

MASTER PLAN
OF
CHIRICAHUA NATIONAL MONUMENT

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Chapter 1, Basic Information

The Land

The Visitor

Prepared by

Ray B. Ringenbach, Supt.

Date

6-2-64

Certify Accuracy

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BASIC INFORMATION

The Land

Location

Chiricahua National Monument is located in Cochise County, Townships 16 and 17 S, Ranges 29, 29 $\frac{1}{2}$, and 30 E. Its latitude is 32° N. and its longitude is 109° 20' W, Arizona.

Access

The nearest major highway is U.S. Interstate Route No. 10, an east-west highway. U.S. Route No. 80 is east, south, and west of the monument. From these two main routes a network of county, state, and federal roads provide access to the park. U.S. Highway 666 and State Highway 181 are paved and provide access from the town of Douglas, Arizona, 70 miles distant on the International Boundary. These same two highways also provide access from the northwest from the junction with Interstate 10, a distance of 60 miles. State Highway 186 provides partly paved access from the town of Willcox, 36 miles away. An unnumbered Cochise County road from Bowie, Arizona on Interstate 10 provides entry by joining with State 186 from Willcox; this route shortens the distance to 34 miles. There is no public transportation to the park. Cross country busses are available to the nearby towns of Willcox, Bowie, and Douglas. Rail transportation to Willcox and Bowie is provided by the Southern Pacific Railroad Company. Commercial airline service is provided to Douglas (American Airlines and Apache Airlines only) and Tucson International Airport, 118 miles west, is the main terminus for all major airlines. The

nearest city airport is at Willcox which is not used by any public airline.

Surroundings

Population Centers. The city of Tucson is located 118 miles west of the park and has a population of 200,000 with a metropolitan population of over 350,000 persons. It is the second largest city in the state and its present population has tripled in the last ten years. Douglas, 70 miles distant, a town of 12,000 inhabitants, and Willcox, 36 miles away with 2,500 persons, furnish adequate community service and have had modest increases in population of about 10 percent in the last 10-year period.

Characteristics. The Chiricahua Mountain Range totaling about 800 square miles of which 17 square miles are in the park, is an isolated, biological "island" representing a high wooded mountain region, surrounded by hot, arid grasslands. Long time isolation of these mountains has changed their biotic pattern. Comparatively high rainfall has resulted in abundant and varied species of birds, animals, and plants. The rugged terrain made it significant in Southwest history as a refuge between raids by the Chiricahua Apache Indians.

Land Use. The park is bounded on the north, east, and south by the Coronado National Forest and on the west by private land. Use of the lands on the adjoining U. S. Forest follows a standard pattern of "Multiple Use". Grazing, mining, and timbering are conducted near park boundaries and hunting is permitted. Picnic and camping sites are provided as the recreational usage. The land in

private ownership on the park west boundary is used for cattle raising and four or five large landowners control most of the acreage.

Features of Interest. Fort Bowie, proposed National Historic Site, is about 20 miles to the north. Coronado National Memorial is 100 miles to the southwest and Saguaro National Monument is 100 miles to the northwest near Tucson. The adjoining Coronado Nat'l Forest along with its picnic and camping facilities has an extensive trail system providing for hiking and horseback trips. The town of Tombstone, Arizona, a ghost town representing early day mining activity, is 70 miles to the west, has a small museum and the Courthouse has been declared a State Park.

