

Polishing the Jewel

An Administrative History of Grand Canyon National Park



Michael F. Anderson

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by

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GRAND CANYON ASSOCIATION



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Traffic congestion has steadily worsened at Grand Canyon Village since the automobile became park visitors' vehicle of choice in the mid-1920s.GRCA 3552; Fred Harvey Company photo.

Inset front cover photo: Ranger Perry Brown collects a one dollar "automobile permit" fee at the South Rim,1931.GRCA 30.

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Preface

Preface

When the U.S. Congress granted Yosemite Valley to the people of California in 1864 and withdrew from private entry a portion of northwestern Wyoming as Yellowstone National Park in 1872, it set national precedents for reserving expansive parcels of open land as public parks. Since those years national parks, monuments, historic sites, seashores, and recreational areas have proliferated, reaching every state in the union but Delaware and embracing more than 375 discrete units comprising 83 million acres. The National Park Service and its allies have successfully, for the most part, fended off concerted efforts to tap these reserves for extractive purposes, helping other land-management agencies slow a centuries-long trend of exhausting the public domain.

Despite its many achievements, the National Park Service in recent decades has been roundly criticized by many sectors of U.S. society, including its intermittent allies among congressmen, preservationists, businessmen, and public users. The history at hand, though narrowly descriptive of issues and events of an administrative nature at Grand Canyon National Park from 1919 to the present, is also attentive to this judgmental shift toward the eighty-three-year-old organization born at the apogee of U.S. progressivism and so immediately successful. A principal argument is that fundamental causes of the perceived about-face derive not as much from specific agency decisions, which have proved remarkably consistent for nearly a century, as from a maturing comprehension of ecology and an understanding of true “preservation,” or what Stephen Mather called “complete conservation.” As park administrators, scientists, and others gained a better understanding of what is required to allow ecosystems to evolve along their own paths, the ambition of some to implement such knowledge collided head on with demographic, economic, and political trends observable in the western United States since the mid-nineteenth century, trends that have so far thwarted otherwise good intentions to fully protect national park flora and fauna.

This conclusion derives from consideration of Grand Canyon and national park history within a broad framework of world-system theory, a method of historical inquiry that shifts analysis from the actions of individual nations to worldwide trends of the past five hundred years. The historical model also focuses on a single, expanding, capitalist economy that by the early twentieth century had captured world markets, labor, and natural resources, but posits more than a Marxist view of world economies. Immanuel Wallerstein argues in *Historical Capitalism with Capitalist Civilization* (Verso, 1995), and I contend in the context of national park history, that world capitalism has engendered a pervasive social system in which the scope of capitalistic rules

has grown ever wider, the enforcers of these rules ever more intransigent, the penetration of these rules into the social fabric ever greater, even while social opposition to these rules has grown ever louder and more organized

It is within the contexts of these “rules” that native peoples, explorers, settlers, exploiters, capitalists, ecologists, tourists, interest groups, park administrators, and governments have acted and reacted in the canyon region since the mid-nineteenth century, virtually unquestioned until a century later when “social opposition” gained a viable national voice.

It will be a relief to most readers that I do not relate park history within the intricate “vectors” and vocabulary of world-system theory, but rather limit contextual relationships to several of the more noticeable and destructive elements of the modern era explained by that paradigm. First and foremost, of the 4,300 internal and external threats to the national parks identified in the NPS internal study, *State of the Parks—1980* nearly all can be traced to the sole malady of expanding populations, which fulfills our culture’s need for more consumers as well as cheap laborers.

“Overpopulation” is a relative condition defined here simply as a number of human beings beyond the land’s carrying capacity given sound ecological constraints. Many argue that there is no such number, that human inventiveness facilitated by man-made contrivances always has and always will accommodate periodic irruptions of human beings. But such answers evade questions of human sanity, recreation, and nature’s survival—older and newer objectives for the national parks—and merely inform us that we *may* have the wherewithal to feed, clothe, and shelter ever-teeming masses of our own species if we do not look closely at ecological costs. These costs include sprawling industrial and residential development, resource “enhancement” and extraction, and pollution, which together pose the greatest long-term threat to ecological preserves.

Overpopulation is not immediately perceived as a primary culprit in the public’s collective imagination because, among other reasons, humans have adjusted over generations to “crowding”—another condition that defies definitive measure. People regard spaces to breathe, reflect, and recreate relative to their everyday lives. Every year more than a hundred million people escape cities worldwide to visit the western parks, yet despite long lines at entrance stations, traffic jams, competition for in-park hotels and restaurants, and congestion at scenic points, they return home believing that they have briefly escaped their hectic lives. To help illustrate, consider a survey of a thousand people who rafted the Colorado River through Grand Canyon in the early 1990s: Despite congestion at Lees Ferry, multiple parties vying for campsites, and the reverberation of outboard motors, fully 91 percent considered theirs a “wilderness” adventure. This sample reveals a present-day desire for safe, comfortable, and speedy wilderness trips (safety in numbers, comfort through technology) but also an ignorance of past experiences when visitors could remain weeks without seeing or hearing but a handful of others. It also tells us that a sense of crowding in the parks is relative to ever-sprawling urban environs and helps explain why park administrators historically have chosen and can still choose crowd management over limitations on tourist numbers.

Overpopulation is a relentless threat to western lands and park experiences, exacerbated by the continuing realization of today’s historical system and its economic component, capitalism. Historian Donald Worster and others with insights similar to Wallerstein’s (including Roderick Nash and Max Oelschlaeger) have expanded and refined the modern era’s definition in societal as well as economic terms. Key elements of particular relevance to the survival of national parks and western ecosystems include mankind’s notion of separateness from and superiority over nature, and the erosion of religious and secular ethics as constraints

on human behavior. Worster, in *The Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge University Press, 1988), observes that economic theorists like Adam Smith inculcated a new ethic within the European populace as transoceanic migrations quickened following the fifteenth century, to treat the earth and each other with a

frank, energetic self-assertiveness, unencumbered by too many moral or aesthetic sentiments.... They must learn to pursue relentlessly their private accumulation of wealth. They must think constantly in terms of money. [They must look at everything as a commodity—land, resources, labor—and demand] the right to produce and sell those commodities without outside regulation or interference

One does not have to look beyond Americans’ movement west in the nineteenth and early twentieth centuries to understand unchecked capitalism’s power to wreak havoc on the natural landscape. Its early manifestations like clear-cutting, overgrazing, strip and hydraulic mining, and impoverishment of soils proved so destructive that by the turn of the twentieth century they had triggered alternative ideologies, conservationism and preservationism, which after a hundred years have only modestly limited destructive development. Commodity sale and purchase, however, have implications that travel beyond confrontations among exploiters, conservers, and the land. A global consumer society in relentless pursuit of commodities directly spurs resource extraction on lands that nominally remain in the public’s hands, or within the hands of nations half a world away.

Threats to the national parks and other public lands emanating from population growth and pervasive capitalism are magnified by fundamental dogmas of American democracy that are destructive to nature despite their attraction to humanity. Among these are unrestrained access to cheap land whether private or public, individual “rights” that are more loosely defined today than a century ago, federal goals to achieve a large yet stable middle class, equal opportunity for all, and freedom from government interference (except as financier) in the pursuit of private wealth. Although U.S. political and social systems have become more restrictive in the wake of growing populations, the propagation of democratic principles, distorted to fit anyone’s selfish interpretation, has left its psychological stamp on Americans loathe to give up their pioneer heritage, both real and imagined.

Perhaps no aspect of our democratic legacy is as threatening to the western parks as the fable of rugged individualism. Framers of the Articles of Confederation and U.S. Constitution briefly debated Hamiltonian suggestions to sell the public domain to swell the national treasury versus

Jeffersonian ideals of democratic land distribution, then selected the latter course because ordinary citizens had already chosen it in their mad dash westward. Driven by romantic spirit or lack of opportunity in the East and lured by the promise of land or yet-unexploited resources, seven generations of families and exploiters rushed to fill the continent's habitable spaces, dismember its forests, mine its precious minerals, and kill its indigenous inhabitants, flora, and fauna. The federal government encouraged and bankrolled these "rugged individuals" with transcontinental wagon roads, liberal railroad grants, preemption and homestead laws, territorial and state land grants, permissive mining laws, ample military protection, and democratic rhetoric.

Technological advance and its universal application, like overpopulation, capitalism, and misplaced notions of American democracy, also poses a multifaceted threat to western lands and is intricately intertwined with our economy, eagerly embraced by governments and peoples alike. It is, of course, a key differentiation between humans and other animals, which emerged in our dim, deep past and has been quickening ever since. But it is only in the last few centuries that invention, accelerated by industrial and scientific revolutions, has interacted with capitalism and eroded ethical restraints to produce environmentally destructive and dehumanizing results. It would require a lot of pages to simply categorize technological threats to the natural environment, but industrial smog, emissions of a billion internal-combustion engines, pesticides, and chemical fertilizers are but a few of the more deadly, their effects extending far beyond points of origin or application.

It is useful to consider an administrative history of our western parks within these manifestations of the modern world-system to illustrate that public agencies, like the rest of us, are ensnared within its interlocking, mutually reinforcing tenets. Land managers have severely limited and mostly short-term options to protect the lands in their care. It is also essential to consider the history of our parks in terms of contemporary goals, political options, and levels of knowledge. Many critics of the National Park Service write as if one relatively small federal agency has had the authority, foresight, and expertise to make all the correct policy turns, and they have defined "correct" in terms of recent attitudes toward preservation applied retroactively. Historians call this "presentism," the judgement (typically the condemnation) of past actions through lenses of current learning and values. In popular parlance it is akin to "Monday-morning quarterbacking," but whatever we call it, this form of criticism is essentially useless. Past decisions and actions should be considered in contemporary contexts, and past contexts compared to the present to determine what has changed and what may now be possible. Doing so

in this history has led to my overall conclusions that little has changed of significant ecological consequence, little is possible within the present world-system other than momentary compromise gleaned from the political tension between entrenched practice and theoretical alternatives, and that the NPS as a politically controlled federal bureau could not have managed much differently had it wanted to.

■ ■ ■

This book is an administrative history of Grand Canyon National Park with a target audience of park employees and others concerned with how the park has been managed over the years. It therefore falls short of a comprehensive history of the canyon and its environs. First, I omit an introduction to the region's natural history that may be found in a number of very good books in print. These include Jeremy Schmidt's *A Natural History Guide Grand Canyon National Park* (Houghton Mifflin Company, 1993), Rose Houk's *An Introduction to Grand Canyon Ecology* (Grand Canyon Association, 1996), L. Greer Price's *An Introduction to Grand Canyon Geology* (Grand Canyon Association, 1999), *Grand Canyon Geology* edited by Stanley S. Beus and Michael Morales (Oxford University Press, 1990), and Wendell A. Duffield's *Volcanoes of Northern Arizona: Sleeping Giants of the Grand Canyon Region* (Grand Canyon Association, 1997).

It was also necessary to omit the stories of native residents and most of the explorers, exploiters, and settlers of the canyon region to afford more space to the park's development under federal bureaus and concessioners. Fortunately, this earlier history was the focus of my book, *Living at the Edge: Explorers, Exploiters and Settlers of the Grand Canyon Region* (Grand Canyon Association, 1998), which I hope the reader will consider as a companion volume to this administrative history. *Living at the Edge* does not explicitly argue canyon events in the context of western incorporation by the United States and world-capitalism, but the story, which ends in the 1920s, can be interpreted in that manner, and its conclusions are consistent with this history.

In addition, there are a number of good books that address particular aspects of the canyon's early history. Some that I have found useful are *Quest for the Pillar of Gold: The Mines & Miners of the Grand Canyon* (Grand Canyon Association, 1997) by George H. Billingsley, Earle E. Spamer, and Dove Menkes; Al Richmond's *Cowboys, Miners, Presidents & Kings: The Story of the Grand Canyon Railway* (Northland Publishing, 1989); and P. T. Reilly's *Lee's Ferry: From Mormon Crossing to National Park* (Utah State University Press, 1999). This list also includes J. Donald Hughes' *In the House of Stone and Light* (Grand Canyon Natural History Association, 1978); Richard and

Sherry Mangum's *Grand Canyon-Flagstaff Stage Coach Line: A History and Exploration Guide* (Hexagon Press, 1999); William C. Suran's *The Kolb Brothers & Grand Canyon* (Grand Canyon Natural History Association, 1991); and Margaret M. Verkamp's *History of Grand Canyon National Park* (Grand Canyon Pioneer's Society, 1993), edited by Ronald W. Werhan.

I was not afforded the opportunity to relate the participatory roles of the six major historical tribes long associated with the canyon, the role of other ethnic minorities and women, or environmental history to any fulfilling extent. These are significant slights since the topics are not comprehensively addressed elsewhere, and their explication would add to an understanding of past management practice. Unfortunately, limited space, other-directed research, and the simple truth that these people as well as non-human species have been marginalized in past management equations all required their omission. There are a number of good books, however, that touch on these topics without addressing canyon management issues, among them Polly Welts Kaufman's *National Parks and the Women's Voice: A History* (University of New Mexico Press, 1996) and Betty Leavengood's *Grand Canyon Women: Lives Shaped by Landscape* (Pruett Publishing Company, 1999). Barbara J. Morehouse's *A Place Called Grand Canyon: Contested Geographies* (University of Arizona Press, 1996) is a thoughtful study of park boundaries as perceived by many interest groups, including some of the tribes, and there are a fair number of books on the tribes themselves. Among the more analytical are Edward Spicer's *Cycles of Conquest: The Impact of Spain, Mexico, and the United States on the Indians of the Southwest, 1533-1960* (University of Arizona Press, 1962); *Paths of Life: American Indians of the Southwest and Northern Mexico* (University of Arizona Press, 1996) by Thomas E. Sheridan and Nancy Parezo; and Thomas D. Hall's *Social Change in the Southwest, 1350-1880* (University of Kansas Press, 1989).

With space and audience limitations in mind, I settled on a political, economic, and developmental history that also identifies the origins and evolution of major challenges confronting managers today. Issues are generally introduced when they have worked their way up to the top of administrators' priority lists. For example, material on the environment and science-based management does not appear until the narrative reaches the 1970s. Major themes include the significance of varied economic interests in the creation and sustenance of the National Park Service and Grand Canyon National Park and the intimate relationship of concessioners and park managers who joined to "polish the jewel" by creating, cultivating, and accommodating an international tourism market. Chapters are segmented along lines of NPS management direction as it has evolved in the past

eighty years or within developmental periods that have been defined or influenced by two world wars, an intervening economic depression, tourism as an export economy and alternative to more traditional extraction, the varied plagues of industrial tourism, and conflicts introduced by increased knowledge concerning environmental protection.

Chapter one is a reconsideration of material presented in *Living at the Edge*, retained in this history to introduce developments in northern Arizona following the arrival of the Atlantic & Pacific Railroad. More attention is paid to changing economies, land use, and debates concerning political and economic control as the canyon metamorphosed from unregulated segment of the public domain to forest reserve, national monument, and national park. European Americans who arrived with the rails are portrayed not only as pioneers but as federal agents and scouts essential to the region's ensuing incorporation by the United States and by world-capitalism. Events at Grand Canyon during these years, 1882 through 1919, also illustrate the escalating conflict between unregulated development and progressive concepts of conservation first addressed by the U.S. Forest Service.

