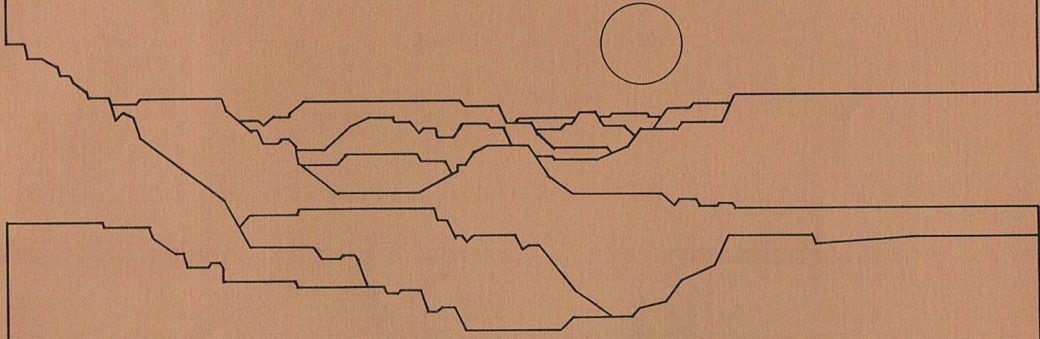


FINAL



HAVASUPAI PLATEAU

**The Secretarial Land Use Plan For The Addition To
The Havasupai Indian Reservation**



United States Department of the Interior
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March 23, 1982

NOTICE

The enclosed document(s) is the Final Land Use Plan for the Havasupai Land Addition. This plan was prepared in accordance with Section 10(b)(4) of the Grand Canyon National Park Enlargement Act of January 3, 1975 (P.L. 93-620; 88 Stat. 2089). Any questions or comments concerning this document should be directed to the Branch of Real Estate Services of this office.

Acting Assistant Area Director

Enclosure(s)

SECRETARIAL LAND USE PLAN
For
ADDITION TO HAVASUPAI INDIAN RESERVATION

Section 10
Public Law 93-620
Grand Canyon National Park Enlargement Act

Prepared by:
The Secretary of Interior
And The
Bureau of Indian Affairs
In Consultation With The Havasupai Tribe

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INTRODUCTION

On December 18, 1974, Congress passed Senate Bill 1296, which President Ford signed into law on January 3, 1975, as Public Law 93-620. This Act, written to enlarge the Grand Canyon National Park, also provided in Section 10 for enlargement of the adjacent Havasupai Indian Reservation by 185,000 acres and designated a contiguous 95,300 acres of the enlarged National Park as a permanent traditional use area of the Havasupai people.

Passage of the Act with this provision for enlarging the Havasupai Reservation resulted from sixty-six years of appeals to Congress to rectify the unfortunate federal actions which removed the Havasupai's land base from them even while they were still living on it and making regular use of it to survive. These actions of removal, begun in 1882 with the establishment of the reservation as a mere 518 acres on the bottom of Havasu Canyon, continued with the establishment of the Grand Canyon Forest Preserve in 1893, the Coconino National Forest and Grand Canyon National Monument in 1908, and the Grand Canyon National Park in 1919, all from Havasupai land.

Officials began making reports to Congress about the Havasupai predicament as early as 1885; the Havasupai themselves appealed to Congress to confirm their just title to and legal use of these 185,000 acres in 1908, 1920, 1931, 1952, 1957, 1968, and 1974.

Section 3 of the 1919 Grand Canyon Act recognized Havasupai use of the area by providing that the Secretary could permit tribal members to use areas within the Park for agricultural purposes. Although the Havasupai had continued to make other such traditional uses of these lands as residence and hunting, any activities not strictly grazing or agricultural were discouraged. The Havasupai had to pursue these uses covertly.

During the discussion of S. 1296, some public factions had gained the impression that the purpose of confirming Havasupai title to the land in question was to permit uncontrolled development and exploitation of the area by outside interests. To allay such fears Congressional sponsors of the measure wrote certain safeguards into the legislation. As it was passed, P. L. 93-620 includes safeguards on the integrity of the land restored to Havasupai, in that the Secretary was required to develop in consultation with the Havasupai Tribal Council

...a plan for the use of this land by the Tribe which shall include the selection of areas which may be used for residential, educational, and other community purposes for members of the Tribe and which shall not be inconsistent with, or detract from park uses and values;

Provided further, that before being implemented by the Secretary, such plan shall be made available through his offices for public hearings, and shall be transmitted, together with a complete transcript of the hearings, at least 90 days prior to implementation, to the Committees on Interior and Insular Affairs of the United States Congress.

Accordingly, the Secretary, through the Bureau of Indian Affairs, in consultation with the Havasupai Tribe, through the Tribal Council and a Council-appointed land use planning committee of tribal members has developed the following plan. The Secretary made the assistance of the Interior Department available to the Tribe whenever this was deemed necessary or requested by the Havasupai Tribal Council. Responsibility for coordinating all necessary studies and for final preparation and distribution of the completed plan was delegated to the Bureau of Indian Affairs by the Secretarial Order of September 10, 1975.

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The plan is a true and direct statement of Havasupai desires; it was developed by them, and any suggested revisions of their original statement were checked with and approved by them before being incorporated and forwarded to the Secretary.

The land use plan is a statement of general intent. The Havasupai Tribal Council interpreted the provisions of P. L. 93-620 as a request for a set of general guidelines and intentions from the Havasupai Tribe. No one should read this plan as a project description. It contains no timetables for implementation, or is this its purpose. Rather, the Havasupai present this as their set of ground rules --their treaty with the government, as they put it--within which future developments on the reservation will operate.

It is a moderate plan, addressing with care man's relationship with nature.

THE HAVASUPAI PEOPLE

The Grand Canyon of the Colorado River between the mouth of the Little Colorado and the mouth of the Mohawk Canyon is inseparable from the history of the Havasupai people. Surrounding Indian people identify them by their occupation of this area; the Hopi even include a Havasupai spirit in the Kachina pantheon as guardian of the Grand Canyon. Havasupai families lived and farmed at Indian Gardens, Santa Maria Spring, and other springs to the west.

From an interpretation of their oral tradition and the work of contemporary archaeologists and ethnologists, the Havasupai are convinced they have inhabited the area included in the Havasupai Reservation, as well as the southern portion of the Grand Canyon National Park and the Tusayan District of the Kaibab National Forest, since about 700 A.D. They

point to ethnological and linguistic evidence indicating they originally entered this area during a northward migration from their original home, probably along the Gila River and lower Colorado, during a period of Mexican expansion which gave rise to the later Toltec dynasties. Archaeologists have designated the remains of these earliest settlements in the present Havasupai area as Cohonina sites, from the Hopi word for "Havasupai."

At least one archaeologist/anthropologist having extensive familiarity with Hualapai and Havasupai archaeology feels that the Cohonina may have been an earlier, separate people who mysteriously vanished and were replaced by the Havasupai around 1100 A.D. The Havasupai believe the disappearance of a whole people is unlikely and say they are probably the direct descendants of the so-called Cohonina.

The Havasupai ethnically belong to the Yuman people and share their language; culturally they resemble the Pueblo much more than they do the Yumans in their agricultural and religious practices.

Originally the Havasupai/Cohonina must have lived on the uplands as hunters and gatherers, but extended drought at the end of the thirteenth century forced them into summer life at the lower elevations of well-watered canyon bottoms. They have continued, however, to winter in their original home at the higher elevations until this century, when administrative restrictions forced most of them for a time into year-round occupation of one of their summer canyon living areas in Havasu Canyon.

Historically, the Havasupai Tribe comprised a fairly stable population of about 250 persons, or 40 families. These persons farmed the canyon bottom intensively and produced abundant harvests, using irrigation practices probably learned from the Pueblo between 1276 and 1780 A.D. During the winter months, when no agriculture was possible, Havasupai families

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departed the canyons to various traditional locations between the present Santa Fe Railroad and the Colorado River to hunt and gather wild plants for food in the winter. The majority of Havasupai families still followed this pattern as recently as 1930, and individual families continue to follow this pattern today.

By adhering to this cycle, the Havasupai achieved a self-sufficiency which they still boasted as recently as 1920; in fact, they were well enough off that they raised a surplus of produce which they shared with other tribes or shipped out to help support the nearby Indian schools.

Then the winter half of their subsistence pattern was interrupted, especially after 1919, by administrative restrictions on water storage on the land outside Havasu Canyon, which at the time was not treated as Indian trust land. There had been sporadic problems commencing upon their essentially unenforceable restriction to Havasu Canyon in 1882; in 1898, for example, officials of the Grand Canyon Forest Reserve forbade the Havasupai even to enter upon the lands of the Forest Reserve, which completely surrounded the tiny canyon-bottom reservation. But prior to 1919 it does not appear the government even intended the bottom of Havasu Canyon to represent the sole area of Havasupai occupation. Not until after 1919 did the government have either the intent or the personnel required to drive the Havasupai back to Havasu Canyon year-round.

By the time of the enactment of P.L. 93-620, the Havasupai Tribe included some 60 families of about 425 persons, probably the highest number of people the Tribe ever included. The number had surpassed what Havasu Canyon could support, even in the summer. With the right to hunt and gather foreclosed, Havasupai self-sufficiency was no longer even remotely possible from subsistence.