Legal Factors

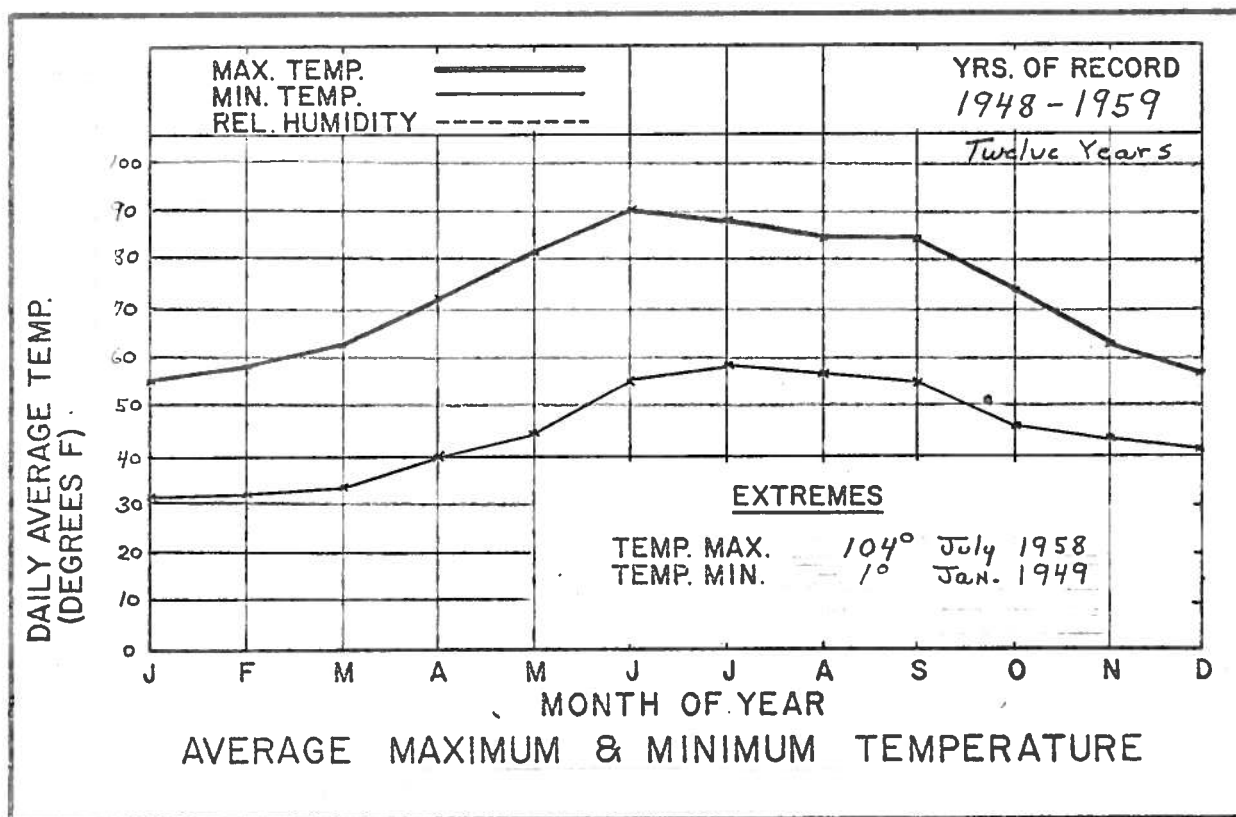
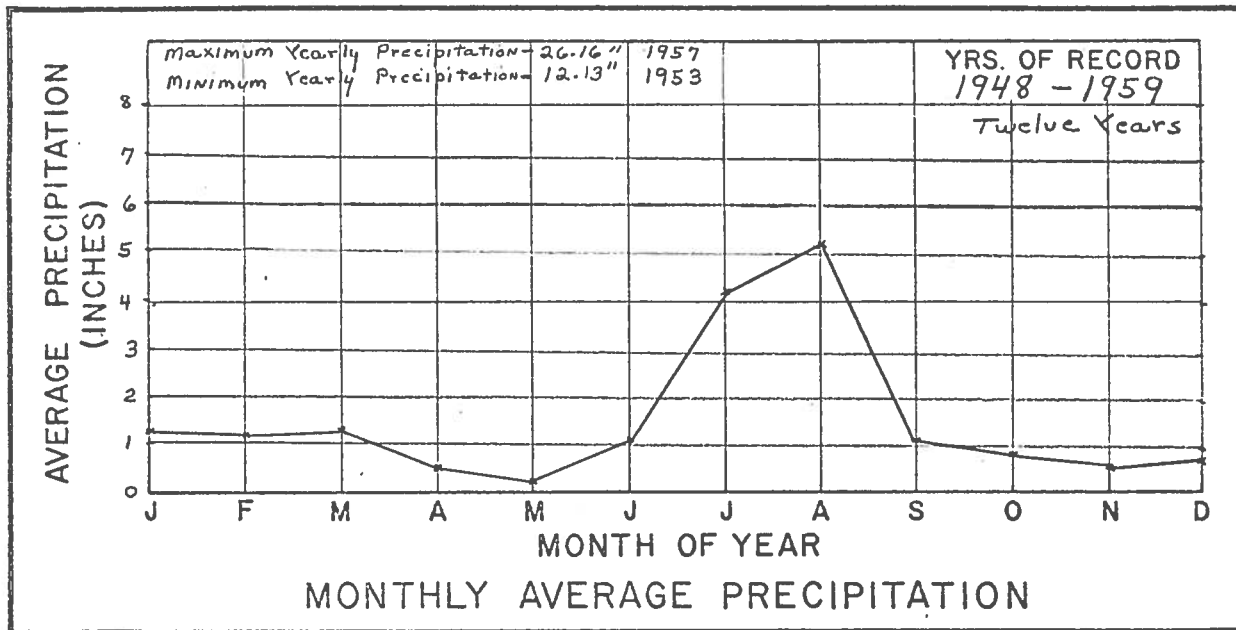
Establishment. The monument was proclaimed by President Coolidge on April 18, 1924. At that time it was a part of the Coronado National Forest. In 1938 the boundary was extended to include important geological formations and to provide better control over the entrance road.