Chapters two and three chronicle formidable successes achieved under early NPS directors Stephen Mather, Horace Albright, and Arno Cammerer during the prosperity of the 1920s and depression of the 1930s. While the agency suffered through a few years of postwar financial retrenchment, Mather and Albright lost no time articulating its principal goals and objectives. When appropriations increased significantly in the mid-1920s, they embarked upon a mammoth infrastructural building program that was completed prior to the outbreak of World War II, thanks to New Deal dollars and desperate low-wage laborers.

The "founding fathers" are portrayed as consummate businessmen with a definitive agenda to create and operate the park system as a federally subsidized tourist business replete with aggressive marketing strategies, plans for horizontal and vertical expansion, and concerted efforts to protect, enhance, and sell their products—parks with unimpaired scenery—to national and international consumers of moderate means. Casting them in this way helps illustrate their sincere belief that remote and apparently worthless lands might be saved not only for altruistic reasons, which were considerable, but as commodities that could be sold repeatedly without degradation. This method of examination reinforces my conclusion that the National Park Service was, and still is (though perhaps to a slightly lesser degree), an agency ensnared by world-capitalism, and it also helps organize the historical inquiry. Another conclusion is that NPS administrators, infused with progressive fervor, endowed with considerable business savvy, and allied with a supportive U.S. Congress and myriad business interests,

brilliantly succeeded in their early goals to raise the National Park System, and especially Grand Canyon, to a viable national institution through visitor enticement and accommodation.

Chapter four begins with the effects of World War II on the park system generally and Grand Canyon National Park specifically, but ends after the war with administrators' first intimations that something had gone awry with the envisioned park experience. The catalyst for change is the emergence of the United States as the world's economic power, reflected in postwar prosperity among more of its citizens. An enriched populace returned to the national parks in droves and for the first time, managers viewed tourists with some trepidation as they arrived in unending lines of air-fouling automobiles, in greater numbers, demanding more and better facilities. They arrived, too, with innovations like motor homes, motorized rubber rafts, small planes, and helicopters, posing heretofore unforeseen visitational issues.

Chapter five continues with congressional, NPS, and concessioner reactions to the tourist onslaught, what I have termed the "infrastructural last hurrah" because the massive rebuilding program called Mission 66, which lingered at Grand Canyon into the 1980s, represented the last time inner-park construction would be posited as a *sole* approach to increased visitation.

Chapter six outlines administrators' attempts through history to manage the canyon's natural resources, a subject that demands its own study but here serves only to balance the record vis-à-vis those who judge NPS resource policies in terms of intentional "facade management." Although early managers, as at all the western parks, were most atten-

tive to the canyon's scenic attributes, they were also concerned (if often wrong) about ways to best maintain its biological health. Science-based management later gained political backing and therefore a foothold in the parks, but following World War II administrators became embroiled in a maze of issues derived from regional immigration, technological innovations, and democratic demands, all of which have since complicated park management and inhibited ecological protection.

In Chapter seven, I summarize the experience of past visitors and historic park planning leading to the 1995 Grand Canyon General Management Plan, which is critiqued from an historical perspective. It is not my intention to offer sweeping alternatives because, as the book reveals, administrators, whether or not they believe in radical management change, have neither the mandate nor the ultimate authority to effect it.

Throughout the book I often use the terms "administrators" and "park managers" rather than identifying specific individuals. This is to some extent intentional, as I came to view superintendents, their assistants, rangers, and others involved in decision-making as interchangeable beings working under guidelines set for them by national and regional directors, headquarters' planners, secretaries of the interior, and the U.S. Congress. By these standards, some administrators were very good, others mediocre. A few had their own agendas; most did not. Superintendents, who have always had considerable leeway in management within set parameters, are all identified in the appendices with their years of service. Other administrators, as many as I could find, are identified in photographs, along with a few additional illustrations that I hope add a bit more life to the narrative.

Acknowledgments

Historians rely on past authors of books, articles, reports, correspondence, and other materials with whom their stories originate. They and their contributions are identified in this history's endnotes where I expand on the text with details that will be of interest to some readers. Among these sources I must single out the secretaries of the interior, National Park Service directors, and Grand Canyon's park superintendents, who wrote candid annual reports of park concerns, plans, and actions from the mid-1910s until the early 1960s. I studied these remarkable reports alongside other contemporary documents to identify original motivations for creating a park system, parks bureau, and Grand Canyon National Park, and to judge the consistency of management decision making through the years.

Shifting to the present, I thank the archivists and librarians who often guided me through their collections. The park itself has benefited from a distinguished line of archivists who have collected physical artifacts, reports, letters, and memoranda spanning the park's first eighty years. I spent most of my research hours here, sifting through more than 10,000 documents, and I thank the current professionals who helped and tolerated my presence: Sara Stebbins, Carolyn Richard, Colleen Hyde, Mike Quinn, Kim Besom, and Alice Ponyah. Further gratitude is owed archivists at Northern Arizona University, Arizona State University, and the University of Arizona, public libraries in Flagstaff, Fredonia, and Kanab, the NPS Denver Service Center, National Archives in Denver, Colorado, and the Library of Congress.

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including world-system theory, which guides much of this history.

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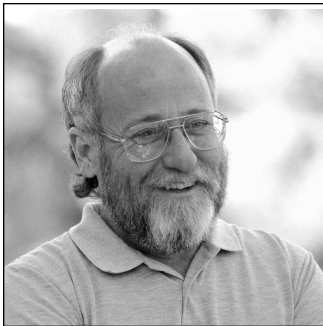
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About the Author



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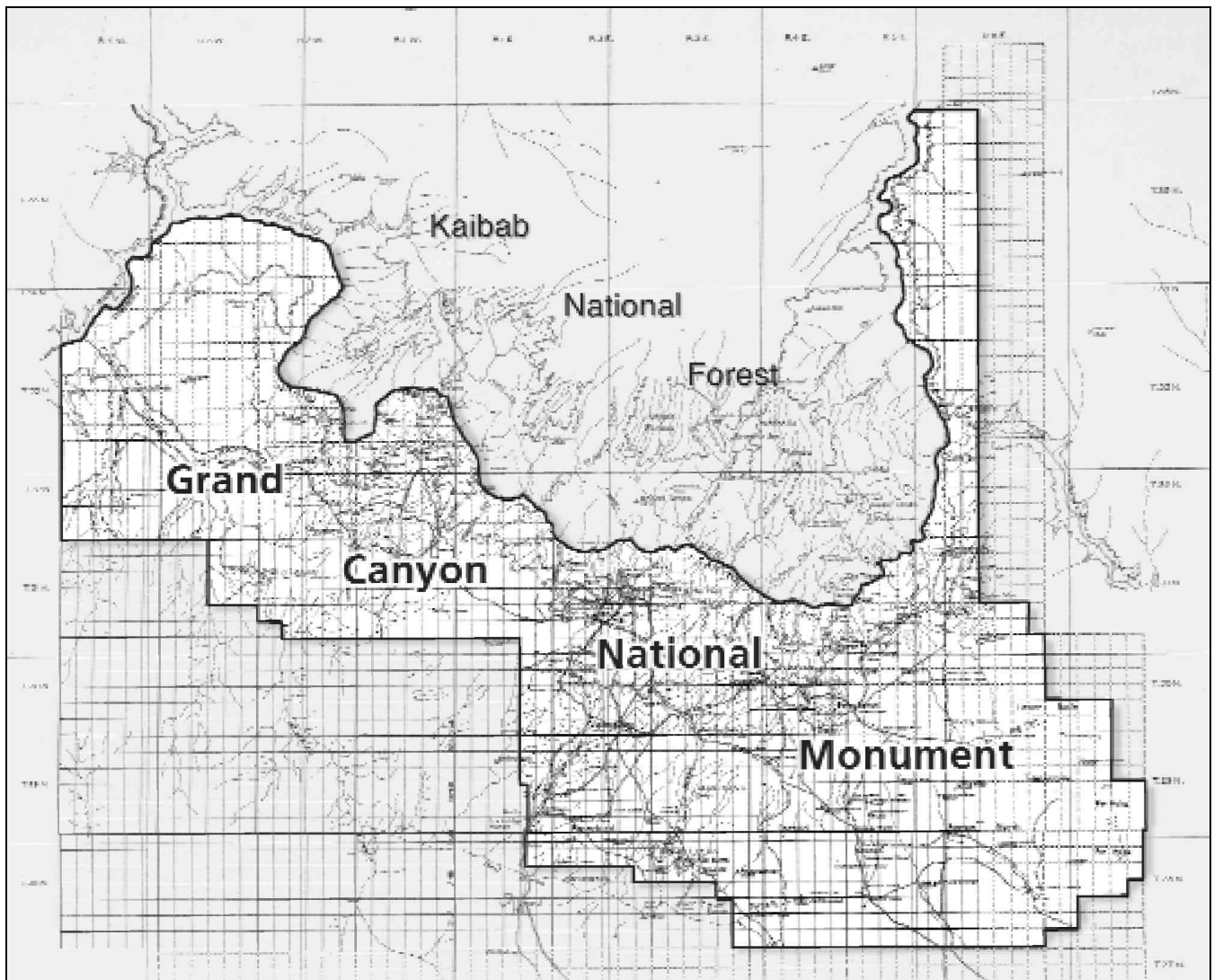
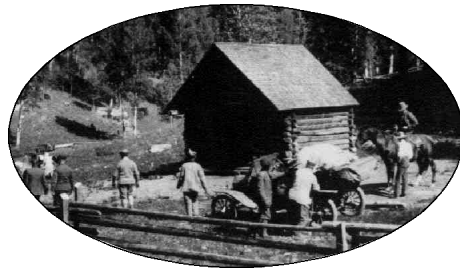


Figure 1. Map of Grand Canyon National Monument/Grand Canyon Game Preserve, ca. 1906-10. President Theodore Roosevelt liberally interpreted the 1906 Antiquities Act when he established by proclamation the 1,279-square-mile Grand Canyon National Monument in 1908. The monument was carved from Grand Canyon National Forest (created by President Benjamin Harrison as a forest reserve in 1893), Grand Canyon

National Game Preserve (created by Roosevelt in 1906), and unassigned public domain. The U.S. Forest Service managed the monument from 1908 until it became a national park in 1919, relying entirely on the Santa Fe Railroad to invest in roads, rails, and amenities to accommodate a budding tourism industry.



Chapter One

Becoming a National Park

1882 - 1919

In the decades after the Mexican-American War, federal explorers and military in the Southwest located transportation routes, identified natural resources, and brushed aside resistant Indian peoples. It was during this time that European Americans, following new east-west wagon roads, approached the rim of the Grand Canyon.¹ The Atlantic & Pacific Railroad's arrival in the Southwest accelerated this settlement, opening the region to entrepreneurs who initially invested in traditional economic ventures. Capitalists would have a difficult time figuring out how to profitably exploit the canyon, however, biding their time until pioneers had pointed the way to a promising export economy: tourism. Beginning in the late 1890s, conflicts erupted between individualists who had launched this nascent industry and corporations who glimpsed its potential. During 1901-1919 quarrels escalated to include pioneers, allied with county and territorial governments, and the media, pitted against corporations teamed with progressive federal agencies. The ultimate ascendance of the latter coalition resulted in the creation of Grand Canyon National Park. Understanding this struggle helps clarify uneasy partnerships among governments, businessmen, and residents that continue to this day.

Unfavorable reports of explorations in and around Grand Canyon, along with difficulties of transport, native peoples' persistence, and the absence of a regional labor pool, accounted for the reluctance of eastern capitalists to penetrate the region until the turn of the century. Settlement continued, however, by a few pioneers who sought out a subsistence living and what little cash they needed through local markets. Mormon lumberjacks entered the Mt. Trumbull and Kaibab Plateau areas in the early 1870s to extract timber for the St. George temple and the town of Kanab. Cattlemen ranged southward from Pipe Springs to the canyon's North Rim and Esplanade in the same decade. Mormon colonizers began their great push into eastern Arizona, settling Lees Ferry, Moenave, Moenkopi, Tuba City, and communities along the Little Colorado River during 1870-78. Hispanic shepherds from northern New Mexico ranged westward astride the thirty-fifth parallel beginning in the mid-1860s and founded small communities at Concho, St. Johns, and Horsehead Crossing.

Colonists from Boston arrived below the San Francisco Peaks in 1876 and established the community of Agassiz (Flagstaff), while ranchers moved north from Prescott and Mohave County mining towns to settle at the foot of Bill Williams Mountain and develop isolated ranches atop the Coconino Plateau approaching the canyon's South Rim.²

Prospectors had descended below the canyon's southwestern and southeastern rims even earlier. William Hardy, who had established the Colorado River landing of Hardyville above Fort Mojave in 1865, may have been the first to prospect among the Havasupais in 1866 but was soon followed by others like Charles Spencer, W.C. Bechman, and Daniel Mooney, who found promising deposits of lead, zinc, and silver beside the waterfalls at Supai. Seth Tanner, a Mormon scout and guide who by 1876 had settled along the lower Little Colorado River, discovered and claimed copper

Figure 2. The Edwin Dilworth "Uncle Dee" Woolley cabin, built ca. 1907 near Blondy Jensen Spring at the head of the old trail along Bright Angel Creek, North Rim. GRCA 15753; Rust Collection photo

deposits near the mouths of Lava and Basalt Canyons in 1877 and in 1880 organized the Little Colorado River Mining District just east of Grand Canyon. Dozens more probed the canyon's depths in the 1870s, often finding minerals, sometimes staking claims, but rarely shipping ore; only very rich lodes could justify transportation costs before arrival of the Atlantic & Pacific Railroad in 1882.³

Prospectors, and especially ranchers and farmers who coalesced into regional communities before the early 1880s, risked the trackless, arid, Indian-controlled peripheries beyond lines of European American settlement because the federal government, eager to fulfill the nation's "manifest destiny," did not quit with its mid-nineteenth century explorations, wagon roads, and military protection. Convinced that possession relied on occupation, Congress enacted dozens of land laws facilitating at-large settlement, resource development, and private construction of transportation infrastructure. The nation had not yet won its independence when the Continental Congress in 1780 defined the initial manner in which the public domain would pass to its citizens, offering large tracts at cents on the acre for title to surveyed lands. Noting by 1807 that its citizens were rushing ahead of federal surveyors, Congress enacted preemption laws permitting squatters to patent their claims. In 1862 it passed the first Homestead Act, which would persist with periodic amendments until the 1930s. Further, to encourage the use of less desirable lands, it enacted the Timber Culture Act in 1873, the Desert Lands Act in 1877, and similar laws encouraging individual reclamation. By the time immigrants reached the Grand Canyon region, they had become conditioned to substantial government support in the acquisition of property and needed only to locate desirable parcels to make them their own.⁴

Homestead laws allowed only one claim for the life of an individual, and although there were a dozen ways to get around this restriction, more liberal mining laws better suited the needs of ranchers, prospectors, and later tourism operators. As many as 500 mining districts and an equal number of communities founded on mineral extraction dotted the West by the time Congress passed its first mining law in 1866. This act as amended in 1872 pertained to lode or "hardrock" mining, while an 1870 law with similar provisions governed placer claims. Both laws, drawn from local districts' common practice, allowed anyone to prospect and occupy public lands whether or not surveyed, to stake any number of claims, to hold them indefinitely as long as annual assessment work was performed, and to patent them if they promised commercial-grade ore. These laws also permitted claims to water sources for placer mining and milling purposes. District rules generally limited lode claims to twenty acres, an adequate size for irrigated plots as well as working mines, and more than enough to tie up

springs, water pockets, river crossings, and parcels for any type of commercial enterprise.⁵

Federal and territorial land grants for transportation corridors were equally generous to industrious individuals willing to take a financial risk and of far greater benefit to corporations that would take on the task of building transcontinental railroads. At the territorial level, anyone who built roads or trails through the public domain could charge tolls for fifteen years, encouraging construction of secondary and tertiary paths from a region's principal wagon roads into its hinterlands. These principal east-west roads were encouraged by the U.S. Congress, who, beginning in the 1820s, gave land to the states along rights-of-way for wagon roads and canals.⁶ From 1850 until 1871, railroad corporations benefited from grants to alternate sections flanking each mile of track laid. In this manner, sixteen railroads acquired nearly 100 million acres in broad checkerboard ribbons stretching from coast to coast, and hastened settlement by selling their lands cheaply to offset the expense of construction.⁷

From beneath this comprehensive blanket of government benevolence emerged the garbled myth of the "rugged individualist," the admittedly adventurous and risk-taking individuals, families, and parties who comprised the West's pioneers, but who would not have entered the region in such numbers and remained long without the comforting arm of federal support. The same incentives inspired the West's first true corporations, the railroads, headed by equally dauntless if more cautious investors with some renown, better financial resources, and more political influence than the common man. Individualists and capitalists were not always easy to differentiate. Both sought federal aid, perceived economic potential in the West, and were willing to take risks. Both hoped to get in on the ground floor. Perhaps the most salient differences lay in economic degree and scope. Individualists sought little more than a good living; capitalists were concerned with the accumulation of wealth, were anxious to control the lion's share of regional business to the exclusion of others, and harbored visions of national and world markets. Another difference lay at the root of hostilities between the two: individualists came first, generally by ten to twenty years, and served unwittingly as scouts for corporations that moved in to capture local production only after assessing pioneer experiences and ensuring federal support, marketable resources, sufficient laborers, and reasonable returns on investment.