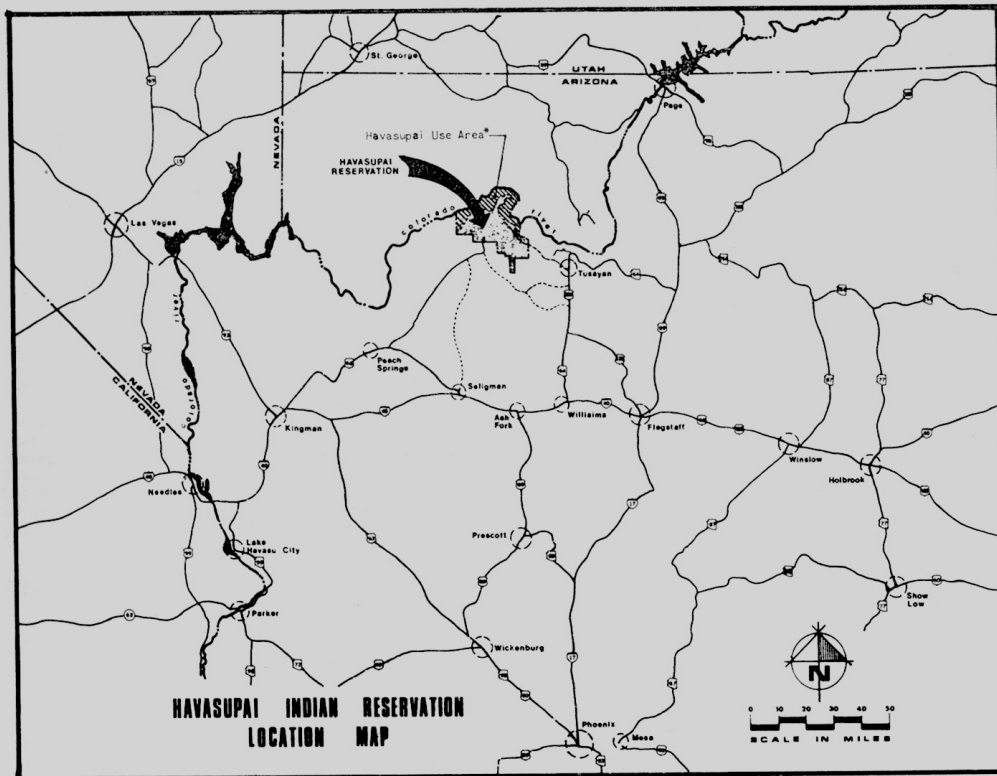
Another element besides the simple removal of the Havasupai land base entered the picture by 1930 or so, and that was the introduction of the cash economy. When the Havasupai economy was based upon subsistence, the rational use of one's time was directed primarily to the obtaining or raising of food. Even then certain specialists existed who gained their subsistence by performing non-subsistence activities --singing, healing, manufacture of hunting and farming implements. Havasupai traders offered red ochre paint, surplus food, buckskins and livestock for woven goods, shells, foreign foods, and other livestock.

With the coming of the cash economy, direct production or obtaining of food no longer represented the most rational use of one's time. The importance of the cash economy for Havasupai life and the future of the Havasupai people cannot be ignored even though some individuals still survive part of the year by subsistence.

LOCATION

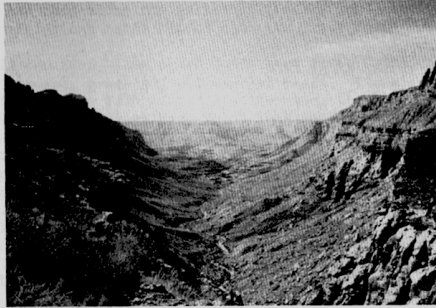
The Havasupai Indian Reservation is situated in northwestern Arizona along the Grand Canyon of the Colorado River. It lies approximately 50 miles northwest of the Grand Canyon National Park Headquarters at Grand Canyon Village. The nearest large towns, Flagstaff and Kingman, each lie over 100 miles distant. Reaching the reservation boundary takes three hours of travel from either location; reaching Havasu Canyon takes another three hours of foot travel.

The 185,000 acres of the Havasupai Indian Reservation under consideration in this plan lie adjacent to the Grand Canyon National Park, which borders on the north and east of the reservation. The 95,300



*Havasupai Use Lands are part of the Grand Canyon National Park.

acres of the National Park immediately adjacent to the Havasupai Reservation on the north have been designated by the United States Congress as subject to the permanent traditional uses of the Havasupai Tribe. On the south the reservation is bounded by private land and on the west by a portion of the Grand Canyon National Park and the Hualapai Indian Reservation.



ONE OF THE PICTURESQUE CANYONS ON THE HAVASUPAI RESERVATION.

TITLE DISPUTE

The Arizona State Land Department asserts ownership of Section 16, Township 32 North, Range 5 West, G&SRM,

containing 640 acres, which is shown on the boundary map as being included within the boundaries of the Havasupai Indian Reservation.

Congress has established the boundary of the Havasupai Indian Reservation to include the above-referenced Section and, therefore, the only matter of dispute is title to that Section. According to the Supreme Court's 1941 decision in *U.S. v. Santa Fe*, this Section was one of the released railroad lands and was subject to the prior possessory rights of the aboriginal Indian occupants. The Havasupai Tribe's right to possess and use this land has never been extinguished and therefore the State's claim to title is subject to prior aboriginal title and possessory rights in the Havasupai Tribe.

The Arizona State Land Department states that it would support a land exchange between the State of Arizona and the United States government, whereby the State would convey the subject Section 16 to the United States and receive an equal value parcel of land outside the Reservation boundary. The Havasupai Tribe, while maintaining the right to continue the use of that parcel notwithstanding an eventual disposition of title or an exchange between the United States and the State of Arizona, would recommend and support such an exchange.

PHYSICAL DESCRIPTION OF THE AREA

Air Quality

Grand Canyon National Park has been designated as a Class I area under the Clean Air Acts Amendments of 1977 (P. L. 95-95). The air quality of the Havasupai Reservation varies according to whether it is being measured in the lower reservation of Havasu Canyon or on the upper plateau regions.

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In Havasu Canyon the air is relatively free of chemical pollution but tends to have dustier air than the upper reservation. Lower canyons in this dry, windy region act as air-settling basins for the upper levels of dust raised from the plateau. Havasu Canyon's Hualapai Canyon tributary is generally aligned with the prevailing wind direction and funnels heavy winds through the length of Havasu Canyon, disturbing the fine dust deposits of the canyon. The dirt trails and movement of horses and people along these trails further accentuate the problem.

On the upper portions of the reservation the situation is much different. The air is generally pristine and unusually dust-free. It is not uncommon to be able to see the San Francisco Peaks from the tip of the Great Thumb Mesa, a distance of 85 miles. The only exception to this clarity is around the several dirt roads which cross the upper reservation. During and for some time after the passage of a vehicle, the air, plant, and animal life in the immediate vicinity suffer clouds of heavy, choking dust.

Archaeology

The earliest evidence of human occupation of the Grand Canyon area are the remains of the people designated only as the Desert Culture, who occupied the area sometime around 2000 B.C. These may have been Shoshonean people who had come into the area from the north. Though others may well have preceded them there, little or nothing is known of any earlier peoples. They were followed by various stages of the Anasazi and the Cohonino.

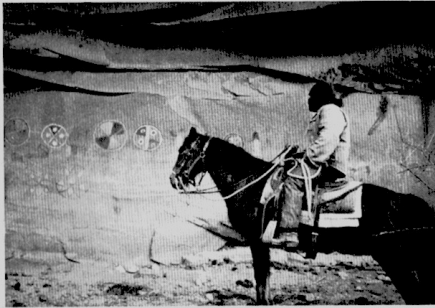
According to a study made for the enlargement of the Grand Canyon National Park,* there are more than 1200 known Indian ruins within the Park complex, many of which are found within the Havasupai Reservation. These ruins are of extreme interest, for they show much about the succession of peoples who inhabited the area and the environmental and climatic problems they were forced to contend with. Some of these ruins indicate the connection the Cohonino, or early Havasupai, had with the Pueblo stage of the neighboring Anasazi culture. Ruins dating from around 1000 A.D. include masonry structures, sometimes with what resemble kivas attached. Some of the ruins, found on the eastern Havasupai Reservation, may actually represent Pueblo ruins though this seems unlikely. Other indications show that later Havasupai culture and society also moved increasingly in the direction of their western Pueblo (Hopi) neighbors. By 1900 many observers noted elements of borrowed Pueblo culture in the food, dress, ceremony, stories, and agricultural practices of the Havasupai

These ruins show that water, or the lack of water, has been a persistent problem for inhabitants in this area, for they are usually located along shallow drainages or near springs where water would be available. They indicate that man abandoned year-round life on the higher elevations of the Havasupai area after the great southwestern drought of 1276-1299. Probably at that time the Cohonino/Havasupai began their intensive agricultural use of the lower water courses from Indian Gardens west to Mohawk Canyon.

*Final Environmental Statement, Proposed Master Plan, Grand Canyon Complex, National Park Service, November 14, 1975.