Legal Provisions. Two grazing permits carrying over from USFS management permit eleven head of stock. The monument has concurrent jurisdiction with the State Game and Fish Department. One special use permit allowing access through the monument to mining activity on adjacent USFS lands is currently in effect.

Climate

Temperature. Generally, it is warm in the spring and summer and cold in the fall and winter. Maximum temperature to date was

CHIRICAHUA NATIONAL MONUMENT



CLIMATE CHARTS

104 degrees in 1958. A minimum temperature to date was recorded in 1949 with a reading of minus one degree. Records of the past twenty years indicate a maximum mean temperature of 90 degrees in June. January is the coldest month with an average mean minimum of 31 degrees. Visitation occurs the year around and construction projects may normally be scheduled throughout the year.

Precipitation. Most of the rainfall occurs during the summer months of June through August. Fifteen inches per year is considered as the average. Four to six snowfalls per year is normal with depth averaging five inches per snowfall. Only the trails in the higher elevations retain snow for more than a 10-day period. The maximum recorded snow depth is twenty-four inches recorded in 1953-54. Drifting occurs at the 6,500-foot elevation to a maximum depth of four feet.

Wind. High velocity winds occur during the early months, namely January through May, and average about 12 miles per hour. In the higher elevations in the park wind velocities have been estimated to reach 40 miles per hour.

Special Conditions. Thunderstorms are frequent during the summer months and lightning accompanies every storm. 103 lightning strikes were recorded in June 1963, alone. Fog or haze occurs on the average of 15 times per year during the rainy season, hanging low in the canyons and obscuring the mountain peaks and terrain.

Fire History

Between one and two fires occur annually, mostly from lightning. Two man-caused fires have occurred since 1959. Each fire

has resulted in less than one acre burned. On the average, about 500 lightning strikes occur in the monument every year, many of which hit rock pinacles without producing fire or tree damage. The fire season is considered to be from May 1 through September 30, the period of high public visitation and storm frequency. A fire lookout building is manned during this period. Cooperative agreements exist with the U.S. Forest Service on adjoining land regarding fire suppression.

Terrain

Elevations in the park vary between 5,160 to 7,365 feet. The terrain consists of canyons and mountains with little level country, is exceedingly rugged, and is composed of welded tuff or rhyolitic lava such weathered by erosion in forms of towering spires, pinacles, and balanced rocks. Two main canyon drainages exist; namely, Bonita and Rhyolite Canyons, these drain westerly with their confluence near the headquarters entrance area.

Soils

Generally, the soil mantle is described as porous with sand and gravel comprising that found in the alluvial portions of the monument. Soils at the higher elevations are more highly mineralized and less decomposed. All top soil is underlaid with rhyolite or welded tuff formation, some ash, rhyodacite, basalt breccia, etc., all volcanic in origin. Other than the Lake Deposit area, little silt is contained in monument soils. Frost penetration is considered less than twenty-four inches, topsoil is rarely deeper than twenty-four inches, and the static water level at the headquarters area is twenty-six and one-half feet. Excavations for

foundations, other than in alluvium, encounter large boulder and solid rock formations twelve inches below the surface.

Resources

Vegetation. Vegetative types consist of grassland (212 acres); woodland (812 acres); coniferous forest (6,535 acres); chaparral (3,102 acres). The grassland type is found around the fringes of the park at the lower elevations. The woodland type is confined largely to the lower elevations in the side canyons and hillsides. The coniferous forest is to be found in the canyons and mesa tops. It is more or less open forest of ponderosa pine, pinon, juniper, and Chihuahua pine. The chaparral type is the second largest type represented, a good portion of which has been overrun by fires. The principal species making up this type are the manzanitas with oak and mahogany the associate species. No list of exotics is in existence but such has been proposed for specific research. No major pest nor plant and tree diseases are known to exist but a definitive survey has been proposed.

Water. No permanent water in the form of streams or lakes are contained. Main drainages carry run-off on the average of three months per year.

Wildlife. A definitive survey has been proposed concerning census, habits, migratory routes, etc. concerning wildlife. Observations have been made for many years and records indicate a tremendous variety of mammal, bird, reptilia as residents and transients. It is suspected that every animal found in the southern part

of the state and many from the Sonoran state of Mexico are or have been within the park.

Fish. None exist.