These western verities were supported by construction of the Atlantic & Pacific Railroad across northern Arizona some twenty years following completion of the Beale Road, the first wagon trains, and incipient settlement. Congress had chartered the A & P in 1866, granting a twenty-mile swath of alternate sections within states and forty miles

within territories along its proposed route from Springfield, Missouri, to the Colorado River where it would join with the Southern Pacific Railroad. When the A & P went bankrupt in 1876 after completing only a few hundred miles of track, the Atcheson, Topeka & Santa Fe and the St. Louis & San Francisco Railroads picked up the charter, invested new money, and by 1880 reached Albuquerque in New Mexico Territory. Following the pioneer reconnaissance of Capt. Amiel Weeks Whipple, Gen. William Palmer's 1867-68 preliminary survey for the Union Pacific Railroad, and Lewis Kingman's final survey of 1880, crews of immigrant Irish and local Hispanos, Apaches, Navajos, Mormons, and itinerant white laborers moved relentlessly across Arizona, securing the last rails at Needles, California, in August 1883.⁸

Completion of the Atlantic & Pacific Railroad rearranged regional transportation and economies as it made its way across northern Arizona. Embryonic settlements astride the Beale Wagon Road like Horsehead Crossing (Holbrook), Sunset (Winslow), and Agassiz (Flagstaff) acquired their modern names and were immediately reoriented in relation to labor camps, then became permanently fixed beside depots left behind as camps moved west. Railroad facilities spawned new towns like Williams, Ash Fork, Seligman, Peach Springs, and Kingman, and railroad workers and their families were their first residents. Where earlier settlements had been populated by a few ranchers, hired hands, merchants, blacksmiths, freighters, and prospectors, the new towns attracted small and large businessmen looking for opportunities that were sure to appear. Most newcomers to the budding urban oases of the 1880s were middle-class European Americans from the East and Midwest who quickly became territorial boosters and accelerated the process of displacing and enclaving earlier Indian peoples, Hispanos, and Mormons through political, economic, and social pressures.⁹

The railroad became the principal artery of east-west travel as each mile of track was nailed fast, replacing the Beale Road that had well served travel by foot, horse, wagon, and stage for a quarter century but had required weeks to move people and freight between New Mexico and the Colorado River. After 1883 transcontinental passengers could cover the same ground in comfort and at less cost in thirty-six hours, and shipping charges that had ranged from \$300 to \$360 per ton dropped to a fraction of the cost.¹⁰ In combination with the Southern Pacific's rails west of the Colorado, completed in the 1870s, and the Santa Fe, Prescott and Phoenix Railway built from Ash Fork to Phoenix during 1893-95, the Atlantic & Pacific also reoriented transportation, diminishing the roles of steamships and land-based freighters to local feeder services. Effects and extent of that reorientation were evidenced by the

Mohave County mining industry, which had formerly relied on wagons to deliver high-grade ore to Colorado River steamships and transfer it to ocean-going vessels at the Sea of Cortez for delivery to San Francisco smelters. After 1882 lower-grade silver and gold ores as well as less-precious minerals like copper could be transported profitably via rail to New Mexico then south atop Santa Fe and Southern Pacific rails to smelters at El Paso, Texas, prompting larger mining companies to move in with new technologies and monopolize most of the districts.¹¹

Aside from boosting the mining economy and doubling population and property values of Mohave and Coconino Counties, the Atlantic & Pacific Railroad supplied the means by which large enterprises could take control of the sheep and cattle industries. Family ranchers who had supplied Arizona's meager civilian markets and lucrative military contracts since the 1860s were quickly nudged aside by companies like the Aztec Land & Cattle Company, Arizona Cattle Company, Babbitt Brothers Trading Company, and the Daggs Brothers. These companies bought out smaller spreads, purchased railroad lands, and used the rails to ship hundreds of thousands of cattle and sheep onto northern Arizona ranges and beef, mutton, and wool to eastern markets. The frenzy to fill northern Arizona ranges together with the alternating floods and droughts of 1891-1905 nearly destroyed the land, but the 1880s marked a boom period for both industries and witnessed robust profits while it lasted.¹²

The railroad also created northern Arizona's lumber industry by creating demand for railroad ties, trestles, and depot facilities, then providing the means to export lumber from the world's largest ponderosa pine forest. Edward Everett Ayer arrived in 1881 to supply most of the ties, and he established a sawmill at Flagstaff in 1882 that would remain the town's principal employer through much of the twentieth century. He was preceded by John W. Young, who founded a mill at Fort Valley north of Flagstaff, and soon followed by the Riordan brothers' Arizona Lumber Company and J.C. Brown's Saginaw Lumber Company, which built mills at several of the railroad towns. The Saginaw & Manistee and Arizona Lumber Companies would later construct tangled grids of narrow-gauge feeder railways that by the 1920s stretched from the Mogollon Rim to the edge of Grand Canyon National Park.¹³

EARLY CANYON DEVELOPMENT

Although corporate cattle, sheep, and lumber companies crept closer to the canyon during the 1880s and 1890s, the chasm itself produced nothing but headaches for shepherds and cowboys and precluded timber extraction. Initial development therefore fell to a few dozen pioneering individuals and families who rode the rails into the bustling commer-

cial atmosphere of Peach Springs, Williams, and Flagstaff and espied opportunities for modest mining and tourism ventures. Prior to 1901 they displaced Hualapai and Havasupai residents, built wagon roads and inner-canyon trails linking the canyon to the outside world, and established the first stage lines.¹⁴ They also secured the most promising mineral deposits, springs, water holes, and building sites, advertised to attract visitors, accommodated the few they enticed, and, to their eventual chagrin, campaigned to attract eastern capital for a spur railroad to the South Rim.

One of the more enduring enterprises was run by the family of William Wallace Bass during the years 1885-1923.¹⁵ Bass arrived at Williams in 1883, and within two years had selected a base camp beside the rim near Havasupai Point, identified a seventy-mile-long wagon route from Williams, and begun to entertain infrequent tourists with excursions along old Havasupai trails. He extended his Mystic Spring Trail to the Colorado River in 1891, applied for toll rights, built an all-weather road from Ash Fork in 1894, and at the end of the century completed the canyon's first rim-to-rim trail by improving earlier Paiute and prospector trails to Swamp Point at the North Rim. He later erected cable systems across the river, constructed a road from Bass Camp to Topocoba Point to bring tourists to the Havasupai Reservation, and built two homes that doubled as hotels nearer Grand Canyon Village. By 1915 Bass had completed more canyon approach roads and inner-canyon trails than any other pioneer and had filed twenty-five or more claims to strategic sites within future park boundaries.

Other than transient prospectors, very few took an interest in Marble Canyon and the Desert View vicinity, but the Grandview area began to bustle by 1880. During the 1890s it became the locus of active mining and tourism activities. Several men, among them William and Philip Hull and John Hance, built a wagon road from Flagstaff to the Hull's sheep ranch and on to Hance's rimside home near Grandview in 1884-85.¹⁶ Within a few years Hance filed for a homestead, built a small log cabin, improved a Havasupai trail to the Tonto Platform, and launched a small tourist venture, offering tents beside his cabin, simple meals, and mule trips. Hance sold his homestead and tourism interests to the James Thurber and Lyman Tolfree families in 1895, and his patented mining claims to a Massachusetts company in 1901, but he remained at the site and later at Grand Canyon Village as the canyon's premier storyteller until his death in 1919. Thurber improved the tourist operation and operated a regular stage from Flagstaff until selling his interests to another pioneer, Martin Buggeln, in 1901 and 1906.

A partnership that included Pete Berry and brothers Niles and Ralph Cameron began to haunt the inner canyon

in the late 1880s. They filed claims atop Horseshoe Mesa in 1890, and in 1892 discovered rich copper deposits on the mesa immediately below Grandview Point. They built a toll trail to the vein in 1892-93 and worked their Last Chance Mine profitably until 1902, when they sold out to larger eastern interests. Along with his mining endeavors, Berry and wife Martha started a tourist business at Grandview Point in the early 1890s that remained the South Rim's most popular destination until 1901.¹⁷

Sanford Rowe was the first European American to arrive in the vicinity of what would become Grand Canyon Village. During 1890-92 he filed several bogus mining claims at and near Rowe Well, three miles south of the rim, established a small tourist camp, purchased Bill Bass's livery business at Williams, and built a spur road from Bass's road to his camp and Hopi Point. In the same years the Berry-Cameron partnership reconstructed a Havasupai path from Indian Garden to the rim along the Bright Angel Fault to expedite prospecting ventures, recording their trail as the Bright Angel Toll Road. In 1896 James Thurber extended the Flagstaff-Grandview stage road through Long Jim and Shoski Canyons to a point near the Bright Angel trailhead and opened the Bright Angel Hotel. Rowe and Thurber had no interest in prospecting and Thurber did not even bother to file a claim to his hotel site, but both took advantage of the Bright Angel Trail to guide customers down to the Tonto Platform.

Developments of these early canyon pioneers and the turnover in properties illustrate initial incorporative processes of the larger Southwest, wherein individuals and families experimented with economic possibilities, extended transportation from principal east-west roads, secured the properties necessary to pursue subsistence endeavors, and sold off those whose future development required more capital than they possessed. Before the turn of the century Bass, Hance, Thurber, Tolfree, Berry, the Camerons, and Rowe, along with other early arrivals like Dan Hogan and Louis Boucher, developed South Rim roads connecting points of interest from Lees Canyon near the Havasupai Reservation east to Desert View. They also built half a dozen roads connecting these points to the gateway towns, and a continuous trail atop the Tonto Platform from Bass's mining claims to the Little Colorado River that intersected with seven rim-to-river trails. Some engaged in mining alone, others pursued only tourist dollars. Most tried both but recognized a brighter future in tourism and sold off working mines and lesser claims to larger companies while retaining parcels of advantage to an emerging tourist industry. A few, like John Hance, sold everything at a profit when the selling seemed good. Some properties passed several times to ever more enterprising pioneers, but many of the earliest arrivals remained into the new century as bit

players in the ensuing drama for South Rim control.

The pattern of corporations succeeding pioneers culminated at the head of the Bright Angel Trail in the two decades following completion of a rail spur from Williams in 1901.¹⁸ Prior to that year most canyon tourists had been transcontinental travelers who chose to disembark at Flagstaff, Williams, or Ash Fork where they rented buggies at local livery or rode the stages offered by Thurber, Rowe, or Bass. They paid fifteen to twenty dollars for a bone-jarring trip that might require two days each way, and puzzled over timetables to resume their cross-country journeys. With completion of the Santa Fe Pacific Railroad's subsidiary, Grand Canyon Railway, transcontinental schedules could offer automatic transfers from the main line at Williams. The railroad often simply switched cars to the northbound rails in the dead of night so that visitors woke to a canyon sunrise. Offering a comfortable, three-hour excursion from Williams for only four dollars, the Santa Fe Railroad immediately put the half-dozen wagon, stage, and livery businesses connecting the South Rim to gateway communities out of business.

Once trains arrived at the doorstep of the Bright Angel Hotel, pioneer operators like Bill Bass and Pete Berry had to scramble to stay afloat. Both offered free stage service to their establishments from temporary ends-of-track at Anita and Coconino as well as from the Grand Canyon depot. Bass went so far as to build new roads from each of these points to Bass Camp. In 1902 he arranged for locomotives to stop at one of his mining claims five miles from the rim (a flag stop), built yet another road from that point to Bass Camp, and constructed a home/hotel on the claim in 1906 called the White House. He realized, however, that while a few people might always enjoy the solitude of his remote west-side camp, real tourist dollars would henceforth be earned at the emerging Grand Canyon Village. He began to offer tours along the south central rim, built a third home/hotel nearer the village in 1912 called the Tin House, and had his best season in 1915, grossing \$15,000. From that year forward, however, the Besses planned for retirement at Wickenburg, Arizona. They realized they could not sell their dying west-side business in what had become Grand Canyon backcountry, and instead entered into negotiations to transfer their interests to the federal government.

Pete and Martha Berry faced a similar predicament but conjured different solutions. Although the Berrys sold their Grand View Hotel and mining interests in 1902 to Henry P. Barber, who in turn sold to the Canyon Copper Company in the same year, they retained their 160-acre homestead, where they built the Summit Hotel in 1903. By agreement with Harry Smith, manager of the copper company, they jointly operated the adjacent hotels from 1903 until 1907, when copper prices and railroad competition

closed both mining operations and overnight accommodations. They lingered to provide day services for Fred Harvey Company tours, then reopened the hotel for the 1911-13 seasons. Slipping deeper into debt, they offered to carve the homestead into lots free to anyone who would make improvements, only to realize the devaluating effect of the railway's arrival when they found no takers. Finally, in 1913, Berry sold his remaining interests and those of the copper company to newspaper magnate William Randolph Hearst. He and Martha stayed on as caretakers until 1919, then moved a few miles south to the homestead of Pete's son, Ralph, where they remained until their deaths in the early 1930s.