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Also within the reservation are numerous elaborate and valuable petroglyphs and rock paintings. Though legends tell of their placement by early Havasupai, few of them can be dated. Some of them represent hunting shrines; others represent obeisance to water spirits at the location of the painting. Most of these rock paintings the Havasupai have carefully preserved. One set of rather well-known paintings within the reservation, however, lies along a major trail and has suffered extensive damage and recent additions.

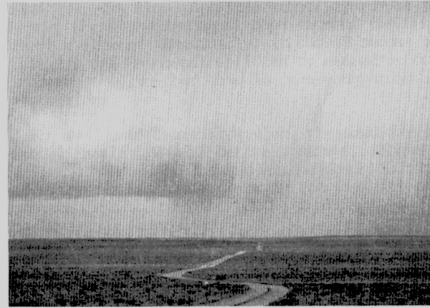


ROCK PAINTINGS

Climate

Temperatures in Havasu Canyon are generally high in summer and mild in winter. In the summer months, temperatures usually top 100 degrees and seldom fall

much below 15 degrees in winter. Generally, winter daytime temperatures pass above freezing. On the upper reservation, temperatures over 100 degrees are rarer, and sub-freezing daytime temperatures in winter the rule. Only within Havasu Canyon is the humidity high enough to be felt.



SUMMER STORM OVER THE UPPER PLATEAU

Rainfall is generally seasonal, nearly all of it falling as snow during February and as rain during August and September. The difference in temperature and rainfall between the lower and upper reservation is caused by the 3000-foot altitude difference. Although the upper parts of the Havasupai Reservation are most lacking in water, they receive most of the rain which falls on the area, as much as 15 inches a year on the forested areas of the

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Great Thumb Mesa's higher elevations and the northern portions of Pasture Wash. Toward the southern and western sides of the reservation, the rainfall is below ten inches a year. Havasu Canyon and its tributaries, which receive the least rain (nine inches a year), end up with all the water of the upper reservation that percolates down to the limestone floor of Havasu Canyon.



VIEW OF THE ESPLANADE

Fauna

A wide variety of mammals live on the Havasupai Reservation. Game animals include mule deer, pronghorn antelope, porcupines, jackrabbits, and cottontails. These animals live on the upper reservation and none of them is in danger of disappearing from

the reservation. At lower elevations are found the exotic burro and the desert bighorn sheep which live primarily on the esplanade at the foot of the Coconino sandstone formation; neither of these animals is in danger of disappearance from the Havasupai Reservation at present. Other large mammals which have been observed within the reservation include the mountain lion, bobcat, coyote, and fox. Only the mountain lion appears to have dwindled to near disappearance from the area.

Despite some claims to the contrary, the desert bighorn does not live primarily on the plateau, and it is relatively abundant in the immediate vicinity of the Havasupai settlement in Havasu Canyon, where it can live undisturbed. Many of the bighorn herds which formerly inhabited the area below Grand Canyon Village have moved westward to take up residence on the Havasupai Reservation, away from the movement and disturbance of large numbers of human beings and away from the areas occupied by the exotic burro. Three herds of bighorns live right above Supai Village, one of which included at least 17 individuals at the most recent sightings.

It seems likely that wild horses and exotic burros present competition to the bighorn. In general, the bighorn has avoided the other two species by moving into the area around Supai Village, while the wild horses and burros have remained farther to the east, around the Great Thumb Mesa. At present wild burros are being removed from the canyon periodically in order to keep the population as close to zero as possible. In March, 1981, 592 burros were removed. Havasupai livestock presents little competition to the desert bighorn sheep. This livestock grazes on the esplanade primarily during periods of drought. Such drought use concentrates around the springs issuing on the upper areas of the esplanade.

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Small rodents abound and include mice, squirrels, shrews, chipmunks, spotted skunks, and ring-tailed cats. Also, recent evidence of beavers has been noted at the northern end of the Havasupai Reservation south of Beaver Falls.

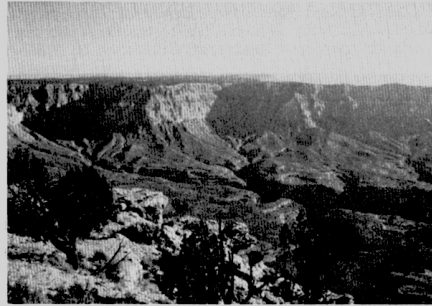
Havasu Canyon is home for many birds and a stopover for many migratory species. There are approximately 20 species of birds to be found primarily on the upper reservation, and 74 species have been observed in Havasu Canyon. Birds which are considered to be rare to the reservation but which have been actually observed include the dickcissal, Cassin Kingbird, Wright flycatcher, marsh wren, red-eyed vireo, and savannah sparrow. Birds which may be found on the reservation include the southern bald eagle, the peregrine falcon, the ferruginous hawk, the American osprey, and the prairie pigeon hawk.

Many other forms of vertebrate animals live on the Havasupai Reservation; none are considered endangered. Snakes include the king snake, striped racer, rubber snake, bull snake, and several varieties of rattlesnake; snakes are relatively unusual in Havasu Canyon. Lizards are found throughout the Havasupai Reservation and include whip-tailed lizards, desert scaly lizards, western collard lizards, chuckwallas, and horned toads.

Few types of fish live within the Havasupai Reservation. Between the rising of Havasu Creek and the first waterfalls are a few varieties of minnows. Between the fourth waterfall, Money, and Beaver Falls are rainbow and German brown trout. None of these is considered endangered.

Flora

The Havasupai Reservation is sparsely vegetated. Overall, about half the acreage of the Havasupai Reservation falls within the canyon system and would



TYPICAL VIEW OF THE CANYONS ON THE HAVASUPAI RESERVATION

be classified as rocky or barren. The open grasslands of the upper reservation are made up of blue grama, wild buckwheat, and other varieties of short bunchgrasses. In this century these open grasslands have given way increasingly to juniper and pinyon moving down from the well-drained hillsides into a few washes. Some areas, like the end of the Great Thumb Mesa, have been covered with dense juniper forests long enough that it has cultivated a natural life form there. In among these pinyon-juniper communities are found abundant areas of cliff rose and buckbrush. No stands of pines larger than the pinyon are known on the Havasupai Reservation. Of the portions lying above the canyon system on the plateau,

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about two-thirds would be classified as sagebrush. In these areas the rainfall and soil barely accommodate grasses or trees and support only sagebrush, saltbrush, blackbrush, and chaparral.



PINYON AND JUNIPER COVER THE GREAT THUMB MESA

At the lower elevations of the reservation within the canyon system is a very different plant community. Along the esplanade some junipers and pinyons occur. Abundant are such desert plants as prickly pear, barrel cactus, banana yucca, Spanish bayonet, ocotillo, creosote bush, and other well-armed plants. All along the better watered portions of the canyon system grow mesquite, canyon oak, hackberry, chokecherry, single-leaf ash, cottonwood, desert willow, black willow, redbud, serviceberry, syringa, wild grape, reeds, cattails, and bermuda grass (see Vegetation Study Map).

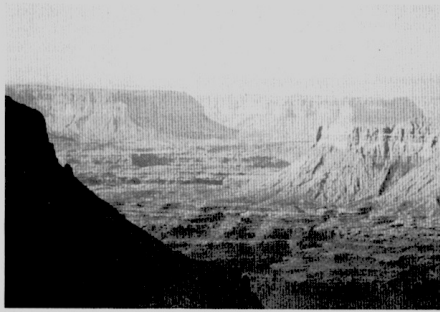


SAGEBRUSH AREA ON THE UPPER PLATEAU

Geology

The most striking feature of the Grand Canyon is its geology. Its cliffs expose millions of years of geologic history and much that tells of the origin of the earth itself. The Havasupai Reservation, of course, shares the geological structure of the general Grand Canyon area. Generally speaking, the compressional forces acting upon the area have been from west to east, so that the major faults and folds lie in the north-south orientation, dividing the uplands mostly into individual plateaus separated by sharp north and south breaks.

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EXPOSED GEOLOGY OF THE GRAND CANYON

Most soils of the upper Havasupai Reservation resemble thin, rocky mountain soils. Due to the aridity of the region during recent centuries, there has been little vegetation and, consequently, little formation of humus. Where there is soil, it is but the thinnest skin over the underlying limestone in which hardy grasses and shrubs cling tenaciously to life. This meager soil supports much human and animal life when carefully used. The major problem which the shallow soil causes is not so much the meager plant matrix as the storage of surface water.

Most of the area underlying the upper Havasupai Reservation is made up of highly fractured Kaibab limestone. Water flows easily through much of this stratum, and millenia of storm drainage have carved underground caverns in it. Only rarely, where this stratum has not fractured, are impermeable water pockets formed;

in most places the Kaibab limestone acts to channel surface water to lower strata.

Underlying the Kaibab limestone are two porous sandstone layers, the wind-deposited Coconino sandstone and the water-deposited Supai sandstone. Between the two is a thin layer of Hermit Shale, which can act as an impermeable layer and which provides a floor for a few aquifers which issue as springs from the base of the Coconino sandstone cliffs around the reservation and the Havasupai Traditional Use Area.

Underlying the Supai sandstone, about 3000 feet below the upper surface of the Havasupai Reservation, is the important Redwall limestone layer. This is, where it is not fractured, also an impermeable layer. It forms the floor of the Havasu Creek aquifer and possibly of other stored ground water deposits within the Havasupai Reservation. This stratum dips toward Havasu Canyon from both sides, however, and is primarily drained by it.