History and Archeology. The entire Chiricahua Mountain Range was used by the Chiricahua Apache Indian in historic times. No evidence that the Apache lived within what is now the park exists but it can be concluded generally that some portions of the park were utilized in their hunting forays. Pottery sherds, metates, and manos along with other evidences of prehistoric Indian habitation in the vicinity exist, and while some evidences are contained within the park no physical remains of structures exist. The remains of a prehistoric Indian village or compound has been located just off the west park boundary, such thought to be of the Salado culture circa 1300 A.D.

Geological. The primary interest in the park is the geology. Most of the park is underlain by a thick sequence of volcanic rocks of the Cenozoic, Lower Cretaceous, and Lower Permian. With the formation of the mountains by earth movement, and subsequent erosion of the exposed rock, there is now contained in the park a myriad of balanced rocks, spires and walls, pinacles and mass rock formations. Eroded into fantastic shapes, often resembling various forms of animal life, etc., many formations have been named, i.e., "Punch and Judy", "Sea Captain", "China Boy", and "Duck". Other geological phenomena include the "Lake Bed Deposit" and the "Volcanic Hailstones". A study and view of the geology is available to the public by developed roads and trails.

Recreational. The main recreational pursuits within the park

other than sightseeing include hiking, mountain climbing, photography, bird observation, vegetation study, picnicking, and back-country camping as well as camping in the developed site.

Special Scenic Features. The scenic road drive from the entrance through Bonita Canyon to the overlook at Massai Point is presently utilized by 99 percent of all the public visiting the area. The Massai Point overlook provides a panoramic view of the geological formations of the park, the valleys to the east and west, and distant mountain ranges in both Arizona and New Mexico. Sixteen miles of high-standard foot and horseback trails permit travel into the Heart of Rocks area, the Natural Bridge area, and to Echo Park in Echo Canyon. Ordinary but existent seasonal variations include general snow scenes, plant blooms in early spring, and nocturnal, small animal movement.

Land Status

The monument totals 10,695.90 acres of which 168.65 are in private ownership. The Approved Boundary Status Report recommends purchase of all inholdings with no boundary changes. Inholdings are: Mrs. Lillian Riggs, 54.00 acres in $S\frac{1}{2}$, $S\frac{1}{2}$, S26, T16S, R29E; Mrs. Pauline Porter Kraft, 26.00 acres in $S\frac{1}{2}$, $S\frac{1}{2}$, S26, T16S, R29E; Silver Spur Ranch, 80.00 acres in $S\frac{1}{2}$, $S\frac{1}{2}$, S26, T16S, R29E; Queen of Sheba Millsite, 5.00 acres in $S\frac{1}{2}$, $SW\frac{1}{4}$, $SW\frac{1}{4}$, S18, T16S, R30E; and Red Plomo Mine Claim, 3.65 acres in $NE\frac{1}{4}$, S18, T16S, R30E.

A scenic easement, 80' wide, through the $E\frac{1}{2}$, $S\frac{1}{2}$, S26, T16S, R30E for monument road Route No. 1 is vested in the County of Cochise, Arizona, and is utilized by the park for visitor access.

BASIC INFORMATION

The Visitor

Visitor Characteristics

Number. Visitor travel from 1950 to 1960 indicates a pattern of steady increase with no big spurts or declines. This can be accepted as a normal condition since no outside factors influenced traffic to any great degree. Projected travel beginning in 1967 shows an acceleration of area traffic based on development of the Fort Bowie National Historic Site and anticipated paving of the approach road routes from Willcox and Bowie.

Heaviest peak travel occurs in June, July and August but the six months span from April through September are considered heavy visitor periods. Normally the Labor Day holiday is the heaviest travel day and Saturday and Sunday the peak days of the week throughout the year. All visitors enter and leave the area by a single route.

Origin. Of those persons who register at the Visitor Center the ratio of out-of-State persons to local persons is approximately 6 to 4. This cannot be accepted as a true statistic of all persons entering the area because all vehicles do not register and no attempt is made to take this data. It is estimated that at least 50% of annual travel is local or within-State. Statistically, registrations for the two winter months of November 1963 and March 1964 indicated 37% from Arizona, 58% from other States and 5% from foreign countries. The summer months of June and July, 1964, indicated 40% registering from Arizona,

59% from Other States and 1% from foreign countries. Mexico is the foremost foreign country represented.