The Thurber and Tolfree business at the old Hance homestead met a similar fate. After purchasing the property and Hance's cabin in 1895, the families of both men built a larger lodge for meals, upgraded accommodations with sturdy tent cabins, took over the Atlantic & Pacific Railroad's stage line from Flagstaff, and made a fair living for the remainder of the century. Thurber responded to the railway's promise faster than others by extending the stage line and building the Bright Angel Hotel, but sold both to Martin Buggeln, a Williams businessman, just months before the railway's arrival. In 1906 Thurber sold the Hance homestead to Buggeln, ending his canyon tenure. Buggeln erected a two-story, seventeen-room hotel at the site in the following year with hopes of reentering the tourist business but thought better of it, retaining the property as a private residence and cattle ranch for another four decades.

ENTER RALPH CAMERON

Private lands to the east and west of Grand Canyon Village remained in individuals' or small companies' hands into the national park era simply because neither the Santa Fe Pacific Railroad nor any other corporation perceived a future in properties that the railroad itself had devalued. Officers of the successful company had every reason to believe that they would dictate tourist development at their twenty-acre depot site, but they soon found their hands full and lawyers busy fighting Ralph Cameron, a canyon pioneer who would not fold as easily as others. The ensuing twenty-five-year struggle that began with one man pitted against railroad magnates embodies private-public conflicts waged at other western parks, and includes nearly all the possible twists and turns of resourceful individualists armed with federal and territorial laws holding out against capitalists allied with a supportive federal government.

Ralph Cameron had arrived at Flagstaff from Southport, Maine, in 1883, and through his inner-canyon forays with Pete Berry and other prospectors since the late 1880s had come to believe in Grand Canyon's economic potential. Cameron knew long before construction was

underway that the railway would touch the rim near the head of the trail he and his partners had built and still controlled, nominally, as a toll road. He was well versed in mining law that would allow him to secure nearby parcels of value to a probable tourism boom. He entered into an understanding with the Santa Fe & Grand Canyon Railroad, the failed predecessor of the Grand Canyon Railway, that their tracks would end at the head of the Bright Angel Trail.¹⁹ Following that agreement in 1898, he hired men to extend the trail to the Colorado River, made other improvements costing thousands of dollars, and began to file lode and mill claims to mineral-barren parcels that would extend from Hermit Basin as far east as Grandview Point. By early 1903 he had acquired sole proprietorship of the trail and opened Cameron's Hotel & Camp near its head and Indian Garden Camp beside its path on the Tonto Platform.²⁰

Troubles between Cameron and the Santa Fe Railroad began immediately when the Grand Canyon Railway struck a different deal with Martin Buggeln to continue the tracks beyond Cameron's establishment to the Bright Angel Hotel. This made sense to the railway as well as Buggeln because, aside from its 200-foot-wide right-of-way along the tracks, the railway was allowed by law to survey a twenty-acre depot site at the rim that included the land on which the Bright Angel Hotel stood. Buggeln's contract therefore required him to pay the Santa Fe Railroad about half of the hotel's profits, in return for which the railway delivered customers, supplies, and water to his door and paid for capital improvements, including hotel additions and an adjacent tent-cabin complex called Bright Angel Camp. The Santa Fe Railroad planned to build a first-class hotel, the El Tovar, but found it useful to work through the Buggelns until the new facility could open.

Opening rounds in the fight to follow were limited to free competition. The competing hotels offered similar services, prices, and quality: modestly furnished tent cabins and hotel rooms costing \$1.50-3.00 per night, horse rentals for several dollars and guides at five dollars per day, simple meals, riding accoutrements, and curios. Guests of the adjacent establishments shared the same views and rim walks, and although it was more convenient to step right up to the Bright Angel, Cameron's employees met each train at the depot, enticed passengers to amble down the tracks a little, and carried their baggage. They also circulated flyers casting Cameron in the role of David fighting the railroad Goliath in hyperbolic terms: "When you can get as good and better from a private individual—are you going to patronize a greedy, grasping corporation?"²¹ The public opinion campaign seemed to balance the scales, and with visitation escalating handsomely, both businesses earned money in the first decade of the new century. Cameron's

hotel entertained nearly 2,000 visitors in 1904-1906 alone.²²

Unable to beat their adversary at the economic level, the Santa Fe Railroad initiated a series of lawsuits. Cameron actually sparked the legal battles in April 1902 when he filed the Cape Horn and Golden Eagle mining claims enveloping the Bright Angel trailhead and his rimside hotel but also encroaching on the railroad's depot site, surveyed in the prior year. In 1906 the courts decided that Cameron could keep his claims to the extent that they did not overlap the depot parcel. He therefore failed to dislodge the Santa Fe Railroad but legitimized his key claims and facilities at the rim. His next move in early 1903, after receiving clearance from the Department of the Interior, was to erect a gate at the head of the Bright Angel Trail and begin charging a one-dollar toll. This prompted a Santa Fe Railroad suit filed in Buggeln's name, *Territory of Arizona vs. Ralph Cameron*. Jurors in 1904 decided that Pete Berry's transfer of the trail to Cameron in 1901 had been illegal, but confirmed Berry's right to charge tolls. Berry simply allowed his friend to continue to run the operation.

Cameron's regional popularity and willingness to use politics to his personal benefit came into play in 1906, when Berry's franchise ran out and (without precedent to the contrary) reverted to Coconino County. Serving on the County Board of Supervisors in that year, Cameron convinced its two other members to assign the franchise to his friend and hotel proprietor, Lannes L. Ferrall. The Santa Fe Railroad tried to circumvent county authority by appealing for a federal permit to operate the trail, but the Department of Agriculture chose not to intervene when the county, slipping into the bravado of the old Wild West, ordered its sheriff to protect it from interlopers. That action prompted the railroad to file suit against the county, arguing that it had no legal right to operate a toll trail. The railroad might have won that case, except that while it languished on the court docket, Cameron convinced the Arizona legislature to pass the "Cameron Bill" giving counties just such authority. Joseph Kibbey, an experienced jurist and Arizona's federally appointed territorial governor, vetoed the bill on advice of the secretary of the interior, but the popularly elected legislature unanimously overrode the veto. Santa Fe Railroad officials were livid when the county rejected a generous offer to operate the trail and instead gave the franchise to their archenemy for a pittance in 1907. The railroad then lost their final appeal in the Arizona Supreme Court in 1909.²³

BECOMING A NATIONAL PARK

Ralph Cameron won most of these early battles because he had the backing of nineteenth-century land laws, a host of friends, and local newspapers always ready to celebrate the common man. He was also aided by small businessmen who felt similarly threatened by corporate takeovers, county

government that abhorred federal interference (unless money was attached), and territorial legislators who did not like a presidential appointee overriding their decisions. The most influential among Cameron's supporters began to look in another direction, however, once his political aspirations began to fail, his motivations turned to simple greed, and the nation's popular culture began to shift slightly toward broader public welfare and social responsibility.

This cultural shift is called progressivism, an aggregation of independent social, economic, and political reform movements at the turn of the century that developed in response to the evils of unchecked capitalism, industrialization, and urbanization rampant since the U.S. Civil War. The national economic depression of 1893-97 accelerated crusades to curtail the worst of such conditions. The fever pitch had largely run its course by 1917 when reforms were derailed by the nation's entry into World War I. Still, while the fervor raged, many citizens of all classes and politicians at all levels rallied to the belief that governments could achieve efficiency, businesses could remain profitable, and people could be treated with more compassion through science and greater democratization.²⁴

Progressivism in the West translated to a great degree into conservation of natural resources, an idea that had arisen prior to the Civil War with the writings and lectures of pioneer naturalists, scientists, game hunters, and federal bureaucrats, but it had no effect on public policy until George Perkins Marsh published *Man and Nature* in 1864.²⁵ Marsh's analysis helped influence legislators to pass laws protecting forested lands as watersheds and wildlife threatened with extinction. It also led to the appointment of Franklin B. Hough as the first forestry agent within the Department of Agriculture in 1876. Hough, Secretary of the Interior Carl Schurz, and John Wesley Powell, director of the U.S. Geological Survey, spearheaded federal efforts to protect the nation's resources. Editors of national magazines published articles promoting wildlife protection, hunting ethics, camping, and travel, revealing to eastern readers a West worth saving.²⁶ The American Forestry Association was organized in 1875. Powell produced his *Report on the Lands of the Arid Region* in 1878, the Department of Agriculture's Division of Forestry was created in 1881, and Hough delivered his four-volume *Report Upon Forestry* to Congress during 1878-84.

These literary, scientific, and bureaucratic crusades brought conservation to national attention by the 1890s, when the U.S. Congress launched its first tangible programs for wise use of the public lands. In 1891 it passed the Forest Reserve Act empowering presidents to set aside forested lands remaining in the public domain, and in 1897 defined the multiple-use managerial concept while placing forest reserves under the jurisdiction of the Department of

the Interior, General Land Office (GLO). Gifford Pinchot, one of few professional American foresters before the turn of the century, became chief of the Division of Forestry in 1898 and, with support from his friend Theodore Roosevelt, helped implement sustainable, multiple-use principles in an ever-growing number of reserves. Two of Pinchot's political achievements were the elevation of the Division of Forestry to federal bureau level in 1901 and the transfer of the reserves to the Department of Agriculture, Bureau of Forestry in 1905, consolidating forest management under one progressive agency. Later in 1905 the bureau was renamed the U.S. Forest Service.²⁷

Conservation was a natural outgrowth of progressive concerns for curbing capitalist abuses and taking scientific and democratic approaches to what remained of the nation's natural resources, but in the same years a parallel movement arose to preserve the country's most scenic lands for citizens' appreciation. As historian Alfred Runte has argued, preservation movements may have stemmed from Americans' cultural inferiority complex vis-à-vis Europeans' historic monuments, a psychological malady some felt could be cured by preserving the nation's scenic monuments if they proved of no traditional economic value.²⁸ Influenced by its cultural inadequacy, and by romantic travel literature and the works of Western landscape artists, Congress began to set aside mountain-top forested lands like Yosemite, Yellowstone, and Sequoia National Parks. As preservation movements gained steam during the progressive era, Congress accelerated its designation of great western parks. Meanwhile, southwestern archaeologists convinced Congress that the nation indeed had a long history of human constructions, particularly among western Pueblo peoples. Largely for that reason, it passed the American Antiquities Act in 1906, authorizing presidents to proclaim national monuments without congressional authority to preserve prehistoric, historic, and other properties of scientific interest.²⁹

These progressive gestures influenced the status of Grand Canyon during the 1890s and 1900s but did not immediately cause federal agencies to participate in its preservation nor in tourist management. Indiana senator Benjamin Harrison introduced legislation in 1882, 1883, and 1886 to set aside the canyon as a "public park," but the bills died in committee.³⁰ On 20 February 1893 President Harrison set aside Grand Canyon Forest Reserve, but the 1897 law that allowed grazing, mining, and lumbering within reserves, though it led to permit requirements for such pursuits, did not challenge rimside entrepreneurs. President Theodore Roosevelt visited the canyon in 1903, expressing his wish that it remain pristine for future generations, then enhanced its protective status by declaring portions to be a federal game preserve on 28 November 1906.³¹ The first

real measure of protection from uncontrolled development, however, did not arrive until 11 January 1908, when Roosevelt proclaimed the 1,279-square-mile Grand Canyon National Monument. This status prohibited future private claims of any type, although the canyon's pioneers scurried to properly file their claims with Coconino and Mohave Counties prior to that date.³²

Before creation of the National Park Service, parks and monuments were managed by various federal agencies, including the War Department and the Department of the Interior's General Land Office (GLO). Grand Canyon Forest Reserve had been indifferently managed by the GLO since 1897, but in 1905 it was transferred to Gifford Pinchot's U.S. Forest Service (USFS) with the land office retaining only those responsibilities associated with surveying, locating, and patenting private entries.³³ Because the monument had been carved from the forest reserve, renamed Grand Canyon National Forest in 1907, the forest service retained its administrative responsibilities with an expanded mission to accommodate tourist visitation.

The forest service took seriously its responsibility to protect public lands under its care but, in the early years of the agency's life, was not inclined to treat tourism as anything but the lowest rung on its ladder of sustainable uses. Impediments included limited budgets, its congressionally mandated mission, inexperience with tourism, opposition from pioneer individualists, and the personal visions of Pinchot and his successor, Henry S. Graves. USFS budgets rose consistently during 1905-19, but so did the number of national forests and administrative costs, so that individual monuments under its care received little money for road improvements until the 1910s, and none at all for tourist accommodations until 1922.³⁴ Abysmal funding also resulted from the chief foresters' focus on fundamental responsibilities—ranching, mining, timber production, and fire suppression. Rangers in the field spent their time checking range conditions, working on timber sales, issuing use permits, recording homestead entries, building fences and telephone lines, and fighting forest fires, but rarely interacted with sightseers.³⁵

With its new responsibilities at Grand Canyon National Monument, local rangers found their alliance with the private sector shifting from pioneer individualists toward corporate magnates who could offer more help with their new roles. Formerly, it made sense for rangers to befriend early miners and tourism operators who shared resource information and hospitality, stored fire-fighting tools at remote locations, reported and helped fight forest fires, and even built the cabins that would become ranger stations at Anita, Hull Tank, Rowe Well, and atop the Kaibab Plateau.³⁶ There had been some animosity over control, with pioneers irritated by the permit system and rangers vexed by the

extent of fraudulent land claims, but permits had been handed out freely and private inholdings remained a GLO concern. After 1908, however, rangers began to comb the monument and question far-flung holdings, causing considerable inconvenience to claimants who had to appear for on-site inspections.³⁷ They reported a greater number of irregularities to land office investigators and admitted increasing frustration at private claims to the most scenic points and to parcels needed for tourist development. In the face of the escalating number of visitors, whose needs pioneer operators could no longer satisfy, the forest service was thankful for an entity like the Santa Fe Railroad. Despite their desire to make developmental decisions, railroad officials proved willing to work with forest supervisors on design, to accept long-term leases rather than property ownership, and to spend liberally to develop quality tourism infrastructure.³⁸

Pioneer developers like Pete Berry, Bill Bass, and Martin Buggeln became bitter with the new federal-corporate relationship but could do nothing but watch their businesses wither and eventually sell out. Berry's anger was typical, if a bit more extreme, than most. He refused time and again to succumb to Santa Fe Railroad purchase offers, choosing instead to sell to William Randolph Hearst whom he believed, correctly, would prove a thorn in the government's side.³⁹ Ralph Cameron harbored the same hostility but was encouraged to continue the fight by his earlier successes and his election as territorial delegate to the U.S. Congress in 1908. The Santa Fe Railroad, for its part, chose a new tack after its defeat over the Bright Angel Trail. Henceforth the corporation and its concession partner, the Fred Harvey Company, would focus on their own developments and leave legal battles to the federal government.

The new railroad strategy, enhanced federal role, and nature of future conflicts were fully revealed in early 1909, when USFS mineral examiners T.T. Swift and H. Norton Johnson examined Cameron's lode claims and found them barren of commercial-grade minerals. Their report caused the GLO to invalidate the claims.⁴⁰ Close on the heels of this decision, railroad officials announced their "Hermit project," an upscale road, trail, and inner-canyon camp development that they hoped would obviate Cameron's trail and Indian Garden Camp. The forest service quickly approved the necessary permit, and district forester Arthur Ringland with forest examiner W.R. Mattoon accompanied the Santa Fe Railroad's engineers and landscape architect to survey the new developments.⁴¹ Cameron's rage at the federal-corporate collusion was fueled by the fact that Hermit Road and Hermit Trail would pass over many of his well-placed mining claims, recently declared invalid. He complained to Gifford Pinchot and Secretary of Agriculture James Wilson, posted notices of trespass at his claim sites,

obtained injunctions against construction, and filed lawsuits, delaying construction to 1911-13 and extorting \$40,000 from the railroad to end his harassment.⁴² Cameron did profit in this instance, but the Santa Fe Railroad-USFS coalition proved its ability to surmount private interests and its intent to upgrade South Rim tourist facilities.