None of the strata near the surface of the Havasupai Reservation are of igneous origin; nearly all deposits are sedimentary. Consequently, the area is very poor in metallic compounds and has never been a site of productive mineral exploration. Only at the lower elevations of Havasu Canyon have a few low-grade deposits of lead, vanadium, silver, and traces of copper been located.

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EXISTING USES OF THE AREA

Agriculture

The Havasupai have not farmed any of the lands now included in the upper reservation since about 1955, although they still keep certain of the farming plots fenced off. Agriculture on the lower parts of the reservation is possible only in the watered portions of Havasu Canyon, and it has been carried on intensively and productively for at least 600 years in this location. Crops formerly raised on the upper reservation included potatoes, corn, and beans.

Access

There is but one relatively improved road on the Havasupai Reservation, the road leading to Hualapai Hilltop from U. S. Highway 66 to the south. Other roads on the reservation are extremely primitive. The road leading out to the Tribal electric generating station on Long Mesa is dirt; though it is kept graded regularly, it still becomes impassable in wet weather. The roads over Wi Gasála are passable by four-wheel and high-clearance vehicles only and also become quite muddy in wet weather.



UNIMPROVED ROAD AFTER A STORM



HUALAPAI TRAIL TO SUPAI VILLAGE

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On the east side of Havasu Canyon, the narrow dirt road leading from Pasture Wash to Topocoba Hilltop is deep, powdery dust in dry weather and equally deep, muddy gumbo in wet weather. As this road approaches Topocoba, it becomes increasingly narrow and rocky. Other roads branching off from this road offer even worse access than the Topocoba Road. All are rocky and dusty; some are little more than animal tracks. To traverse the forty miles from Tusayan to Topocoba requires some three hours in good weather; in bad weather the same trip may take all day.



PACKERS ALONG ONE OF THE MORE PRIMITIVE TRAILS

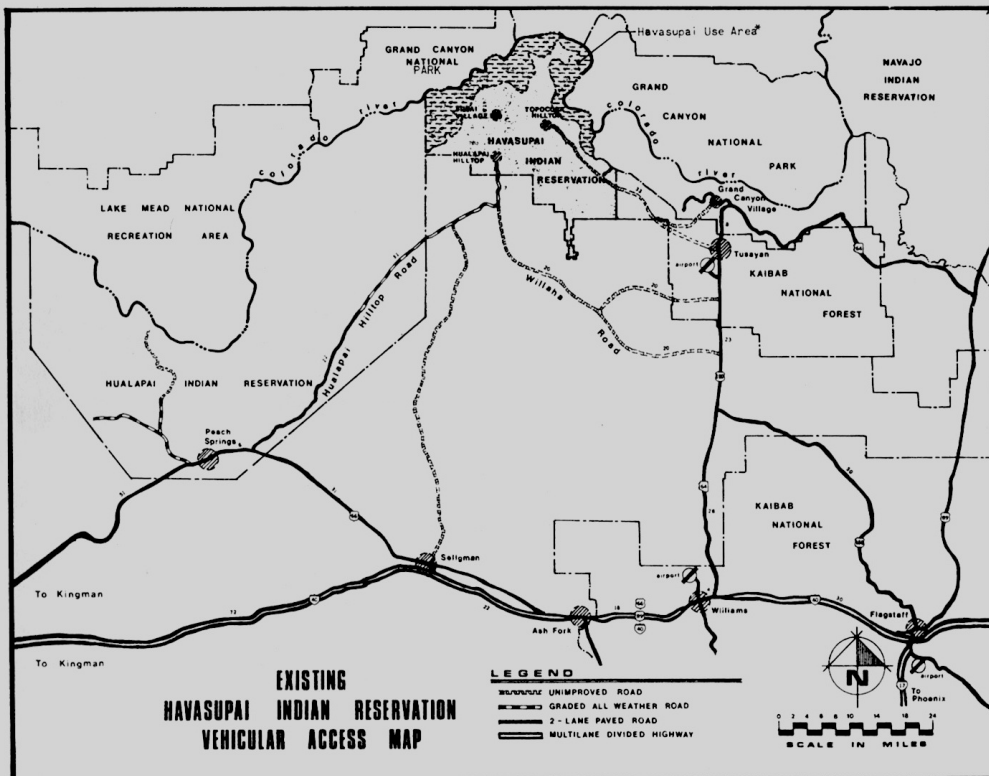
Two main trails lead to Supai Village from the upper reservation; the Hualapai Trail, which is in regular use and constantly maintained, and the Topocoba Trail, which is in poor repair and seldom used by non-Indians. Other trails passable by horse are the Moqui and Kirby Trails, also used almost exclusively by the Havasupai. Other trails leading from the upper to the lower Havasupai Reservation are extremely primitive, dangerous foot trails and seldom used by anyone. Reaching Supai Village from Hualapai Hilltop takes two to three hours by foot or horse; from Topocoba, five to six hours

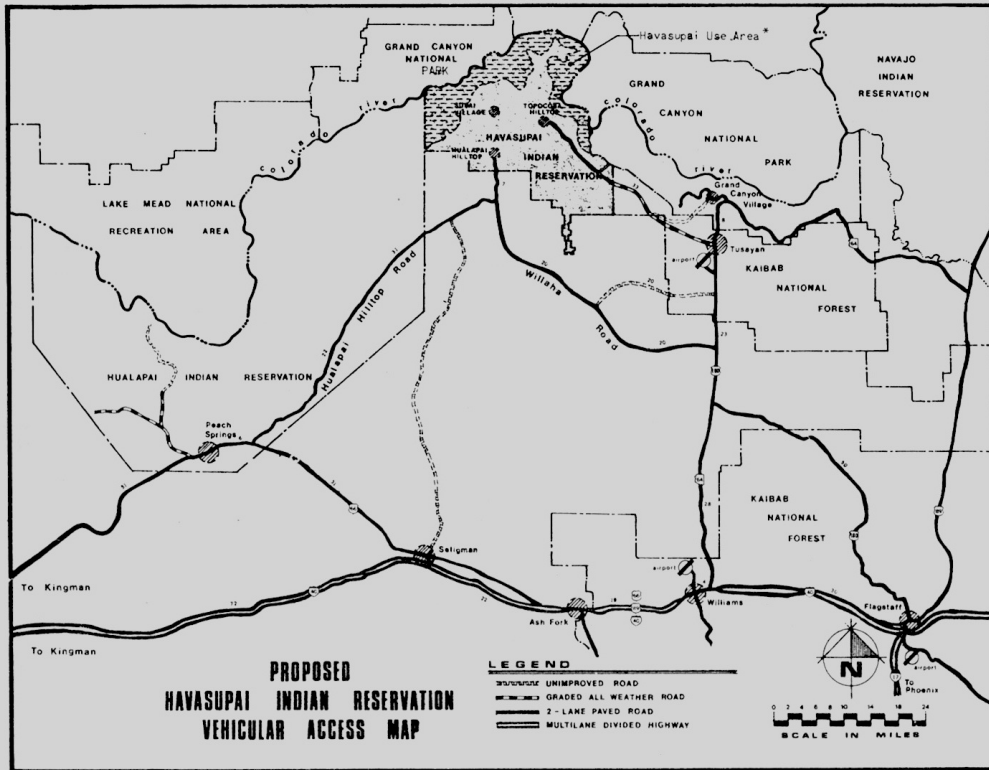
Gathering

The Havasupai have continued to gather wild plants and plant foods on the lands included in the reservation. During the late fall and early winter months especially, Havasupai families travel to the upper reservation to obtain pinyon nuts, agave, and yucca fruit. Most grass seeds are now difficult to obtain. Other plants, foods, materials, and medicines are collected at various times during the year.

Grazing

At present the lands included in the Havasupai Reservation are used by the Havasupai Tribe for grazing cattle and horses on relatively unimproved range. The Tribe, under a former permit arrangement for the use of this land, was allowed to graze 138 head of cattle and 322 horses on this range. Actual numbers may have been somewhat less than this; the Bureau of Indian Affairs estimates there were about 125 Havasupai cattle on the range during 1975, but accurate counts of horses on this range are not available. The animals are not grazed on any rotational basis but simply allowed to range freely. There is evidence of range degradation in some areas.





*Havasupai Use Lands are part of the Grand Canyon National Park.

Hunting

Prior to 1975, the only hunting the Havasupai were allowed on the lands included in their reservation today was in the southern part under public permits from the Arizona Game and Fish Department, which furnished the following deer forest estimates:

Year	Hunters	Hunter Days	Harvest
1969	68	223	6
1970	93	268	14
1971	52	224	9
1972	37	145	5
1973	45	185	8
1974	26	98	5
1975	area closed to public hunting		

The Havasupai were in competition with other, non-Indian applicants for these hunting permits and were not always successful in obtaining them. Therefore, these figures do not represent total Native American harvests.

Residence

The Havasupai have long maintained residences on the upper portions of the reservation. Some of these are traditional conical earthen homes, and others are simple frame cabins. There are about 25 such homes still located on these lands.

Traditional Uses

The Havasupai Tribe has put to other traditional uses lands included in the upper Havasupai Reservation. Specifying these uses of the land will of necessity be very broad and general. Detailed identification of such uses, including burial, prayer, and other ceremonial uses would involve invasion of privacy

and of the right to freedom of belief and would be considered religious sacrilege to the Tribe. Such uses are practiced on the area designated as the Havasupai Traditional Use Area as well.