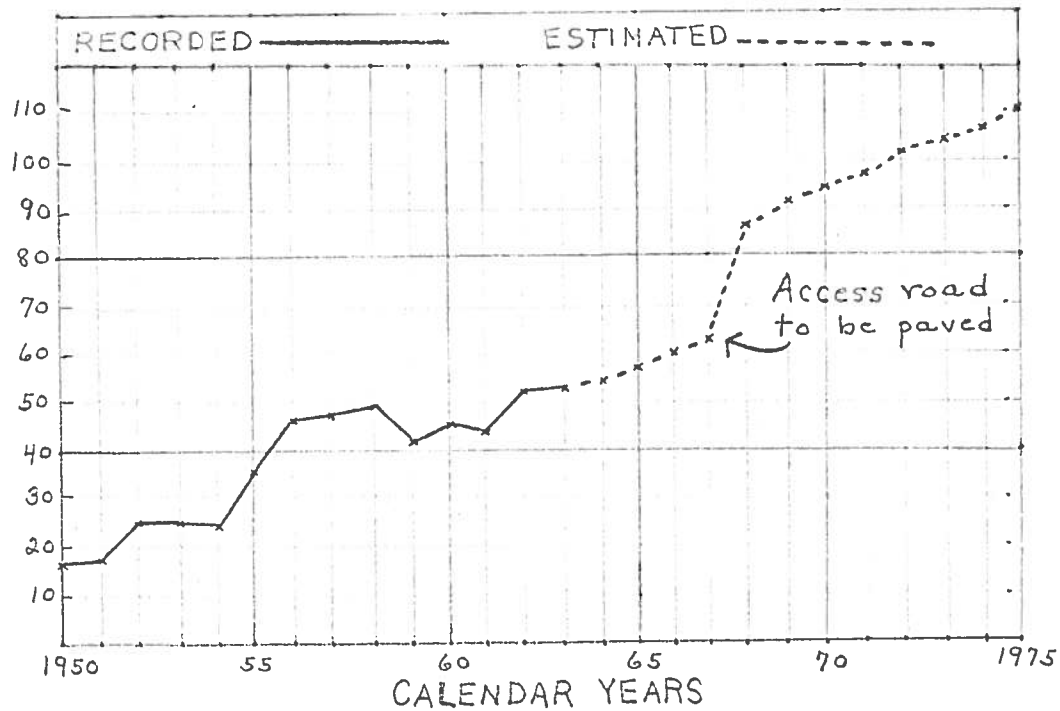
Types. The type of visitor to the monument is estimated as follows:

1. 90% - Family groups - 3.5 persons per family
2. 5% - Organized groups - 10 to 25 persons.
3. 3% - Special tours - 40 to 60 persons.

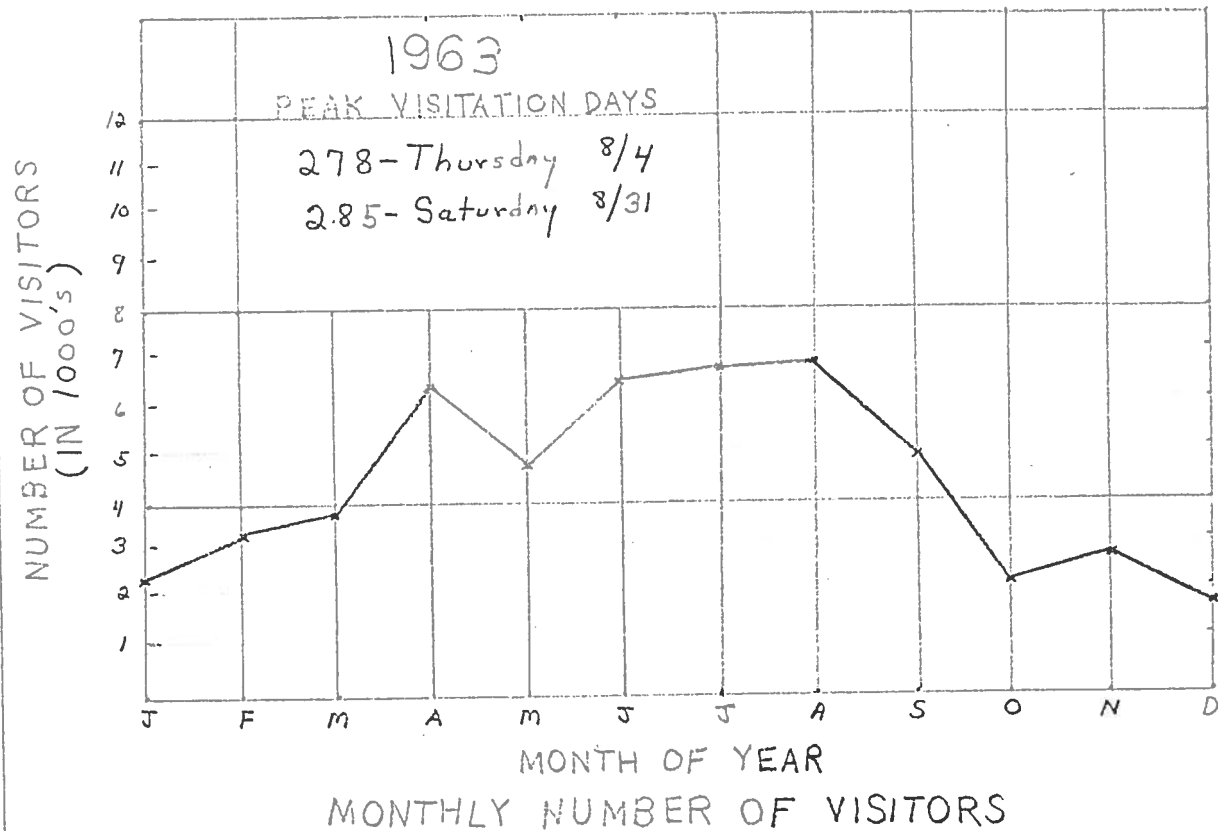
Other than an influx of special groups in May, primarily high school graduating classes on tour, there is little seasonal variation percentage-wise.