Cameron spent very little time at Grand Canyon after taking his seat as territorial delegate in early 1909, leaving day-to-day business to brother Niles and a dozen or more employees who acted as on-site informants. His rimside hotel closed due to Fred Harvey Company competition and relocation of the railroad depot to the foot of the El Tovar hill in 1909.⁴³ Cameron retained the lucrative trail franchise, Indian Garden Camp (which

soon became an eyesore for lack of maintenance), and his mining claims, which he could never patent but would nonetheless retain through legal machinations and political influence until 1924. While the forest service continued legal actions against his claims through the remainder of the 1910s, Cameron promoted a series of development schemes and introduced federal legislation designed to raise their value in speculator's eyes or to coerce the Santa Fe Railroad or federal government into buying him out. None of his intrigues came to fruition, although the railroad did pay him to relinquish more of his claims in 1916.⁴⁴

Ralph Cameron's maneuvers after 1908 reflect the last-ditch efforts of pioneers to retain control in the face of corporate-federal partnerships prevalent in the West during these years. Although he distracted, hindered, and occasionally horrified the forest service, Santa Fe Railroad, and Fred Harvey Company with his plans, Cameron did not keep them from developing and controlling tourist services in the national monument. Adopting rustic and Pueblo-revival building styles and employing professional architects, the railroad during 1902-19 created visually pleasing, state-of-the-art structures that blended well with the forest-and-stone environs. Many of these still stand and fulfill their original purposes, including the El Tovar Hotel, Hopi House, mule barns, Fred Harvey Garage, Lookout Studio, Hermits Rest, and an assortment of service buildings. The railroad addressed South Rim aridity by hauling water in tanker cars from sources as far away as the Chino Valley,

using the latest aeration, filtration, and distilling technologies to provide potable water. It also installed a modern septic system to serve the El Tovar and its other facilities. The on-site Santa Fe Transportation Department scheduled excursions ranging from day trips along scenic rims to months-long adventures into remote backcountry. While the railroad invested the capital, the Fred Harvey

Company's wranglers, tour guides, and Harvey Girls managed accommodations, meals, and most direct visitor contact.⁴⁵

The U. S. Forest Service role remained one of enthusiastic support for its principal concessioner with minimal interference. Rangers sometimes interacted with



Figure 3. U.S. Forest Service ranger Pat Fenton, 1905. GRCA 15822B.

monument visitors and produced an occasional brochure, but continued to regard tourism as just another use of the lands in their care as they continued to investigate land claims and wrote permits for a wide variety of uses. This approach, born of budgetary necessity, had no effect on the remote backcountry and the little-visited Kaibab Plateau but led to unfavorable conditions at Grand Canyon Village. Since the Santa Fe Railroad and the Fred Harvey Company focused on profit-making services, they supplied few accommodations, amenities, or services for employees, who numbered more than 300 by 1919. Since nearly all visitors arrived by rail, they did nothing to maintain roads. Forest service and concessioner neglect resulted in a community resembling western boom towns of no definitive form, replete with scattered trash heaps and open-pit toilets, employees housed in wooden shacks, tents, and sidetracked boxcars, and wagon paths leading everywhere and nowhere.⁴⁶

Problems were exacerbated by the Fred Harvey Company's inability to schedule or adequately accommodate motorists who began to arrive unannounced in the 1910s. Since the forest service did not maintain campgrounds, the village scene was further muddled with impromptu tent sites and visitors asleep in their Model-Ts. Forest examiners developed at least five separate plans to correct these conditions during 1909-18, but accomplished almost nothing, and in fact contributed to the disarray by ignoring fuel-wood cutting and livestock grazing through-

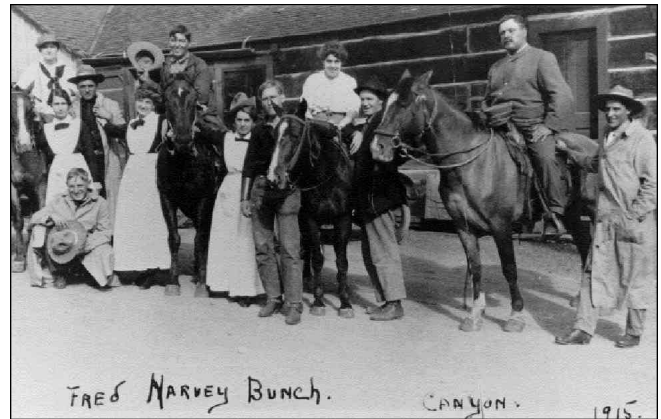
out the village. As the end of their tenure approached, forest officials could look back on a number of achievements, particularly their corporate partnerships and aggressive pursuit of fraudulent land claims. But developmental problems persisted—problems they could not adequately address, much less resolve.⁴⁷

At the national level, the forest service's administration of all lands in its care on multiple-use principles spurred preservationists to clamor for a federal bureau that would focus on protection of and visitation to the nation's parks and monuments. The idea was opposed by individuals of the Cameron mindset and "get-in, get-rich, get-out" corporations like the early lumber companies. It was also contested by civilians, bureaucrats, and legislators who sincerely believed in the middle road of sustainable democratic use of the public lands versus blatant destruction or no use at all. The forest service, concerned for its own bureaucratic empire and loss of forest lands to parks, led the political opposition. Arguments were couched in progressive rhetoric that emphasized efficient extraction of natural resources for the most citizens for the longest period of time. They were also framed in favor of traditional economic endeavors that in the century's first years did not include tourism, and against the inefficiency of creating still another federal bureaucracy that might limit public-land productivity.

Supporters of a parks bureau faced a hard battle to overcome exploiters and their political allies, as well as conservationists who still fought to overcome unrestrained development. By arguing that parks and monuments were typically worthless for mineral production, timber, grazing, and crops, and that tourism promised more in the way of regional dollars, however, a handful of proponents accomplished their mission in less than a decade. Among these were spiritualists like John Muir; interest groups like the Sierra Club, American Civic Association, General Federation of Women's Clubs, western railroads, and emerging "good roads" associations; and politicians like William Howard Taft, Interior Secretaries Walter Fisher and Franklin Lane, Representative John Raker of California, Representative John Lacey of Iowa, and Senator Reed Smoot of Utah. Legislation introduced annually during 1911-15 resulted in the creation of the National Park Service on 25 August 1916.⁴⁸

Arguments for the creation of the National Park Service coincided with efforts to promote Grand Canyon to national park status. A great many visitors to the canyon had considered the nation's premier chasm a national park ever since the Santa Fe Railroad and U.S. Forest Service had established their presence at its South Rim. Lingered private opponents to national park status, other than Ralph Cameron and a few like thinkers, had been satisfied since the early 1910s that the canyon could never produce wealth

from resource extraction but might bolster local service industries as well as state and county coffers. All special interests that had supported creation of the National Park Service, including the Arizona chapter of the General Federation of Women's Clubs and the Arizona Good Roads Association, also supported the canyon's promotion. They were joined by Mark Daniels, first superintendent of the national parks, his successor Robert Marshall, and the first director of the National Park Service, Stephen Mather. Even the U.S. Forest Service proved an ambivalent antagonist, opposing the transfer as a matter of general principle yet approving of it to rid themselves of an administrative headache.⁴⁹



By 1917 supporters considered it a foregone conclusion that Grand Canyon would be elevated in stature and that its management would transfer to the one-year-old National Park Service.

Senator Henry Ashurst of Arizona, whose father had once prospected the canyon's depths, introduced Senate Bill 390 on 4 April 1917. The legislation quickly passed the Senate on 16 May 1918. The United States' entry into World War I, Horace Albright's negotiations with the forest service over boundaries, and details concerning the status of the Bright Angel Trail, rights of private interests, and other matters of continuing commercial use delayed approval by the House Committee on Public Lands until 18 October 1918. After clearing that hurdle, the bill easily passed the full House and Senate, and President Woodrow Wilson signed it into law on 26 February 1919. The forest service continued to manage the park until the Sundry Civil Act of 19 July 1919 appropriated funds for new administration and the park service could gather its own staff. Transfer in the field took place when William H. Peters was appointed acting superintendent and arrived on 15 August 1919 to take charge of the nation's seventeenth national park.⁵⁰

Figure 4. Fred Harvey Girls and other employees, ca. 1915. Harvey Girls worked at the Bright Angel Hotel (later the Bright Angel Lodge) and ElTovar from 1905 until the 1950s. GRC A 18207; photo by T.L. Brown.



Chapter Two

Foundations

1919 - 1929

Most modern analysts of the newborn National Park Service have written of the agency's wholehearted support of recreational tourism as a strategy designed to gain support of the populace, thereby gaining congressional funding for park improvements, operations, and additions. The first NPS directors certainly pursued this political strategy, but while steeped in progressive concepts of control and restraint, they never questioned economic assumptions of world capitalism that had led the American West to this juncture in its history. Such questions and viable land-management alternatives would await notions of ecological maintenance that did not achieve some measure of popular acceptance until the 1960s. Until then, creation, extension, and administration of the National Park System and Grand Canyon National Park would proceed with few challenges, along established lines of western economic development.

Park supporters like John Muir, J. Horace McFarland, Frederick Law Olmsted, Jr., and the men who would lead the new federal bureau expressed philanthropic ideals in their arguments for a separate management agency to preserve scenic America, but they emphasized the economic potential of selling unaffected scenery. For this reason alone they were joined by the West's railroads, "good roads" and civic associations, chambers of commerce, transportation companies, and prospective concessioners who ardently supported the parks as people's playgrounds and tourist magnets promising to augment business opportunities. All were concerned for efficient administration, but when these varied interests met to discuss pragmatic issues, as they did annually during 1911-17, efficient exploitation and construction of facilities typical of early twentieth-century resorts dominated their agendas.¹

The first federal officials charged with systematic management of the national parks, in fact, expressed their beliefs, mission, and objectives in terms familiar to today's businessmen. In 1913 Secretary of the Interior Franklin Lane wrote that scenery, as much as real estate, minerals, and timber, was a natural resource that required economic development, and that its worth derived from national and

international markets.² Mark Daniels, first superintendent of the national parks in 1914-15, while insisting on national parks' contributions to public knowledge and health, emphasized marketing and structural goals to divert international scenic consumers to the western United States. To that end, Daniels argued that a collaborative federal government must be willing to subsidize development of the market and the products (i.e., the parks) if they proved unable to support themselves. Daniels's successor, Robert B. Marshall, also highlighted the importance of federal subsidies, national advertising, and structural improvements to entice consumers. The National Park Service enabling act itself, imparting the will of Congress as well as that of boosters who drafted the bill, reveals strictly anthropocentric precepts of resource conservation similar to the early forest service mission, simply substituting the nontraditional economy of tourism for extractive multiple use.³

Stephen Mather and Horace Albright, NPS directors responsible for interpreting and implementing the act, would refine and institutionalize these economic aspirations.⁴ Mather, a mining executive prior to becoming the first NPS director in 1917, and

Figure 5. NPS staff in front of the 1921 park administration building in 1930. GRCA 9493.

Albright, a mining executive following his retirement as director in 1933, were personally inclined to frame the purposes, needs, operations, and growth of the park system in business terms. They were supported by federal legislators and presidents whose business had long been business, whether through *laissez-faire* policies or direct assistance. The “founding fathers” therefore proved culturally consistent in ensuing years as they argued their agendas in terms of market share and advertised the parks through public address, the print media, and associated business and civic boosters. They reported to the secretary of the interior with facts, graphs, statistical tables, and market trends as if accounting to a board of directors, and they established the number of consumers visiting the parks each year as their primary measure of success. They understood that they were selling scenery, that there were competitors in the international marketplace eager for the same customers, and that others in the West, including competing federal agencies, would like to acquire the parks or at least limit their proliferation.⁵

Early NPS reporting techniques and measurement standards reflected the first directors’ administration of the park system as an expanding, federal-private business venture. They rarely varied from their perceptions of visitors as consumers to be satisfied through structural enhancements and services. Expansive, grandiose western landscapes represented the principal merchandise, worthy of enhancement through bucolic service villages, rustic architecture, scenic drives and trails, educational programs, and creature comforts. It made sense to enlarge the products and expand their number through boundary extensions and new additions to envelop landscapes that had not yet been visually despoiled and to protect them from inholders, extractive users, and overdevelopment, as well as from natural enemies like fire, insects, disease, and destructive exotic species.

With efficient organizations at headquarters and within the parks,⁶ the first NPS directors invested most of their time and energy on marketing goals. Mather used his considerable sales skills to sell Congress as well as businessmen on scenery’s economic value. He courted greater appropriations from the former and substantial investments for first-class park accommodations from the latter by offering a guaranteed market through monopolistic and long-term (though price-controlled) contracts.⁷ He wooed the sympathy of regional businessmen in gateway towns with assurances that tourists would spend most of their vacation dollars before reaching the parks. One of Mather’s more consistent arguments in this vein was that the parks represented “scenic lodestones,” and that “every visitor is a potential settler, a possible investor. Above all, he is a satisfying source of business.”⁸

Concurrent with their efforts to sway congressmen and

businessmen, Mather and Albright launched a multi-pronged strategy to attract visitors through direct advertising, competitive pricing, convenient park access, and comfortable accommodations. To directly lure visitors, the NPS joined with private partners and the Government Printing Office to circulate an endless stream of press releases, park bulletins, informational brochures, pamphlets, and guidebooks. They also supplied materials for lectures, lantern slides, traveling art exhibits, and motion pictures. The directors liked to call these materials “informational” or “educational” data, but most could not be distinguished from creative sales literature.⁹ Mather urged expansion of the See America First campaign, which began as a railroad promotion but proved an even more viable marketing tool in the dawning era of automotive travel. This campaign, which tapped heavily into Americans’ patriotism, was a direct crusade to divert worldwide tourists to the western parks and, after World War I, to dissuade wealthier American tourists from returning to Europe for their traditional grand tours. “Buy American” proved to be one of Mather’s more convincing messages, and to sell it better, he lobbied strenuously for a U.S. Travel Division within the National Park Service to complement the railroads’ own travel agency, the Bureau of Service: National Parks and Monuments.¹⁰

Aside from direct advertising campaigns, the early NPS paid keen attention to competitive pricing by pegging the cost of entering and using the parks well below amounts charged in regional marketplaces. Mather coaxed federal subsidies to help keep prices down, reporting mounting park revenues from motor vehicle “licenses,” concession fees, and special-use permits, and argued that the popular parks, at least, would thereby support themselves once Congress funded initial improvements.¹¹ He then backed away from the self-sufficiency argument once appropriations began to flow more freely. Mather also rethought license fees—as high as \$10.00 in parks with developed roads—in terms of visitational deterrents, which caused him to reduce prices substantially in 1926. He understood that lesser fees would reduce revenues but believed the difference would easily be made up in tourist numbers, escalating handsomely through the 1920s. He was correct, although the volume of tourists soon revealed a perpetual need for new construction and maintenance that by the early 1930s caused Albright to drop Mather’s assertion that each park unit required only one physical facelift to be prepared for the future.¹²