TRADITIONAL HOUSE ON THE UPPER HAVASUPAI RESERVATION

Visitation

Most outsiders' visitations to the lands now included within the Havasupai Reservation were made to Havasu Canyon. No accurate estimate is available as to the number of persons who, prior to 1975, may have visited the lands now included in the upper reservation. Judging from sporadic observations and requests from people wishing to visit the area at present, the average number visiting that area probably did not exceed a dozen persons a month.

Within Havasu Canyon the picture is entirely different. In 1972, the high point was reached when nearly 14,000 persons visited camping facilities which were at the time under the control of the National Park Service. The number of persons making use of the facility at given times appeared plainly excessive; and the area, now located in the northern part of the lower reservation, was undergoing serious degradation. After 1972 the National Park Service instituted controls over the number of persons allowed to use the camping facility at any one time. The Havasupai Tribe has continued to enforce these limitations. Present visitation levels in Havasu Canyon stand in the neighborhood of 8000 to 10,000 persons a year. When one considers that over 22,000 persons visited Phantom Ranch during 1975 under roughly comparable conditions in the Grand Canyon National Park, it seems fair to say that visitation levels in Havasu Canyon are moderate.

In the past, the problem was not the total visitation level but its distribution. On certain weekends, especially Easter, 2,000 persons would crowd into a campground designed for use by 300; then the campground would sit nearly empty for weeks at a time. With present limitations, ten to twelve thousand persons a year can safely use the Havasu campgrounds if they are more evenly distributed over the year. Presently, only 100 persons are allowed in the campground between Havasu and Mooney Falls, and a further 50 persons can be accommodated in two additional tribal campgrounds on the lower reservation. During the past two years, the visitation has tended to distribute itself more evenly, with much less of it clustered on summer weekends than before. With improvements to existing toilet facilities and replacement of the present seven-night limit with a two-night limit, the Havasu campgrounds should easily accommodate 25,000 persons annually.

Spreading an even load of lower visitation levels throughout the year allows for steady maintenance

of the camping facilities and the access trails, rather than facing situations of recovery from brief but extreme overuse. The access trail, which in the past was about evenly utilized by the National Park Service, the U. S. Forest Service, and the Havasupai Tribe, was primarily maintained on a daily basis by the Havasupai Tribe. The Tribe is continuing such maintenance.

Water Resources



EARTHEN WATER CATCHMENT ON THE EASTERN BOUNDARY OF THE RESERVATION

Over the years the Havasupai Tribe developed an extensive system of earthen water catchment reservoirs on the lands of the upper Havasupai Reservation. There are about 30 such tanks in various stages of repair. At present the Tribe has the beneficial use

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of about 14 of these tanks. There are ten tanks located on land formerly managed by the Park Service which are in need of repair before they can provide the Tribe significant benefit. The tanks on the Pasture Wash area are in good repair and can be put to use immediately.

Successful storage of surface water by the use of earthen catchment reservoirs requires enough depth of soil to allow a sizable excavation where water may collect. Where the soil is shallow such an excavation would cut into and shatter the limestone bedrock and allow drainage of the stored water to underlying layers. Water storage or reseeding efforts will be limited by the shallow soil in this area. In the few upper areas where the soil is deeper, such as the bottom of Pasture Wash, agricultural attempts have been generally successful and less limited by the lack of water.

The Havasupai Tribe has considerable water resources at its disposal. There are 23 springs on the upper reservation and ample underground water resources available within Havasu Canyon; also, Havasu Creek produces 38 million gallons of water a day.

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GOALS AND OBJECTIVES



HAVASUPAI RIDER OVERLOOKING THE GRANDEUR OF THE TRADITIONAL HOMETLAND

The Havasupai people, in presenting this proposal, state their intention of being guided by their traditional concepts of harmony with all life; that they have followed their ancient beliefs and the ways of their old people toward the earth in every way possible in preparing their proposals. Those traditions tell them the proper ways to do things and ways to do them in keeping with the flow of the earth and its life. The Havasupai planners stated they have followed these ways from their earliest times. Where they have struck out in new directions, they have traveled as far along the new paths as they find compatible with their attachment to the

land. To these ends, the Havasupai people have established the following goals and objectives, and believe that they would win the approval of their grandparents and ancestors:

To preserve the magnificence of their homeland. For, as they state it, the Havasupai people and their homeland are inseparable. The land involved has always been their home, and they expect it to remain so forever. Preserving it is a matter of life and death to the Havasupai

To preserve their cultural identity in every way possible. In numerous ways the Havasupai people feel the very land that gave them birth defines this identity. They feel that the land helps to preserve their cultural identity by separating and insulating them from those influences they do not wish to incorporate into Havasupai life.

To use their homeland to provide sustenance for themselves, and they hope to return once again to a self-sustaining life.

To use the land to gain the benefits of the cash economy which enrich their lives and to avoid those aspects of the cash economy which would depersonalize their lives.

To continue to provide themselves as much as possible of the outdoor life and employment they prize so highly with activities such as horse packing, cattle raising, and farming.

To provide their children with a better education through improved schools containing higher grade levels, and located close to their homes and families.

To provide their children with more alternatives than their parents had. Such alternatives can come only with better education and increased employment opportunities on the reservation.

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To provide the people with the best possible health and sanitation facilities.

To provide housing for all the Havasupai people; housing that will utilize as much as possible the natural materials of the land and have the feeling of the outdoors, yet protect and give warmth to the inhabitants.

To develop safe, all weather roads (graded, gravelled, with proper drainage which are usable every day of the year but not necessarily paved) where needed to connect the reservation with the outside world.

To make the most efficient use of the water available to them.

To make the least wasteful use of the energy resources available to them.

To welcome visitors to various parts of the reservation; but to keep other parts restricted for their own use and that of their relatives and close friends.

To carefully control the influences that could destroy their privacy and sense of tribal community.

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LAND USE PLAN
FOR ADDITION TO HAVASUPAI INDIAN RESERVATION

General

It is evident that the Grand Canyon and Havasu Creek are unmatched for their beauty. The Havasupai people have always admired their homeland and deeply lament misguided efforts to develop or alter it. For decades they feared the commercial developments of the South Rim would be brought farther westward, toward Havasu Canyon, and that they would be unable to prevent it. Now, however, Congress has placed the most unspoiled of the lands between Havasu Canyon and Grand Canyon Village in the hands of the Havasupai and they feel the integrity of these lands is assured under their protection.

Agriculture

The Havasupai Tribal Council has designated approximately 6700-plus acres of Pasture Wash as a gardening area. Here the Havasupai people historically carried on Hopi-style dry gardening into the 1950's. This land will be designated as agricultural in order that the Tribal Council may make provisions for those members of the Tribe who desire to garden this area again. The Havasupai Tribal Council will develop a land use code to govern both individual and tribal farming in the area, as well as small personal garden plots anywhere on the reservation while anticipating that, outside Pasture Wash, garden plots would primarily be located on the downhill side of stock tanks for water.

Such crops as potatoes, beans, and some types of corn may be grown on the upper reservation by using the seasonal rainfall of late summer. Large-scale artificial irrigation methods are not anticipated presently due to a lack of an economical water supply. Such small-scale gardening will necessitate the erection of small fences to protect the crops from animals. The major part of Havasupai farming will continue to be located in Havasu Canyon.

Cultural Resources

Confirmation of Havasupai title to these lands provides tribal protection to the numerous archaeological sites on the reservation, which shed much light on the early life of the Havasupai and their Cohonina ancestors, and on that of the neighboring Anasazi and the earlier Desert Culture. The Havasupai will neither allow building upon nor destruction of such sites, where their presence is detected. In addition, the Havasupai would like to restore certain of these archaeological sites and relics to as near their original condition as possible. Where this is to be done, prior examination would be performed to assure that such restoration would not result in any obliteration or distortion of what now exists.

Any cataloging of archaeological and cultural resources will be carried out under Tribal auspices and would be kept confidential to protect the sites. Such cataloging would be made available to the Secretary only to assure that they are being protected; it would not be made available for research purposes except with the specific, written permission of the Havasupai Tribal Council.

Domestic Water

The lands surrounding Havasu Canyon and its tributaries are arid, semi-desert uplands. Water has always presented the major problem in utilizing these lands. Providing domestic water occupies a very high priority in the Havasupai Plan.

In years past, individual Havasupai families gathered and melted snow, hauled water on horseback from lower springs and caught rain water from their cabin roofs to support wintertime life on the uplands. During the drier summer months they returned to the well-watered lower elevations of Havasu Canyon and several other springs to the east. The Havasupai will continue to follow these practices for the pro-

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vision of domestic water and will probably have success in years of normal precipitation. Atmospheric water is undependable, however, and the Havasupai feel they must investigate other alternatives also.

One alternative would be the location of underground water sources for domestic use. Preliminary surveys indicate only a 25 percent probability of locating even minor underground sources.* The general trend of the underlying strata on the Havasupai Reservation is into Havasu Canyon, which drains these strata and makes location of any underground water unlikely. Only the extreme eastern portion of the reservation lies outside the immediate Havasu drainage basin; on this area the major trend of the strata is a slight southerly dip. It appears the likeliest locations of pooled underground water will be somewhere in the Pasture Wash area or toward the southeastern boundary of the reservation in the vicinity of Rock Tank.