Frequency and Duration of Visits. No accurate records concerning frequency of visits are maintained. It is estimated that 15 to 20 percent of all visitors are revisits. The average length of stay in the area is from 2 to 3 hours involving 85% of all visitation. An approximate 12% of all visitation is recorded as overnight visits at the campground with average length of stay being 7 days. An estimated 3% of park visitors are overnight guests at ranches which are inholdings with their length of stay estimated as 3 days.

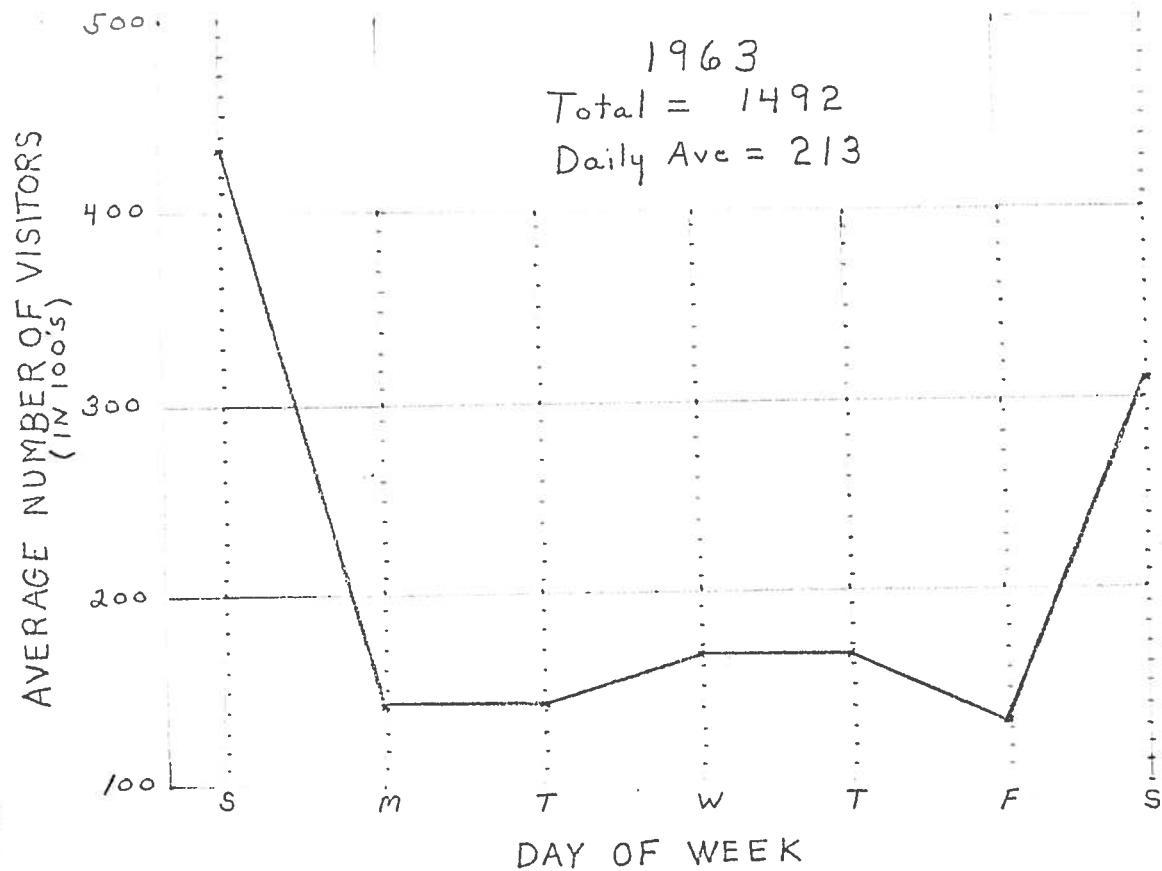
NUMBER OF VISITORS
(IN 1000'S)



