	443.0	497.5	1,710.3
Municipalities	815.8	751.4	664.3	853.3	1,408.7	4,493.5
Totals	\$1,173.7	\$1,344.4	\$1,025.4	\$1,641.3	\$2,623.7	\$7,808.5

Since the survey of local governments did not include several of the smaller cities, towns, and counties, the foregoing estimates can be considered conservative. In addition, it is probable that the expected scarcity of local funds had effectively reduced the federal assistance expectations of responding localities.

<sup>1/</sup> In addition, the Department of Housing and Urban Development's Open Space program has contributed some \$729,889 since 1966 to recreation projects in Phoenix and Scottsdale.

### PROJECTED SLIF DEMAND

It is predictable that the demand for State Lake Improvement Funds will continue to exceed the supply, especially since the liberalization of requirements to permit 100% state grants. This will likely provide \$300,000 per year, or \$1.5 million over a normal five-year period, for selected types of improvements.

The July 1969 allocation from the State Lake Improvement Fund was the first made by ACRCC and the first since fiscal year 1967-68. Some \$720,750 in project requests were reviewed and \$648,725 allocated, raising the total amount allocated under the program since 1963-64 to \$1,221,000.

The \$1.5 million that can be predicted as being made available through SLIF for lake improvements over the next five years is insignificant in contrast to the ACRP's claimed need for \$177 million in improvements. Undoubtedly, other monies will be devoted to lake improvements, but nothing on the scale suggested as being necessary. Moreover, the re-assessment of recreation activities and recreation area needs contained herein would contradict the ACRP's conclusion that 88% of the next five years' outdoor recreation spending in Arizona should be devoted to lakes.