Within a short distance of the Grand Canyon's rim on the north boundary of the reservation, the presence of springs below the rim of the canyon indicates the presence of minor, northerly-flowing aquifers and a short, northerly-dipping geology. As a second alternative, the Tribe will investigate the possibility of tapping these aquifers without significantly interfering with existing springs below the upper rim along the northern boundary of the reservation.

A third alternative for supplying domestic water would be to tap the abundant resources of Havasu

Canyon. Havasu Creek's output varies neither seasonally or annually. Getting a fraction of its water back to the uplands would be an expensive but possible proposition, comparative in scope to the transmission of water from the North Rim of the Colorado River to Grand Canyon Village on the South Rim.

A fourth alternative might be to draw water from stock water tanks and to treat such water with alum and chlor to render it suitable for human consumption.

Energy

In past years, Havasupai families have utilized dead pinyon and junipers for heating and cooking fuel; this process will continue on all parts of the reservation. However, dependable sources of electricity are desirable at several locations outside Havasu Canyon for domestic use, water distribution, and for operation of a clinic or school.

One expensive but possible solution for supplying this energy would be with small, local generators such as the Havasupai Tribe presently operates for supplying power to Havasu Canyon. Such stations could be constructed elsewhere to supply the upper portions of the reservation.

Another possibility which has been under investigation for the past five years is the installation of a power line from a commercial supplier. The line would probably run across the Hualapai Reservation and onto the Havasupai Reservation from the southwest and connect with the power lines at Long Mesa. A spur line would run to Hualapai Hilltop. This alternative appears far more acceptable than the use of several local stations, for it permits a higher available output to the users at a lower final cost; it would also avoid the noise and service requirements of small, local stations.

*E.G. DeWilde, Jr., "Preliminary Report on Water Availability for the Havasupai Reservation Expansion," February 1975.

W.J. Breed, G. Billingsley, and S. Imsland, "A Preliminary Survey of the Ground Water of the Havasupai Reservation, Coconino County, Arizona, June 10, 1975.

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The barrier of Havasu Canyon makes it unlikely that a power line supplying the western half of the reservation would be available to the eastern half. Therefore, the Tribe would investigate the extension of a spur line from a commercial source to Pasture Wash, Topocoba Hilltop (and possibly Moqui Tank at some future date).

The Tribe also wishes to investigate the feasibility of using wind and solar energy. The technology for low-profile wind generators for individual family units exists and is rapidly improving. The Tribe will also look into the use of individual power units, including solar and wind power units. Wind and solar power would allow the location of communities and homes independent of the need to transmit power to them over a distance.

Fencing

The Havasupai Tribe anticipates retaining the approximate 15,000 acres of Pasture Wash between the Havasupai Drift Fence and the east reservation boundary as a separate unit, maintaining the Havasupai Drift Fence as a cross fence and eliminating the need to remove it.

Other cross fencing will begin at canyon heads and either meet the reservation boundary fence or cross the shortest distance to another canyon head in order to minimize the erection of fences in the area. Exceptions to this will be possible to manage more precisely fairly large areas. All fences, to the extent possible, will be constructed to permit the passage of wildlife while regulating the movement of livestock.

The extreme eastern portion of the Havasupai Reservation presently forms a portion of the Rain Tank Allotment which was under grazing permit to a private

rancher until January 2, 1985; however, the permit was voluntarily relinquished in exchange for construction of a new boundary fence on the eastern boundary.

Because of the oblique terrain of the Canyon and the staggered boundary line location at some isolated areas of the Havasupai Reservation Addition, it is impossible to carry out straight line fencing. It appears that convenience fences following the contour of the Canyon would be a feasible solution so that full use may be made of the land base by the Tribe and its neighbors. Therefore, the Havasupai Tribe feels that the possibility for land use exchange agreements with their neighbors, particularly those to the south, should be left open.

Grazing

The Havasupai Tribe recognizes that the lands included in their reservation are presently marginal for grazing purposes. However, they need to make every reasonable use of these lands to support their livestock.

There is every reason to believe the lands of the upper reservation could safely support productive increases in both water storage capacity and available forage.* Therefore, it is planned that all suitable areas of the upper reservation will be subject to controlled livestock grazing, being broken into grazing districts; the boundaries of these districts shall follow natural boundaries as much as possible.

*See Report 2210, "Management Plan Havasupai Allotment," Kaibab National Forest and Grand Canyon National Park, undated (prepared approximately 1968).

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The Havasupai Tribal Council will develop and implement a grazing plan. When sufficient stock water is available, it will separate the cattle and horses and manage them separately; the intention is to manage both herds as Tribal units, though animals may be individually owned in these Tribal herds. Such Tribal control of grazing and watering patterns will prevent haphazard use of the range with possible degradation and will also control the number of animals allowed on the range and their location.

The Havasupai people have long shown a distinct preference for the cow-calf type grazing operation, but there is some reason to believe a yearling type operation might also succeed well in such rough terrain. Forage for livestock is more abundant during certain seasons, and it may prove beneficial for the Tribe to purchase calves for grazing during such periods with a complete round-up and sale at the end of these periods. This would take advantage of seasonal forage while protecting parts of the range from year-long exposure to grazing. Certain breeds of livestock not presently used could be examined also for their special suitability to this range.

Law Enforcement

In the past, enforcement of littering and defacement regulations has been all but impossible on the Havasupai Reservation, due to the failure of the Havasupai law code to apply to non-Indians. The Havasupai Tribal Council is revising this code so that its civil law applies to all persons within the Havasupai Reservation. Enforcing this code will necessitate the stationing of several Havasupai enforcement officers or rangers where they can monitor access and be easily available to others. Cooperative enforcement will be worked out between the Tribe and National Park Service for management and enforcement on the Havasupai Traditional Use Area.

Residence

Traditionally, the Havasupai people lived outside Havasu Canyon during the winter months from October to March. They anticipate that families will return to this pattern; additionally, some families may elect to establish permanent residence on the upper reservation.

At present the Havasupai Tribe includes approximately sixty families, of which many have expressed the desire to live in individually isolated locations on all part of the upper reservation. Their homes would be self-constructed or cooperatively built cabins or traditional earth-covered log houses and wickiups.



CABIN ON THE UPPER RESERVATION

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TRADITIONAL CONICAL EARTHEN HOUSE SHOWN BLENDING IN WITH THE LANDSCAPE

The eventual formation of small settlements and groups of homes in several areas is anticipated. The Havasupai have designated four residential areas for this purpose; these are Pasture Wash, the south boundary of the reservation directly south of Hualapai Hilltop, Moqui Tank, and the area just east of Topocoba Hilltop, all of which are shown on the Land Use Plan Map. The boundaries of these areas are fairly approximate, and their designation is not a statement that groups of houses will be placed on any of them; it is merely a guarantee that settlements of homes will not be permitted to develop outside these designated areas. The Havasupai do not envision tract-type housing on any part of the upper reservation. In addition, the tribe will develop an

ordinance to govern proper disposal of refuse and waste for all parts of the reservation.

Revegetation

Annual assessments will be made of the forage, range conditions, and water availability in relation to the livestock and wild game herds to establish and maintain a stable balance and prevent any degradation of the area. Game and livestock herd levels will be adjusted to the prevailing range conditions.

Where it is feasible and seems justified, the Havasupai Tribe wishes to improve the forage situation. In some places the infiltration of woody and less desirable species and the spread of junipers has degraded the available range, promoted serious erosion, and nearly eliminated certain native grasses. Where juniper removal is carried out, it will be preceded by an archaeological and cultural resources inventory of the area. The removal will be in well-watered locations, such as the bottom of washes, where immediate reseeding to productive grasses would be most successful. Removal of plant species from an area should be carried out only if it can be demonstrated that these species are detrimental to the area and removal would result in an improvement of the range, forage, and wildlife.

The Havasupai Tribe intends to restore certain native food plants that have become relatively scarce on the upper reservation; such plants could be reintroduced in areas protected from livestock grazing or in areas unsuitable for grazing but well suited to the growth of the food plant.

A recent examination of natural forage on the Great Thumb Mesa area has shown it to be surprisingly productive of nourishing grasses, more so than any other area of the reservation. For this reason, it is important to protect this naturally productive

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area from degradation so that it may continue as a stable, producing source of forage for the livestock and wildlife of the region. The Great Thumb Mesa holds special significance to the Havasupai people who wish to maintain this area as undisturbed as possible.

Stock Water Development

The need for adequate and permanent stock water on the Havasupai Reservation is apparent, and its development will benefit both Havasupai stock and wildlife of the area.

The Havasupai envision that stock water development will consist primarily of improving existing earthen catchment tanks and building additional tanks in suitable areas. If it should prove feasible, the Havasupai Tribal Council also hopes to produce permanent stock water from drilled wells and limited spring development. Another method which the Tribe will explore is the use of "trick tanks," with which an artificial drainage is created over a hard surface such as metal or concrete and allowed to flow into a closed tank to minimize evaporation. Water lots will be constructed around water and will be used rotationally as water is available.

The Great Thumb Mesa will be designated as a special grazing zone wherein water developments will be limited to repair and improvement of existing water catchment reservoirs and natural catchment basins.