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AVERAGE NUMBER OF VISITORS PER DAY OF
WEEK - THREE MONTHS HEAVIEST VISITATION

Visitor Activities

ACTIVITIES	PARTICIPANTS			
	1958	1963	Max. 24-hour Per.	
*Automobile Sightseeing	49,934A	51,773A		
Conducted Trips	36A	135A	80A	4/15/63
Auto Caravans	100E	175A	75A	11/63
Attending Interpretive Talks	128A	3,498A	115A	7/63
Attended Stations	21,409A	23,932A	427A	9/1/63
Self-guiding	35,986E	36,917E	560E	9/63
Wilderness Use - Hiking	500E	1,000E	125E	4/62
Wilderness Use - Horseback	300E	403E	15E	7/63
*Overnight - Camping - Tent	4,200E	5,685A	100E	9/63
*Overnight - Camping - Trailer	1,500E	2,798A	50E	4/63
*Overnight - Camping - Org. Gr.	50E	300E	25E	7/63
Overnight - Camping - Backcountry	5E	10E	4E	8/63
*Overnight - Guest Ranch(Private)	1,300E	1,500E	35E	4/63
Picnicking	7,000E	10,000E	75E	6/63
Mountain Climbing	15E	15E	4E	4/63

*Winter Sightseeing)

Winter Camping)

Both continue during Dec-March. Figures are included in above.

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Chapter 2, Area Objectives

Purpose

Management Category

Management Objectives

Prepared by: Ray B. Cunningham Date 8/15/64

Recommended By: Ray B. Cunningham Date 8/15/64

Recommended: Daniel S. Brand Date 11/30/64

Regional Director

Approved: J. E. N. Jensen Date 1/8/65

Assistant Director, D&C

PURPOSE

The mission or purpose of this park is to present and preserve for the visitors the impact which the forces of volcanism, isolation, rain and drought, heat and cold and time have upon the shaping of the landscape and of all the life forms, including man, which have lived and are living within the area. Visitors should leave with a sense of great beauty and awe, liberally seen, felt, and absorbed.

MANAGEMENT CATEGORY

Chiricahua will be managed as a Natural Park with emphasis upon the scenic-scientific resources. Management will also recognize the lesser historic and minor recreation values of the area.

SERVICE OBJECTIVE I

TO PROVIDE FOR THE HIGHEST QUALITY OF USE AND ENJOYMENT OF
THE NATIONAL PARK SYSTEM BY INCREASED MILLIONS OF VISITORS
IN YEARS TO COME

AREA OBJECTIVES

1. To insure that all services adhere to standards which will provide a quality park experience.
2. To encourage visitor use and enjoyment of all park resources.
3. To maintain the high traditions of the visitor services and visitor protection programs, as exemplified by the uniformed rangers and integrate these programs to provide consistent service.
4. To provide - through coordinated planning with adjacent private interests when appropriate - necessary public facilities, properly located, to help visitors better enjoy the park.
5. To make maximum use of visitor facilities, particularly the visitor center, in off-hours and off-season, for interpretive and conservation programs.
6. To encourage use of the monument for qualified research purposes, whether or not such research is directly concerned with Service operations, and to provide appropriate assistance to such programs.
7. To obtain complete data on visitor use of and reaction to facilities and services, as guide to anticipating future trends and providing better public service. Seek to determine effectiveness of visitor programs and facilities.
8. To support all park programs with accurate measurements of the present and potential capacity of the monument and its facilities to accommodate rising visitor use in years to come.

9. To approach the complex task of providing for increased monument use and reducing its impact upon monument resources on the broadest possible front - joining with local organizations and private enterprise, and with other agencies in programs of comprehensive land planning which will provide for the optimum man-land ratio and result in the highest and best use of the land.

10. To insure that the primary pattern of use will enable the visitor to enjoy freely the natural beauty, to appreciate the significance of the natural features, and to make optimum use of the recreational opportunities they afford.

11. To continue to preserve the primitive, roadless wilderness for all those visitors willing to use the wilderness on its own terms and to develop required facilities and informational programs to encourage visitor participation in back-country experience.