As for its private partners, the park service guaranteed concessioners a “reasonable profit” by allowing them to charge prices comparable to similar products and essential services in surrounding towns, with higher margins for luxury items. The park service also offered some protection

from business downturns by its willingness to adjust franchise fees and formulas. In 1923 the park service began to protect its own interests by auditing concession accounts to ensure accurate fee payments as well as reasonable rates. It also helped concessioners and furthered its own goals by satisfying customers with developed camps, trails and bridle paths, and educational programs, all available at no charge.¹³

Another sales element, product access, was addressed with the most ambitious road construction program yet undertaken by the federal government in the American West. Just as Mather and Albright had parlayed varied interest groups into the creation of the National Park Service, so they turned regional commercial groups interested in building better western roads to the benefit of the park system. Mather, an avid motorist, argued in terms of the entire region when he advocated an "Interpark System" as early as 1915 in order for the tourist "to see as much as he can in the shortest possible time."¹⁴ His concept grew by the early 1920s into a 6,000-mile-long, counterclockwise National Park-to-Park Highway beginning at Denver and taking in as many of the western parks as possible, including Grand Canyon along its southern sweep. Not content with this grand loop, he helped promote shorter, concentric "circle tours" requiring reconstruction of subregional highways and, ironically, he convinced the railroads to help bring such automotive tours to fruition. The entire concept in the early 1920s was more an argument than an accomplished fact, a way of prodding Congress, states, and counties to fund construction, and it worked. By the late 1930s the first western interstate system of highways engineered to automotive standards was in place.¹⁵

After successfully promoting modernization of western interstate highways and approach roads as conduits for park visitors, the NPS used such improvements to press for better inner-park entrance roads, scenic drives, and service roads. According to Mather, it was ludicrous to entice tourists along paved highways up to park boundaries, then set them adrift on rutted tracks worn by horse-drawn conveyances from the last century. Arguing that park thoroughfares were "in the nature of toll roads," he complained that many units were unable to charge a license fee due to their roads' miserable condition, and that motorists who did pay such fees were not getting their money's worth.¹⁶ By submitting statistics proving that by 1920 most park visitors arrived in cars and by proposing separate road budgets beginning in 1922, he was able to secure a three-year construction program in 1924 totaling \$7.5 million. In the same year, the NPS began to work with the Bureau of Public Roads (BPR) to oversee construction, and in the following

year concluded a formal agreement, continuing to this day, whereby the agency would undertake major work on all national park roads. By 1932 NPS budgets included \$5 to 7.5 million per year for such construction, and the BPR had built, rebuilt, or otherwise improved 360 miles of park roads with another 430 miles in progress.¹⁷

EARLY CONCERNS

Grand Canyon's first two decades of administration under the National Park Service illustrate the philosophy, organization, wish lists, budgets, and priority goals of the larger bureau. Stephen Mather's vision reflected his euphoria with acquisition of one of the finer western landscapes, as he outlined a series of developmental projects befitting an all-season national "resort," the term he and others used in reference to Grand Canyon National Park. Priorities included refurbishment of Hermit Rim Road to automotive standards, reconstruction of James Thurber's old Village-Grandview stage road with an extension to Desert View, and a new road that would connect Grand Canyon Village to Supai via the Topocoba Trail. "Imperative" needs included North Rim scenic drives to Point Sublime and Cape Royal. Mather wanted an "extensive trail system" to include not only re-engineered North and South Bass, Tonto, Grandview, North Kaibab, and Tanner Trails, but new paths from the South Rim to Bright Angel Creek and along the North Rim from Bright Angel Point to Swamp Point. He wanted a good trail from Tiyo Point to the river in order to create a Hermit-Tiyo transcanyon corridor. He contemplated additional trails to "develop" the South Rim from Cataract Creek to the Little

Colorado River and suspension bridges across the Colorado River for the Bass, Hermit, and Bright Angel corridors. Trails would be enhanced with "chalets" or camps at Bright Angel and Swamp Points and inner-canyon camps at the mouths of Bright Angel and Shinumo Creeks. Only after outlining these plans for enhanced access and visitor comfort did Mather cite needs for administrative sites, campgrounds, water supplies, and other utilities. Protection of the natural environment did not make his wish list.¹⁸

These dreams reflected the larger NPS vision for the western parks. Some would eventually be realized, but for Grand Canyon's first superintendent, pretentious schemes took a back seat to more pressing administrative problems. William Peters arrived at the South Rim in August 1919 to find very little of a federal presence. There were only one or two primitive administrative cabins and no federal housing, campgrounds, or services. There were no utilities other than those of the Santa Fe Railroad, which were antiquated and



Figure 6. William Harrison Peters (1891-1932). He and wife Cora arrived at the South Rim in August 1919. GRCA 2302.

inadequate, and a rickety, 30-mile-long telephone system inherited from the forest service. There were no automotive roads inside park boundaries or within a 200-mile radius other than the National Old Trails Highway (U.S. 66) 70 miles to the south and the Arrowhead Highway (U.S. 91) more than 100 miles to the northwest. Mining claims still littered the South Rim and Bright Angel Trail, which remained a county toll road. Local residents ignored conservation policies as well as federal administrators, whose recourse in law hinged on an often uncooperative county judiciary. Visitors had few rules, relied on concessioners for information, and suffered unsanitary conditions at the village stemming from open-air incinerators, pit toilets, impromptu trash heaps, no zoning, no building codes, and unfettered livestock.

Under these conditions, Peters had every reason to be as happy with concession partners as the forest service had been, because without them administrators had no hope of meeting demands of escalating visitation. At the South Rim the NPS collaborative strategy resembled that of the forest service understanding forged in 1908 whereby concessioners would supply visitor accommodations, employee housing, groceries, meals, utilities, supplies, souvenirs, and entertainment. Major differences included the NPS commitment to monopolies and multi-year contracts, and the promise for greater business volume through advertising, access, zoning, and building standards. One of Peters's and subsequent superintendents' more important tasks was the coordination of these services and the execution of agreements that would allow administrators to get on with their part of the bargain.

The Fred Harvey Company and Santa Fe Railroad remained the most important private elements. Under the direction of customer-oriented company presidents Ford Harvey (1901-28) and Byron Harvey (1928-46), the concessioner had since 1905 furnished quality services as well as utilities at the South Rim and within the canyon. By 1929 these would consist of overnight accommodations at the El Tovar Hotel (1905), Bright Angel Hotel (1896) with adjacent tent cabins (1905), Hermit Camp (1912), Phantom Ranch (1922), and the Motor Lodge (1927); meals and snacks at the El Tovar, Bright Angel, Hermits Rest (1914), and inner-canyon camps; supplies and souvenirs at the Hopi House (1905), Lookout Studio (1914), and Hermits Rest; and excursions ranging from South to North Rims and from Topocoba Hilltop to the Hopi villages.¹⁹ Understandably, Peters, guided by Mather, hurriedly consummated a contract with the Fred Harvey Company in 1920 to continue and augment these services for a period of twenty years. Terms of this agreement, and those that followed for other concessioners, reveal the early NPS preoccupation with administrative control, aesthetic construction,

and quality service rather than direct income for the park. It allowed "very considerable exemptions" for capital improvements, ownership of which remained with the Santa Fe Railroad, and required that only a small percentage of gross receipts be paid in franchise fees. In return, the park service secured the promise of substantial investment and final approval over building plans, architectural style, materials, and location.²⁰

Administrators executed agreements with three more South Rim concessioners for relatively minor services, for little reason other than to respect private interests ensured by the park's enabling act and avoid the appearance of granting all tourism services to one corporation. The Babbitt-Polson Company of Williams had operated a small



general store prior to 1919 and in April 1921 contracted to continue this business from a small building near the park's first formal campground, southeast of the Fred Harvey Garage. Their twenty-year contract resembled that of the

Fred Harvey Company, with a sliding scale of franchise fees based on a percentage of gross sales.²¹ In 1923 Babbitt Brothers Trading Company acquired the contract from the former partnership and in 1925-26 built a new store within the administrative district at what would become the intersection of Center and Village Loop Roads.²²

John G. Verkamp's sale of Indian artifacts and other "curios" from his single shop and residence east of the Hopi House dated to 1905, and with arrival of park managers he continued to operate under annual permits for which he paid only \$100 per year. Officials chose these year-to-year agreements until 1936 because they considered Verkamp's operation superfluous and eyed the store's favorable rimside location for an additional Harvey hotel and casino.²³ Emery and Ellsworth Kolb had opened their photographic studio in a tent beside Ralph Cameron's hotel in 1903 and built the present frame studio beside the rim in the following year. This, like the Babbitt and Verkamp stores, was

Figure 7. Fred Harvey tour buses line up from the garage toward the El Tovar, ca. 1923. Buses like these first appeared at the South Rim ca. 1914. GRCA 3552; Fred Harvey Company photo

simply a niche business, with the Kolbs and Emery's wife Blanche photographing mule parties embarking down the Bright Angel Trail, selling a few photo-related souvenirs, and, after 1912, delivering popular daily lectures on their trip down the Colorado River. Early on, Emery negotiated a multiple-year contract which, upon renewal for ten years in 1930, required payment of 4 percent of gross profits, excluding earnings from lectures.²⁴

Commercial services at the North Rim through most of the 1920s corresponded to administrators' concept of more rustic services for the less-frequented area. Kanab residents Edwin Dilworth "Uncle Dee"

Woolley and his son-in-law David Rust had offered outfitting services from Kanab to the vicinity of Bright Angel Point and down to Rust's camp since 1907 but discontinued their efforts by 1919. In the latter year, Uncle Jimmy Owens left the forest service's employ as a game warden but continued to offer hunting trips within the Kaibab National Forest, retaining his home base at Harvey Meadow until 1927 and grazing his crowd-pleasing buffalo herd nearby. Arizona

Strip residents Aldus "Blondie" Jensen and wife Melissa, headquartered at the Woolley Cabin near the head of Rust's trail since 1915, offered similar saddle trips along the rim and down Bright Angel Creek. In 1922 Chauncey and Gronway Parry, automobile dealers based in Cedar City, Utah, began to include the North Rim in their public transportation network that embraced Utah's southwestern parks and monuments.²⁵

Elizabeth Wylie McKee operated the principal North Rim concession at Bright Angel Point from 1917 until 1927. Her father, William Wallace Wylie, had pioneered the "Wylie Way" concept of park concessions at Yellowstone in the 1880s, which consisted of a camp with a central dining room and primitive lodge flanked by individual tent cabins. At the request of the Union Pacific Railroad, Wylie opened a similar camp at Zion and Bright Angel Point in 1917, remaining to manage at Zion and entrusting the North Rim facility to his daughter. She acquired ownership upon her father's retirement in 1924 and managed the camp with the assistance of her son, Robert, and a small staff of local Mormon teens, while husband Thomas guided trips to Point Sublime and Cape Royal. Wylie opened the camp with the understanding that he would receive a long-term forest service contract, and McKee pressured Stephen Mather to grant one similar to those afforded South Rim concessioners so she could justify, plan for, and finance capital improvements, but throughout her tenure she received

only annual permits.²⁶

Administrators began to upgrade facilities at Bright Angel Point in early 1927 when they solicited bids for the North Rim's first permanent concessioner. Bids were strictly a formality, as it had been long understood that the Union Pacific would include the North Rim within its sphere of influence, which encompassed Zion, Bryce, and Cedar Breaks, once visitation justified capital expenditures. As expected, none of the small concessioners could afford the costly improvements specified in the request for proposal. Therefore, consistent with NPS practice, the McKees,

Jensens, and Parrys were forced to sell to the railroad's subsidiary Utah Parks Company. The McKees agreed to operate the Wylie Camp



Figure 8. Wylie Way Camp staff at Bright Angel Point, summer 1919. Thomas McKee left; Elizabeth Wylie McKee and son Robert, right; Brighty the burro, center, surrounded by hired help from the Arizona Strip communities. GRCA 5427.

through the 1927 season. The Parrys and Jensens did the same for a few more years, while Utah Parks Company's managers invested millions of dollars creating a smaller version of Grand Canyon Village with its centerpiece Grand Canyon Lodge, flanking duplex and deluxe cottages, utilities, employees quarters, postal and telegraph services, and visitor entertainments. Terms of the twenty-year contract, effective 1 January 1927, mirrored those of the Fred Harvey Company, though fees were based on a percentage of profits, not gross receipts.²⁷

INITIAL NPS/CONCESSIONER RELATIONS

NPS actions to replace pioneer concessioners and establish lasting partnerships with larger corporations support the thesis of the parks as federal-private economic enterprises, but should also be viewed as necessary and expedient measures given the vision for the parks as well as increased visitation. Affiliations between the NPS and the Fred Harvey and Utah Parks Companies were more intertwined and symbiotic than public-private relationships today, partly because of the need for utilities and residential services that preoccupied administrators through the 1920s. At the South Rim, managers had inherited all the problems of a transient boomtown; they arrived without mandates or money to replace ailing private utilities necessary to satisfy residents' and visitors' demands. They had no choice but to tap into the concessioners' systems before gradually assuming these

responsibilities as appropriations became available.