Support Facilities

Support facilities for the four residential areas will be developed as needed and as resources become available. The first area with sufficient residents to warrant health treatment facilities would be scheduled to have it located there; other areas could

then draw upon these. Inasmuch as the residential area south of Hualapai Hilltop is separated from the other three by Havasu Canyon, it may be necessary to locate separate emergency treatment facilities there.

At present, Havasupai children attend school 300 miles and more away from home after the sixth grade. The Havasupai people wish to set aside a school site on the upper reservation; the Pasture Wash area will be the location of this site. This area is expected to bear the greatest concentration of Havasupai families and lies closest to the school system at Grand Canyon, where the Havasupai hope to send their high school children. Eventually, it should become possible for all Havasupai children to attend school close to home, whether this is on the upper or lower reservation.

As the residential areas develop, the need for commercial facilities will become apparent. These facilities should be located at Hualapai Hilltop and either in Pasture Wash or in the vicinity of Topocoba, and will be intended primarily to serve the Havasupai themselves.

Transportation and Communications

Most travel within the Havasupai Reservation will be on foot or horseback along non-motor trails. The repair and maintenance of the extensive system of existing trails is therefore essential to Havasupai life. Access to Havasu Canyon will continue to be by foot or horseback. The Havasupai people have frequently stated their determination to keep Supai Village forever isolated from motor traffic. Supplies will continue to be brought on horseback, or, by helicopter, if they are too heavy or bulky for horse packing.

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Flight Restrictions

In the interest of privacy and respect for the peace and quiet of certain special areas, the Havasupai Tribe feels no flights except emergency flights should be permitted over the Great Thumb Mesa, Long Mesa, and Wi Gasala. In addition, no flights except for helicopter landings should be permitted over Havasu Canyon at an altitude below 6500 feet. The Tribe would also like to limit flights over Havasu Canyon to certain times of day. Non-emergency helicopter landings would be restricted to three locations on the reservation: Hualapai Hilltop, Long Mesa, and Supai Village. For special needs, the Tribe will permit helicopter landings on the area above Havasu Falls. The Tribe will relax these restrictions only for emergencies and scientific investigations and surveys as authorized by the Havasupai Tribal Council or the Secretary.

Public Access to Adjacent National Park Lands

Public access to the Havasupai Traditional Use Area within the adjacent Grand Canyon National Park will be available onto those portions of it above the rim of the Grand Canyon over routes designated by the Tribe and the Secretary of Interior. Public access to lands below the rim will be limited to three routes: the Havasu Creek Trail below Beaver Falls to Colorado River, the Great Thumb Deer Trail, and the Apache Point Trail north of Watahomiji cemetery. The Tribal Council would prefer to maintain some scrutiny over the use of the Great Thumb Deer Trail to protect delicate areas and to promote visitor safety, as this area is both remote and hazardous.

On the west side of Havasu Canyon, public access to lands below the rim within the Traditional Use Area will be from the Colorado River. The Tribe does not feel any trails from the upper reservation in this area into the canyon are safe or desirable for public use.

The Secretary or his authorized representatives will be permitted access to any part of the Havasupai Reservation or the Havasupai Traditional Use Area on adjacent National Park lands in order to ascertain that provisions of this plan are being adequately carried out. The Havasupai Tribal Council has stated its strong wish that neither the Secretary nor his authorized representatives employ motorized access to the Great Thumb Mesa.

Roads

The Havasupai see an eventual need for a maximum of three paved, all-weather roads leading to the reservation. Two of the roads, located outside the reservation are: the one to Hualapai Hilltop from Highway 66 (presently under construction and programmed for completion by the Interior Department during FY 1981); and the Willaha Road which would tie Hualapai Hilltop Road to Highway 180 (the highway to Tusayan and Grand Canyon Village).

The third paved road, located partially within the reservation, leads to Topocoba Hilltop from Pasture Wash. The Tribe feels it may be advisable to leave that part of the Topocoba Road between the east reservation boundary and Arizona Highway 64 as a graded, graveled road. The preferable connection with Highway 64 would be at Tusayan rather than at Grand Canyon Village. This road would connect the Pasture Wash residential area (potentially the largest) with suppliers at Grand Canyon and Flagstaff; it would allow ready access to Grand Canyon Village for Havasupai children who would attend public school there; and it is already an improved road.

These roads would be low-speed, two-lane routes located over existing dirt roads which follow the existing terrain wherever possible and, for the most part, would be unfenced, open-range roads, to avoid interference with livestock and wildlife movement.

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The Topocoba Road would re-open the Topocoba access route to Havasu Canyon, a route which the Havasupai have stated they wish to restore as the principal route. The Tribe will review the possibility of relocating the final few miles of this road. The Tribe prefers a paved road to follow the top of the ridge south of Topocoba Wash, ending at a broad area above the existing Topocoba Hilltop and to the south of it. If this relocation should prove unworkable, the Tribe would like to end the paved surface approximately a mile to the east of Topocoba Hilltop. No vehicular traffic would be permitted further west than this along the existing Topocoba Road, thus preventing any motor travel onto the Great Thumb Mesa.

In addition, five other roads need to be upgraded into improved, graveled, all-weather roads. These are the Pasture Wash Ranger Station Road, the Long Mesa Road, the Pasture Wash-Moqui Tank Road, the Pasture Wash-Rock Tank Road, and the road to the Topocoba residential area. These roads, all shown on the Proposed Land Use Plan Map, are important for local residents to obtain supplies, move livestock, and visit one another. These would be low-speed roads intended primarily for local, Havasupai use. The one exception might be the Long Mesa Road, if the Tribe should locate a wilderness camping area on Long Mesa.

A minimal amount of relocation might also be carried out on the Long Mesa Road, if it should prove feasible, to connect Long Mesa with the Hualapai Hilltop Road by staying within the reservation. The only other case of possible relocation would be, if it should prove desirable, to divert the Wi Gasala Road to follow an older, existing route along the east boundary of the Hualapai Reservation. Such relocation and diversion of the Long Mesa and Wi Gasala Roads would be carried out to avoid right-of-way problems across adjacent private land.

It is the Havasupai Tribe's intention to offer only limited access into the reservation and to control the number of visitors. As a means to this end, the Tribe wishes to minimize the number of entry points into the reservation. Vehicle traffic into that portion of the reservation lying east of Havasu Canyon will be restricted to two entries: the present Tusayan-Topocoba Road for the public, and a second entry point, primarily for Havasupai use, on the road from Rock Tank south to the Anita Road. On the west side of the reservation, access will be by the Hualapai Hilltop Road and the Long Mesa Road. Limited access will also be allowed on the Wi Gasala Road. In the case that a diversion to the Hualapai boundary road is established, the present south entrance to Wi Gasala will be closed off.



PRIMITIVE DIRT ROAD ON THE UPPER RESERVATION

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The Tribe wishes to have the Wi Gasála (Tenderfoot Mesa) Road and the Moqui Tank-Sagebrush Point Road as graded, dirt roads. The balance of existing dirt roads will be kept primitive, with a relatively low amount of maintenance. The Tribe wishes to limit non-Tribal use of such primitive roads. The same limitation also applies to any foot trails not specifically listed.

The Havasupai Tribe intends to prohibit all vehicle traffic north of Topocoba, except for authorized emergency needs. All visitation to Manakaja Point and the Great Thumb Mesa will be by backpacking or on horseback only. Further motor use of this area is to be ended. Public off-road vehicle travel on all parts of the Havasupai Reservation is prohibited.

Telephone and Radio

The Havasupai people hope to establish some means of communicating between the upper and lower reservation and between the scattered settlements of the upper reservation for emergency purposes. This may be accomplished with a few telephone lines to central locations or by means of microwave relay stations or battery-powered, two-way, citizen-band radios located at central sites such as Topocoba, Moqui, Hualapai Hilltop, and Supai Village.

Trails

The Havasupai Tribe has designated two existing trails which they wish to maintain as public access and transportation routes. These are Topocoba Trail and the Hualapai Trail. In addition, they wish to maintain five other trails for their own use and for the restricted use of the public; these are Moqui Trail, Kirby Trail, Manakaja Point Trail, Great Thumb Trail, and the Whitewall Bend Trail, all of which are shown on the Proposed Land Use Plan Map. The Havasupai

wish to restrict all other non-designated trails to their own use.

Visitor Use

During the slack month of December 1975 alone, 49,952 visitors entered the Grand Canyon National Park's south entrance. The proximity of the Havasupai Reservation to the National Park Service tourism complex at the South Rim makes much potential business available to the Havasupai; however, the Havasupai do not advertise to attract such business and have no plans for such advertising in the future. All the visitation they care to accommodate is available to them already, and they will continue to limit the number of visitors permitted to enter the canyon at any one time.

There will be, in the interest of visitor safety and control, a limited number of designated access routes into Havasu Canyon as previously mentioned. Other trails into Havasu Canyon will be used only with Tribal permission or the accompaniment of Havasupai guides, in the interest of safety and protection of delicate areas.

In Havasu Canyon the Tribe maintains a cafe, two small lodges, and three Tribal campgrounds. These Tribal campgrounds, with waste management improvements, could bear a maximum load in excess of the limit the Tribe presently enforces; however, whatever level the Tribe adopts will be reassessed annually to assure that no degradation to either the environment or the visitors' experience occurs.