12. To provide for the enjoyment of important historical or archeological features found in the monument.

SERVICE OBJECTIVE II

TO CONSERVE AND MANAGE FOR THEIR HIGHEST PURPOSE THE
NATURAL, HISTORICAL AND RECREATIONAL RESOURCES OF THE
NATIONAL PARK SYSTEM

AREA OBJECTIVES

1. To base conservation and protection of the monument resources upon more effective management programs.
2. To expand the monument's capability to carry out a sustained, comprehensive research effort, in cooperation with other agencies and institutions, in support of all management programs.
3. To develop and adapt management concepts which will withstand modern pressures and influences upon monument resources.
4. To achieve the conservation mission through development of a land use plan, as part of the master plan, which will assure a balanced relationship between preservation of monument resources and visitor needs.
5. To emphasize, as a tool of park conservation, design excellence, the establishment of architectural themes, and construction in harmony with the monument atmosphere.
6. To assure dependability, efficiency and long life for all monument facilities, through programs including maintenance schedules, coordination with other programs and visitor cooperation.
7. To contribute on a national scale to the conservation of the total American environment through the example of the monument as a radiating influence upon its surrounding communities.
8. To establish explicit resource management guidelines for the monument which are in harmony with the ecological and environmental processes of the area.
9. To provide for the conservation of important historical and archeological resources which may be present in the monument.

SERVICE OBJECTIVE III

TO DEVELOP THE NATIONAL PARK SYSTEM THROUGH INCLUSION OF
ADDITIONAL AREAS OF SCENIC, SCIENTIFIC, HISTORICAL AND
RECREATIONAL VALUE TO THE NATION

AREA OBJECTIVES

To revise, where needed, the boundaries of the monument in
order to provide improved management and protection of
resources.

SERVICE OBJECTIVE IV

TO PARTICIPATE ACTIVELY WITH ORGANIZATIONS OF THIS AND
OTHER NATIONS IN CONSERVING, IMPROVING AND RENEWING
THE TOTAL ENVIRONMENT

AREA OBJECTIVES

1. To cooperate with other Federal agencies in programs for natural and historical resource conservation, and outdoor recreation.
2. To assist the states, their political subdivisions and other organizations by making available Service experience in the fields of land planning, historical preservation, design, management, interpretation and operation of parks, and exchanging information on techniques of mutual value, when requested.

SERVICE OBJECTIVE V

TO COMMUNICATE THE CULTURAL, INSPIRATIONAL AND RECREATIONAL
SIGNIFICANCE OF THE AMERICAN HERITAGE AS REPRESENTED IN THE
NATIONAL PARK SYSTEM

AREA OBJECTIVES

1. To give highest priority to strengthening visitor information services as a necessary element of better interpretation.
2. To achieve the highest quality of interpretation based on standards of professional interpretation established by the Director; reviewed, promulgated, and inspected by the Regional Director; and maintained through critical and systematic appraisal by the Superintendent.
3. To insure high quality interpretive services through conduct of programs by professional interpreters qualified in their subject fields and with responsibility for planning and executing interpretive programs.
4. To maintain as fully as possible in the face of increasing park use, informal personal interpretation, including the strengthening of speaking skills.
5. To reach a wider representation of park visitors through special interpretive programs and facilities for families, young people, and for visitors from other nations.
6. To improve the design and quality of museum, wayside and audio presentations, graphic and visual arts, and other creative media of interpretation and information, developing new methods and tools based on current advances in technology.
7. To expand interpretive and preservation programs in the fields of American music, art, handicrafts, folklore and other aspects of the Nation's culture, and encourage participation by artists and craftsmen of the region.
8. To communicate to the public at large the significance of the Nation's heritage as represented in its parks, through talks, publications, graphic arts and other extension services.

9. To work closely with schools, colleges, educational associations, publishers, and other institutions engaged in educational processes in order to teach the relationships between man and his heritage as represented in the monument and in the National Park System.

10. To strengthen mutual understanding and cooperation between the monument staff and the people of neighboring communities.

11. To communicate park policies and philosophy to the public through informational and interpretive media at all levels of the monument operation.

SERVICE OBJECTIVE VI

TO INCREASE THE EFFECTIVENESS OF THE NATIONAL PARK SERVICE
AS A "PEOPLE SERVING" ORGANIZATION DEDICATED TO PARK
CONSERVATION, HISTORICAL PRESERVATION AND OUTDOOR
RECREATION

AREA OBJECTIVES

1. To assure full and efficient development and use of manpower, with a high degree of employee morale.
2. To assure maximum efficiency, closely related functions are to be grouped together in each organizational unit.
3. To achieve maximum results through improved operational procedures.
4. To improve the effectiveness of monument operations through establishment of a systematic program sequence which translates the long-range objectives of the National Park Service into park objectives and develops coordinated park programs to achieve these objectives.
5. To provide safe practices, safe working conditions and a high level of safety consciousness on the part of all employees - National Park Service, permittees and contractors - and to motivate park staff to keep the monument safe for the public.