Maintaining a consistent water supply posed the greatest challenge. By 1919 the Santa Fe Railroad was hauling 60-100,000 gallons of water per day from Flagstaff and Arizona's Chino Valley to tanks near Grand Canyon Depot, at a cost of seventy-five cents per thousand gallons. This manner of delivering water to the parched rim continued while the park service helped search for new sources. In 1927 they allowed the railroad to improve the flow of Indian Garden springs to 576,000 gallons per day and to develop plans that would lead to the South Rim's first dependable water supply in 1932. Meanwhile, NPS manual laborers dug wildlife tanks at outlying areas like Desert View and Pasture Wash, and the bureau purchased water at cost for its own village needs. The railroad also sold water to smaller concessioners, residents, and campers, all of whom filled their containers at tanks designed to service locomotives until pipes could be laid to catch up with village growth.²⁸

Sanitation posed as great an inconvenience and a more imminent threat to public safety. The Santa Fe Railroad had installed a septic system in conjunction with construction of the El Tovar in 1905, but subsequent connections to new facilities caused effluent to discharge into an open ditch beside the railroad tracks. In 1921 administrators began to employ Public Health Service inspectors, one of whom, H.B. Hammond, designed an activated sludge disposal plant that was built with federal funds appropriated in 1925. The plant went on line in late May 1926. An engineering marvel, it was designed to process eight times the volume of waste produced in that year, reclaimed 99 percent of used water, and, by 1930, supplied 120,000 gallons per day at a cost of 35 cents per thousand gallons for steam generation, irrigation, and flush toilets.²⁹

The railroad assumed responsibility for the disposal of solid wastes. Since the pioneer era, tourism operators and residents had informally designated a dozen or so open-air dumps scattered throughout the village and nearby forest, occasionally reducing volume by setting the unsightly piles ablaze. Through the early 1920s, concessioners and NPS personnel simply redistributed the garbage by loading it on flat cars and hauling it outside park boundaries where it was dumped along the tracks, a practice disturbing to the forest service as well as train passengers en route to a national park. Studies for an incinerator to serve the entire community began in 1925, and the new facility, funded entirely by the railroad, was completed in August of the following year. It included a state-of-the-art "can-smashing" and baling machine that reduced the tens of thousands of tin cans used in a given year to eight percent of their original size, accelerated the rusting process through abrasion, and increased incinerator capacity by 50 percent. In 1927 the new incinerator disposed of 100 tons of garbage

per month during the summer season, and, by 1930, another similar system had been placed on line.³⁰

Electric power was also within the purview of the Santa Fe Railroad, which delivered DC current from its first, pre-1913, steam-generating plant at a cost of thirty cents per kilowatt hour. Like the early septic system, the old plant proved inadequate by the middle 1920s, and in 1925 the Santa Fe Railroad began to build a new, oil-burning plant: the imposing rock building seen today along Village Loop Drive, now without its original smoke stack. Completed in mid-1926, the new plant distributed ample AC current throughout the village via a high-tension underground cable to the "center of park activities." Steam for residential heating, for the Fred Harvey Company laundry, and for electric power immediately dropped to one-fifth the former cost.³¹

Postal services were managed independently by the U.S. Postal Service, but were provided until 1935 from hotels built in the pioneer era. Remote offices had been located at Hance Ranch in 1894 and 1897, at Supai in 1901, and at the Grand View Hotel in 1903. These were tied into the first post office at Grand Canyon Village, established in 1902 in Martin Buggeln's Bright Angel Hotel then relocated to the abandoned, two-story Cameron hotel in 1910, where it remained until housed within a new federal building beside Babbitt's Store in 1935. In the absence of churches or community buildings of any type, the post office was a vital meeting place among early residents, and the postmaster was a dependable source of local gossip. The position through the early 1920s following Buggeln's departure was held by Louisa Ferrall, then her husband, Lannes, both employees, allies, and informants of Ralph Cameron and others resistant to NPS administration. Two postmasters who followed, Charles Donohoe and James Kintner, were also "Cameron men," if not as loyal as the Ferralls. This was only one of many manifestations of defiance to NPS authority evidenced into the early 1930s, serious enough that park managers, irritated to the point of paranoia, often sent and received sensitive correspondence via encoded telegrams. Security remained a problem until Kintner resigned in 1928 and Art Metzger became postmaster through civil service examination, a position he held until 1963.³²

Medical services and interment of the dead seemed less pressing issues but were addressed cooperatively between the private and public sectors. In 1919 medical treatment was dispensed by a single Fred Harvey Company nurse in residence at the El Tovar. There was no hospital, and in serious cases treatment relied on finding a doctor among guests or on making a long trip to Williams or Flagstaff. Dr. G.C. Rice of the Public Health Service set up an office in 1920 but resigned in the autumn of 1921 and was replaced

by Dr. H.B. Schnuck, also of the Public Health Service, in January 1922. Schnuck was replaced by a Santa Fe Railroad employee, Dr. J.A. Warburton, in April 1923. These doctors and others that followed periodically practiced in whatever empty boxcar, shack, or cabin was allotted them until the first hospital was completed in 1931. Similarly, those few who happened to die at the South Rim without ties elsewhere, and those who died elsewhere with ties to the canyon, were buried at random on the South Rim until a small cemetery was established in 1919 surrounding the grave site of John Hance. Eight others joined Hance before administrators got around to fencing and platting the site in 1922.³³

Park laborers extended and improved the primitive telephone system originally strung to connect scattered USFS stations and fire towers. They finished stringing a single-wire, magneto-handset system from rim to rim in 1922, connecting the Wylie Way camp to Phantom Ranch, Indian Garden, and Grand Canyon Village. By the following year, lines had been overhauled and consisted of some fifty-nine miles of wire. Hermit Camp was tied into Indian Garden by 1924, and in the following year lines extended from Desert View through the village and westward to the recently constructed Pasture Wash ranger station, from which point the Bureau of Indian Affairs continued it to Supai. During 1927-28 phones were installed along the central corridor at the Tipoff, Ribbon Falls, and Roaring Springs, giving rangers and tourists the opportunity to phone in emergencies from five locations including Phantom Ranch and Cottonwood. In 1928 North Rim visitors could dial long distance from the Grand Canyon Lodge via the transcanyon line to Grand Canyon Village. By 1929 the NPS had completed a ninety-six-mile system of telephone lines, and in that year they contracted with Mountain States Telephone & Telegraph Company to operate an all-day, everyday central system from within the new administration building.³⁴

Administrators addressed other village services on their own, and one of the more frustrating entailed enforcement of regulations, law, and order. Superintendents (and therefore NPS directors) did not dwell on routine police matters in their annual reports, but ranger reports and a few scattered sources reveal an undercurrent of petty lawlessness among residents and contractors. A flurry of construction in the 1920s combined with limited residences, distance from nearby towns, and contractors' disregard for employee welfare spawned tent-camp slums on the village's southern fringe populated by Mexican, American Indian, and European American low-wage laborers. These men often quit or were fired within a few weeks of arrival but lingered to become involved in a number of illegal activities including prostitution and moonshining. Some reports insinuated

racial unrest and the presence of a local chapter of the Ku Klux Klan, whose members included a few of the more prominent pioneers.³⁵

Police and judicial powers throughout the 1920s rested jointly with rangers, county justices of the peace residing at the South Rim and at Flagstaff, and the nearest U.S. District Court in Prescott. Rangers like any private citizen could make arrests, but miscreants had to be bound over to one of these courts. Local JPs were invariably elected from among antagonistic village residents, so crimes had to be serious enough to warrant very long trips to Flagstaff or Prescott. Coconino County Sheriff Campbell, responding to what he considered a struggle for control of the park, appointed three rangers and the assistant superintendent as deputy sheriffs in 1924, giving staff a little more authority in county and state matters, perhaps, but still requiring a trip to Flagstaff following arrests since there was no local jail. Given the tension between the park and county, even Flagstaff judges might view infractions to park regulations as something less than serious offenses.³⁶ More often than not, administrators simply banished lawbreakers and undesirables rather than press charges. The park service asked the State of Arizona to relinquish jurisdiction as other states had done for parks within their boundaries and hoped for a U.S. commissioner or magistrate within the village, but did not receive this judicial authority until 1959.³⁷

Aside from providing utilities and other essential services required of a burgeoning tourist village, park managers had to be concerned with properly housing employees and equipment. Competing responsibilities, the absence of a village plan, and inadequate budgets resulted in temporary edifices, multi-functional buildings, false starts, and considerable confusion. Still, Superintendent Peters had no choice but to build a few essential structures. On his own initiative he identified village "administrative" and "industrial" zones then supervised construction of several inexpensive buildings by the summer of 1920, including a warehouse, mess hall, combined stable and blacksmith shop, a superintendent's residence, and a bunkhouse. NPS landscape engineers and Peters's successor, Dewitt L. Reaburn, designed and supervised construction of a mess hall addition, rooming house, "cottage" for employees, and a twelve-man dormitory in 1921, as well as the administrative building completed in November that also functioned over time as an information center, library-museum, and superintendent's residence. This lovely building just north of the Fred Harvey Garage is the park's earliest example of NPS Rustic architecture. It survives because it was built within a "civic group plan" devised by NPS Chief Landscape Engineer Daniel Hull in 1921. Superintendent Walter W. Crosby followed up in the next two years with substantial personnel quarters, a

combination garage and blacksmith shop, carpenter shop, and storage sheds within this plan's administrative zone.³⁸

Hull's village design preceded and influenced Grand Canyon National Park's first "master plan," undertaken in 1923 by the Chicago architectural firm of Graham, Anderson, Probst and White but completed by Hull and approved by Mather in June 1924. This plan, concerned solely with village development, again illustrated the interwoven relationship between the park's principal concessioner and management. The Santa Fe Railroad financed the endeavor and lent its own engineers to the task, but the final blueprint reflected Hull's intent to reinvent the village along lines popular among turn-of-the-century city planners. The developmental blueprint consisting of one annotated village map was not an original design, as it amply revealed elements of "city beautiful" movements in vogue at that time that advocated separation of industrial, commercial, administrative, and residential areas with native landscaping and plentiful open spaces. It also conformed to NPS ideas of the 1910s for "bucolic" service villages within the western parks and strongly resembled earlier U.S. Forest Service plans proposed by landscape architect Frank Waugh. The difference in 1924 was that all those concerned with village development participated in its creation and committed to its fulfillment as funds became available. The 1924 plan remained the pattern for expansion through the early 1950s, and its original intent, though obscured by modern construction, can still be discerned today.³⁹

As administrators wrestled with developments and visitation at Grand Canyon Village prior to 1924, they understandably neglected less-visited areas that could await increased appropriations and manpower. The North Rim remained essentially another park, left to the devices of Elizabeth and Thomas McKee and rangers within the adjacent Kaibab National Forest. Congress, in fact, refused to appropriate funds for its management through Fiscal Year 1924, with the result that administrators could afford to send over only one or two rangers during summer months. These men, set adrift and at first without communications to the South Rim, slept at whatever pioneer or forest service cabins happened to be vacant, often at Jimmy Owens's place at Harvey Meadow, or stayed in the McKees's camp at reduced rates. Since there were no NPS facilities whatsoever, no entrance station, and only 3,000 visitors per year by 1924, one wonders what they could possibly have accomplished other than to circulate among the McKees's guests, act as fire lookouts, and perform a little road maintenance.⁴⁰

■ ■ ■

Grand Canyon's early administrators struggled to improve deficient utilities, curtail conduct unbecoming a national

park, and bring order to the management process. The frenzied period was conspicuous for hard work, inadequate budgets, poor housing, and a fair measure of disorganization and demoralization. William Peters survived only thirteen months but was rewarded for his efforts with the superintendency of Mount Rainier National Park. He was replaced on 5 October 1920 by Dewitt L. Reaburn, the former superintendent at Mount Rainier, who also lasted only thirteen months before resigning, an unusual move among early professional administrators. The superintendent of Sequoia National Park and former Grand Canyon chief ranger, Col. John R. White, filled in for a few months until Col. Walter W. Crosby arrived on 15 February 1922. Crosby remained at his post for only eighteen months, working diligently to help forge the village master plan and reorganize demoralized clerical and ranger staffs before escaping for a trip around the world. Assistant Superintendent George C. Bolton filled in for six months until Crosby returned to serve out the remainder of 1923. He was replaced on 8 January 1924 by the park's sixth head administrator in less than five years, J. Ross Eakin.⁴¹

Attrition among the clerical and ranger staffs was even steeper than among managers.⁴² As appropriations for administration, maintenance, enhancements, and protection increased from \$40,000 in 1920 to \$125,000 in 1924, superintendents were able to augment permanent staff from four rangers and an entrance checker to an assistant superintendent, chief ranger, eight rangers, and several clerks. Still, most dollars went toward maintenance and rehabilitation of the more deplorable roads and purchase of road equipment, leaving little for housing and other basic human needs. As a result of difficult conditions and poor salaries, it proved hard to attract what administrators considered good workers, and perhaps those they did hire were unable to tolerate start-up hardships, residents' hostility, and myriad demands imposed by visitation, which had increased from 38,000 in 1919 to 108,000 in 1924. As a result, Col. Crosby found it necessary to reorganize the entire staff in spring 1922 and summer 1923, during which time the entire clerical staff was replaced. Chief Ranger Charles J. Smith and five rangers also resigned in 1923 and could not be replaced immediately, as appropriations for Fiscal Year 1923 had dropped 25 percent from the previous year. The colonel, it seems, bit the bullet to reorganize park forces in order to allow Superintendent Eakin to move forward with a new master plan.⁴³

Eakin did proceed with improvements in 1924, building the village's first community center, a new mess hall, and four employee "cottages" so that all NPS permanent employees were "comfortably housed."⁴⁴ As regular appropriations wavered between \$120,000 and \$173,000 during 1925-29, Eakin and his successor, Miner Tillotson, added

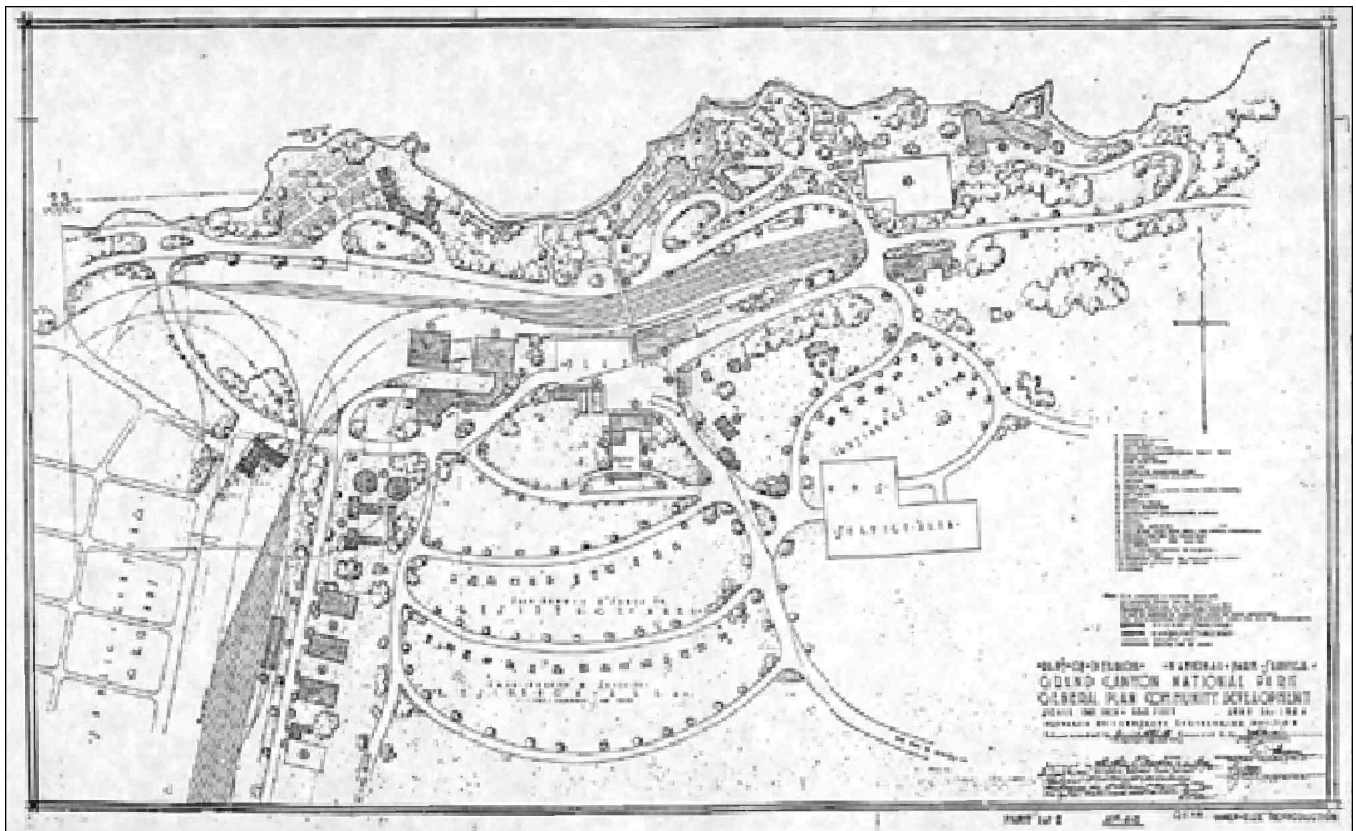


Figure 9. The 1924 village plan map. The Santa Fe Railroad, with minimal guidance and still less assistance from the U.S. Forest Service, determined the location, extent, and character of South Rim development surrounding its twenty-acre depot site during 1901-19. With the arrival of the National Park Service in 1919, control began to give way to the federal government, although the railroad and later the Fred Harvey Company continued

to influence growth with their choices for capital investment. This 1924 village development blueprint represents the park's first "master plan," created by railroad and NPS architects. It guided village zoning and construction into the 1950s, and its concept of leaving the rim for commercial services and the forest to the south for residential housing continues to this day.

additional housing, a recreational field, an NPS mule and machine storage shed, and a new administrative building in 1929 at the southeast corner of Village Loop and Center Roads. Eakin managed to instill among NPS and concessioner employees an esprit de corps, in part through utility improvements; a new sense of order promised by the village master plan with its residential streets and solidly constructed bungalows; and general cleanup programs that removed much of the filth formerly surrounding the railroad tracks. Better morale was evidenced by the emergence of civic groups like the Parent-Teachers Association, American Legion, and a "Women's Auxiliary," and by the congregation of off-duty employees at the new community center for films, lectures, and dances.⁴⁵

Eakin, with a ranger force of twelve in 1925 and a bit more money, was the first superintendent to pay serious attention to management outside the village. To facilitate backcountry patrols, cabins were completed at Desert View, Pasture Wash, and Muav Saddle in 1925, at Kanabowmits Spring and Greenland Seep in 1926, and at Cottonwood Flats along Bright Angel Creek in 1926-27. A ranger cabin, warehouse, barn, and machine shed were constructed at the

North Rim's Bright Angel Point in 1925, and duplex cottages along with a few outbuildings followed in 1926. Since 1917 the McKees had secured water on the North Rim by hauling it in wagons then automobiles from Bright Angel Spring, or by mule and burro from springs just below the rim within Transept Canyon.⁴⁶ In 1927 the park began pumping twenty-four gallons per minute from the latter springs to a storage tank that served the camp as well as new administrative buildings.⁴⁷ These improvements, combined with definitive plans for new roads and increased visitation, prompted the contract with the Utah Parks Company in the same year.