Visitors will be instructed that they are to remove all materials they bring into the canyon with them; they are to introduce no trash. They will not be permitted to disturb natural or archaeological features. They should be able to enjoy the area without damaging it. They will be expected to respect the

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privacy of Havasu Canyon as the Havasupai people's home.

Presently Havasu Canyon bears the entire load of visitation, and the Havasupai people view this load as somewhat intense under present conditions. All lodges, pack animals, campgrounds, and stores are based in the canyon.

Since P.L. 93-620 provides access to and temporary use of lands within the reservation for recreation purposes to non-members, the Tribe feels that it would be wise to follow the lead of the National Park Service and attempt to base certain operations on the canyon rim, where the environment is not so heavily used, and where they can be maintained more easily and cheaply.

Basic, rustic, overnight campground facilities located at Hualapai Hilltop would improve conditions as well as provide a storage place for cars and other personal belongings for those going to Havasu Canyon. Location on the rim would make short day trips to Havasu Canyon possible for those who wish to spend only a day in the area.

Location of overnight facilities to serve the Topocoba access is still somewhat more complicated, since the Topocoba Trail to Supai Village is too long to make day use feasible. A camp consisting of simple shelters and possibly a camp kitchen should be located somewhere along the trail; the three possible locations are: (1) to the east of Topocoba; (2) part way down Topocoba Trail; or (3) near Havasu Springs.

The Tribe may organize horseback packing trips and permit backpacking along designated trails outside Havasu Canyon. It is the Tribe's wish that camping outside the canyon be limited to three wilderness-type, primitive campsites. One would be located on Long Mesa overlooking Supai Village; one a half mile back from the rim near Manakaja Point; and one a quarter to a half mile back from the rim near the base of Gatagama Point on the Great Thumb Mesa (see Land Use Plan Map). These camps are all located within easy walking distance of the rim along existing trails and offer a variety of views which, the Tribe feels, should amply satisfy the most avid outdoorsmen's wishes to view the spectacular scenery of Havasu Canyon and of the wilderness of the Grand Canyon at one of its most remote points. Camping outside these areas will be strongly discouraged for several reasons, including fire control, public safety, and environmental protection. Camping at the Great Thumb site will be available only seasonally, as this particular site will be closed during the winter from October through March. Backpackers will be welcome to hike and visit other areas within reach of these campsites along the designated trails,



HUALAPAI HILLTOP--JUMPING OFF POINT TO SUPAI VILLAGE

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but will be expected to base themselves at the designated sites. Tribal Rangers will be strategically stationed on the upper reservation to assure proper enforcement of the protection of this natural area.

Waste Management

Disposing of sewage in Havasu Campground, which has borne a heavy volume of visitor use for many years, promises to be a difficult problem. One solution the Havasupai Tribe is experimenting with is the use of chemical enzymes in the privies there to reduce both the volume and odor of the wastes. Eventually the problem of disposal still arises, though in a minimized form. The Havasupai Tribe will also investigate the installation of a small treatment station for Havasu Campground, a solution which one study* indicates could be very costly and which would have to be examined very carefully to avoid all odor and minimize maintenance problems. Some form of chemical toilets may also prove a workable alternative. In no case will raw sewage be allowed to escape into Havasu Creek.

Outside Havasu Canyon, privies seem to be a reasonable choice for disposing of human waste at individual homes. Other choices could be composting toilets, incinerating toilets, biological toilets, and oil-flushed toilets. None of these alternatives require the use of water; the composting toilet, like the privy, requires neither water or power for its operation. For settlements which grow large and compact enough, the Havasupai will investigate the installation of waterless disposal systems or the installation of septic tanks and leach fields, if water should be available. The use of a leach field in highly

*Pope, Evans, and Robbins, Consulting Engineers, "Study of Water Supply and Sanitary Waste Disposal at Havasu Canyon Campground," National Park Service, June 1973.

fractured or permeable soils will be accompanied by the laying of a suitable absorption bed where this is indicated to prevent rapid escape of waste water and possible pollution of ground water sources.

The satisfactory disposal of solid, inorganic waste has caused the Havasupai increasing headaches in recent years on the lands of the lower reservation. The problem arises from the ease of transporting containers into Havasu Canyon and the annoyance of bearing the same empty containers out. A large volume of cans, boxes, and scrap paper build up in Havasu Campground and elsewhere in Havasu Canyon as a result of some visitors' individual carelessness. The Havasupai are inclined to believe that no amount of public education can improve this situation significantly and they must be prepared to gather and transport such trash from Havasu Canyon themselves. National Park Service experience does indicate, however, that a good clean-up program will significantly discourage the deposit of new trash.

The Tribe proposes to separate solid waste into combustibles and non-combustibles. Combustibles can be reduced in volume by means of a proper incineration device, which can serve all of Havasu Canyon. Remaining solid waste can then be separated into recyclable and non-recyclable materials, both of which can be compacted with a gas- or electric-powered trash compacter. These blocks of solid waste can then be stored in a suitable facility until such time as the weight and volume justifies the use of a helicopter lift to transport the material to the nearest road vehicle pickup point on the upper reservation. If it should prove unfeasible at times to have trash flown out, it may become necessary to have individuals pack trash out by horse. All such transport will prove expensive, and the Havasupai Tribe will continue to appeal to their visitors to take out the materials they carry in and leave nothing behind. This would solve much of the problem without expense or complication.

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Solid wastes which have been taken to the upper reservation can then be taken to a sanitary land fill. In so far as possible, recyclable materials will be reclaimed. There are several suitable sites for land fills on the reservation, but one land fill on each side of Havasu Canyon should prove sufficient. These land fills will be properly maintained for sanitation. Disposal of solid waste generated outside Havasu Canyon should be a relatively minor problem to be handled by the use of the same sanitary land fills.

Wildlife Management

The Havasupai people have traditionally used several food animals, these include the mule deer, pronghorn antelope, jackrabbit, cottontail rabbit, and porcupine. All of these shall be considered permissible species for the use of the Havasupai; however, because they feel the existing game herds cannot bear outside hunting pressure, the Havasupai Tribe will restrict public hunting on the reservation.

The Tribal Council will conduct a survey of wildlife on the reservation and will develop a wildlife management plan based on this survey to guide in maintaining and improving existing levels and to prevent any diminution in numbers through overhunting or indiscriminate hunting. The Tribal Council will then authorize annual resurveys by the U.S. Fish and Wildlife Service, by the Arizona State Game and Fish Department, or by trained rangers from their own Tribe. If a game survey should show the presence of more game than the Havasupai themselves can use and more than the range can bear without degradation, then the Tribal Council will first consider the sale of live game species for restocking elsewhere. Should the Tribal Council choose to permit public hunting in such a case, it will develop a plan and set of regulations to govern such public hunting and submit the plan to the Secretary for approval.

There will be no hunting of desert bighorn sheep on the reservation; the Havasupai Tribal Council intends for these lands to be a sanctuary for them.

The Havasupai will pursue the control of predators with extreme care. The presence of predators must be weighed against the presence of the human hunter as well. If game herds and livestock maintain stable levels in the presence of existing hunters and predators, then predator control will be deemed unnecessary. If a reduction of game herds occurs, then the number of predators must be investigated together with existing hunting patterns and other factors such as overgrazing and drought to determine what causal relationship exists. In case an individual predator should become dangerous to livestock, the Havasupai can have this predator trapped or hunted, if necessary. This taking of predators is not to be regarded lightly or abused; they will be taken only by methods approved by the Interior Department. Eagles and hawks shall not be considered predators for the purposes of this plan.

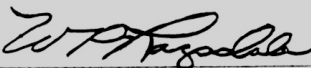
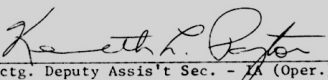
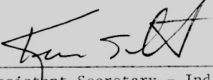
Fish cannot be successfully stocked in some areas of Havasu Creek, the only perennial stream in the reservation, as the water is too warm and mineral-laden to support most varieties of fish. Additionally, seasonal flooding carries stocked fish over the waterfalls of the creek and on into the Colorado River. The continued presence of helgrammites in this stream does witness to its freedom from other impurities. Any non-Havasupai fishing on the reservation would be limited to the area north of Mooney Falls.

The Havasupai Tribe intends to investigate the possibilities of re-establishing vanished native animals on the area, if such restocking may be done without detrimental effect to existing species. They feel that the greatest possible diversity of natural wildlife is very important to the health of the reservation. The Havasupai Tribe has stated that, whatever decision

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future Tribal Councils may adopt regarding public hunting on the reservation, the entire Great Thumb Mesa north of Topocoba is always to be reserved from public hunting.

The plan for the use of the 185,000 acre addition to the Havasupai Reservation, developed by the Secretary of the Interior in consultation with the Havasupai Tribal Council, pursuant Section 10(b) (4) of Public Law 93-620, is hereby respectfully submitted to the Senate Select Committee on Indian Affairs and House Committee on Interior and Insular Affairs of the United States Congress on this date, _____.

 _____ Area Director, Phoenix Area Office	<u>14 JUL 1981</u> (Date)
 _____ Actg. Deputy Assis't Sec. - AA (Oper.)	<u>12/2/81</u> (Date)
 _____ Assistant Secretary - Indian Affairs	<u>1/5/82</u> (Date)