By 1929 park managers, in close collaboration with the Santa Fe Railroad, Fred Harvey Company, Union Pacific Railroad, and Utah Parks Company, had finished structural improvements that satisfactorily addressed housing, utilities, and other essential services demanded by park residents and the 184,000 visitors who arrived in that year. These developments were completed in the face of visitation that had increased by 500 percent in ten years, due largely to NPS and railroad marketing efforts and improved village conditions. By the mid-1920s the park service recog-

nized the unmistakable visitational trend that fulfilled the political objective of ensuring Grand Canyon's survival as a national park. One can argue that if survival had been their primary objective, as some writers claim, they might well have reined in on development and imposed limits on growth by this year. There was not even a hint, however, that anyone paused to consider limiting development. The absence of debate on this subject, along with unambiguous plans to further polish Grand Canyon's image with enhancements on demand, tends to confirm managers' visions for a middle-class resort and national playground, with no bounds to the number of customers to be pleased.

ROADS, TRAILS, AND CAMPGROUNDS

The development of roads, trails, and campgrounds to entice, accommodate, and delight ever more visitors proceeded hand-in-hand with improvements to essential services through the remainder of the 1920s and 1930s. Emphasis was placed on the expensive task of reconstructing regional and inner-park roads. Despite increasing numbers of western motorists during the 1910s, transportation in 1919 still revolved around transcontinental railroads. Surface roads had not yet progressed beyond the horse-drawn conveyance era. Arizona and Utah governments were just beginning to organize road commissions and publicize state road systems. Despite the canyon's distance from both state capitals, Utah had upgraded the Arrowhead Highway to connect Salt Lake City with the south-



Figure 10. Superintendent J. R. Eakin (left) and Fred Harvey Company manager Victor Patroso, ca. 1925. Patroso ran Fred Harvey operations at the South Rim prior to World War II. GRC A 9620.

western part of the state and southern Utah parks, while Arizona had improved the National Old Trails Highway across northern Arizona. Otherwise, nearly all regional roads remained poorly signed, graded-dirt paths at best, more often unsigned parallel ruts, which were usually impassable in winter and following heavy rainfall. Motorists carried plenty of tools; local ranchers and farmers supplemented incomes pulling motor vehicles out of the muck; Fred Harvey buses mired so often that drivers brought along carrier pigeons to signal for help.⁴⁸

In the Grand Canyon region, diminished use since the railway's arrival had only worsened roads south of the rim. By 1919 Bill Bass's road from Williams to Bass Camp had long been abandoned. The wagon path from Ash Fork still reached the village via Rowe Well, but usage had dwindled in favor of an equally treacherous if shorter route from Williams that shadowed the railway tracks then arrived at the rim via Rain Tanks. Motorists who used the unmarked Grandview stage road often got lost amid bewildering ruts that led to isolated ranches and cattle tanks. In 1919-20 Coconino County improved a road from Maine (Parks) that ran east of Red Butte before joining the Williams Road at Rain Tanks, but it remained graded dirt until abandoned in 1928. In 1920 Superintendent Peters wrote unequivocally that the "approach roads to the Grand Canyon National Park are a disgrace to the State of Arizona and Coconino County," and he grieved that 60 percent of transcontinental motorists did not turn north to visit the park.⁴⁹

As bad as they were, south-side roads were in far better condition than those approaching the North Rim. Before the early 1930s only adventurous, ignorant, or foolhardy motorists braved the unmaintained Mormon emigrant trail east of Grand Canyon that wound its way from spring to spring through the Painted Desert, crossed the Colorado River at Lees Ferry, and continued atop the sandy hillocks of House Rock Valley to the Kaibab Plateau and Jacob Lake.⁵⁰ Arizona couples journeying to and from the temple at St. George had worn deep tracks connecting that town and Rockville to Fredonia and Kanab via Pipe Springs, while freighters had developed an equally menacing path from the railhead at Marysville south to Kanab. These converged at Fredonia into a set of wagon ruts that neared the Kaibab Plateau, then split to approach Bright Angel Point via Ryan and Big Springs (Edwin Woolley's early tourist path), and via Jacob Lake by a route improved by the forest service in 1913 and pretentiously dubbed the Grand Canyon Highway. These two approach roads converged at VT Park and continued as far as Harvey Meadow, the Woolley Cabin, and Walhalla Plateau, but did not reach Bright Angel Point until 1917-18. They were in such poor condition that during the early 1920s the tiny towns of Fredonia and Kanab supported half a dozen service stations, whose employees spent much of their time combing the Arizona Strip for stranded motorists.⁵¹

Grand Canyon administrators lamented the condition of regional roads throughout the 1920s and lobbied for their improvement by federal and state agencies, but they had their hands full trying to improve roads within the park. Beginning in 1920, superintendents paid as many as forty laborers a few dollars per day to widen, partially realign, and grade the South Rim's thirty-two-mile "El Tovar-

Desert View Road” and resurface the park’s only paved road, to Hermits Rest. Bill Bass’s early wagon path from Rowe Well west to Bass Camp and Topocoba Hilltop remained unimproved, as did all minor service roads and the path to Yavapai Point.⁵² At the North Rim, the only roads consisted of the terminal segments of wagon paths out to Point Sublime, Cape Royal, and the Woolley Cabin, worn by cattlemen and pioneer tourism entrepreneurs, and the final three-mile-long segment of the forest approach road to Bright Angel Point, built by the forest service. In 1924 “crude roads” replaced ruts to Point Sublime and Cape Royal, the former built to help fight forest fires and the latter to aid the Bureau of Entomology’s war against insect infestations on the Walhalla Plateau.⁵³

Appropriations in 1925 allowed NPS laborers to build a bridle path to Swamp Point and to begin work on a comparable passage from Desert View to Cape Solitude, completed in the following year. In the same year, Bureau of Public Roads (BPR) engineer Donald Evans arrived to select and survey an entirely new, 132-mile park highway system that administrators hoped to complete in five major phases. This all-at-once approach to park access was only one of more than a dozen such projects undertaken in as many western parks in the 1920s. It was made possible by special funds appropriated in December 1924, as well as by Stephen Mather’s decision to build park roads to BPR standards.⁵⁴ Systemwide, engineers like Evans were guided by the park service’s own civil engineers and landscape architects, who ensured that planning would result in all-weather highways that complemented landscapes with unobtrusive lines, graveled surfaces of locally quarried rock, and rustic-stone culvert headwalls and retaining walls. Grand Canyon’s new highways, in combination with regional approaches completed during 1925–36, would represent some of the first and most artistic automotive roads ever built in the western United States. Although periodically widened and resurfaced (and occasionally realigned), they still serve today as the park’s major thoroughfares and as the backbone of the region’s secondary highway network.

Of the five highways envisioned, a replacement road from Grand Canyon Village to Desert View ranked high in agency priorities and attained a sense of urgency when the Santa Fe Railroad threatened to halt further developments until it was built. Planning had actually begun in 1923, when NPS engineer George E. Goodwin recommended an alignment similar to that of the Hermit Rim Road; that is, a low-speed scenic drive that would snugly embrace the rim. By 1925 Mather and Albright favored a path more or less overlaying the old stage road from Grandview, portions of which lay outside the park boundary. Superintendent Eakin and park engineer Miner Tillotson lobbied for a compromise: a high-speed thoroughfare to follow the flat-

test terrain yet remain close enough to the rim to allow short spurs to major scenic points and pullouts at intervening bays. Following the latter proposal, Evans surveyed the route in spring 1925, and the park road crew completed the grubbing and clearing that summer. Contractors James Vallandingham of Salt Lake City and Pearson & Dickerson of Riverside, California, started work when funds became available in 1927. As completed and surfaced in 1931, the \$380,000, twenty-five-mile-long East Rim Drive ended at Desert View, with spurs to Yavapai, Yaki, Grandview, and Moran Points. A half-mile spur was also built southward from the new highway, from a point four miles west of Desert View, to connect with the Navahopi Road to Cameron.⁵⁵

A south approach road emanating from the National Old Trails Highway actually ranked ahead of East Rim Drive, but the controversy that tied funding to acquisition of the Bright Angel Trail delayed construction. Nevertheless, in 1925 BPR engineers completed their survey of an entrance road that would tie into the eventual approach, and park forces grubbed and cleared the four-mile route in the following summer. James Vallandingham won the contract in December 1926 and completed the project simultaneously with his work on East Rim Drive in December 1928. The original alignment in that year, and until the 1950s, left the path of today’s approach road at the Moqui Lodge, passed beneath a rustic-style entrance arch built in 1931 at the park boundary, and paralleled today’s entrance road before following the line of Shuttlebus, Center, and Village Loop Roads to join East Rim Drive at the Fred Harvey Garage. The entrance station along the old road from Maine was dismantled and a new one placed at a point about fifty yards southeast of today’s Boulder Avenue.⁵⁶

Until the onset of the Great Depression, and occasionally thereafter, NPS and Fred Harvey Company managers seriously considered tourist developments from Grand Canyon Village west as far as Supai. One of the five road projects envisioned in 1925 included a highway in that direction. It seemed sensible to them to build a road similar to East Rim Drive that would reach facilities at the south end of the Bass corridor, access scenic points along the way, and continue on to Supai, Manakacha Point, or at least to the head of the Topocoba Trail. Such a road would also make it easier to deliver the mail, other services, and tourists to the remote Havasupai village, a popular destination since the earliest days of pioneer tourism. In 1926 Evans completed a survey to Manakacha Point, thence down to the village of Supai, that included a spur to Bass Camp. The estimated cost of \$2 million seemed prohibitive, however, and the only road built to the west of Grand Canyon Village during the 1920s was a 3,800-foot service

spur from Rowe Well Road to the new incinerator and sewage plant.⁵⁷

Plans to upgrade North Rim roads in 1925 included a three-way intersection at Little Park where the north approach from Jacob Lake would split into separate paths to Cape Royal, Bright Angel Point, and Point Sublime. Those plans changed in 1926, despite an impending boundary extension that would place the intersection within the park. Evans instead surveyed a scenic road that began at Bright Angel Point and descended northward to meet the old approach road at Harvey Meadow. The route then climbed the Walhalla Plateau via Fuller and Neal Canyons and continued along the plateau's east side to a parking lot at Cape Royal.⁵⁸ The new twenty-four-mile-long road begun in 1927 closely traced the path of the old wagon road worn by cattlemen and improved by the Bureau of Entomology. It included a 2.9-mile spur to Skidoo Point (Point Imperial) that followed earlier wagon tracks to that scenic overlook. The difficult, serpentine road was completed by three separate California contractors in 1931 at a cost of well over half a million dollars. Plans for the boundary extension north to Little Park delayed construction of a new entrance road until 1929, when two California contractors started work on a ten-mile-long highway from the park entrance station as far south as Harvey Meadow. The North Entrance Road, completed in 1931, followed the 1913 Grand Canyon Highway until reaching Lindberg Hill, where it diverged from the old track to descend in moderate grades through Thompson Canyon to connect with the new Cape Royal Road at the mouth of Fuller Canyon. Today's entrance station at Little Park was built beside the older dirt road in 1928.⁵⁹

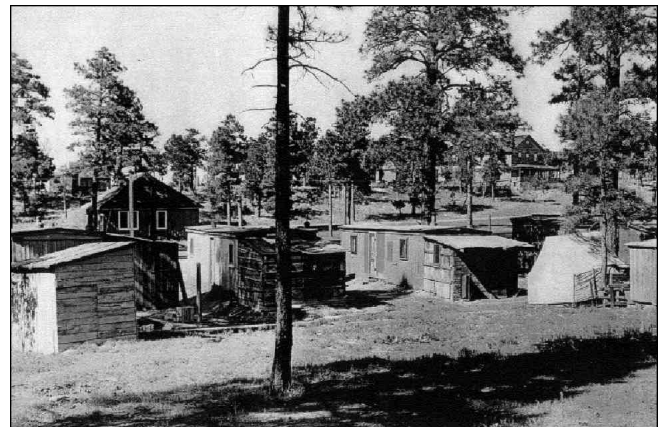
Point Sublime Road had been bladed through forest and park lands in 1924 to fight forest fires, but inclusion of its entire eighteen-mile length within the park in 1927 and popularity among tourists by 1929 prompted Superintendent Miner Tillotson to add the informal path to the regular maintenance schedule. Park Engineer C.M. Carrell, responding to complaints concerning the deplorable condition of the narrow, undrained, "scratch" road, supervised minor reconstruction in 1930 and 1931 by day laborers who reduced grades, straightened curves, installed culverts, and cleared side ditches. It would receive similar attention through the 1930s but was never upgraded to automotive standards. Like roads to Swamp Point, Cape Solitude, and Bass Camp, it would serve only administrative purposes and those few visitors seeking access to the park's backcountry areas.⁶⁰

Remote Grand Canyon trails had also fallen into disrepair by 1919, as the railroad funneled tourists to the village and inner-canyon trips narrowed to the central corridor. The once popular South Bass, Grandview, New Hance, and

Tanner Trails, as well as the less-frequented North Bass, Thunder River, and Nankoweap Trails, had returned to pre-pioneer condition, with large segments obliterated by erosion. Of the Santa Fe Railroad's Hermit Trail and the central corridor trails, consisting of Ralph Cameron's Bright Angel Trail linked with David Rust's trail up Bright Angel Creek, only the Hermit had been maintained to high standards. The Bright Angel Trail and David Rust's trail had received no regular repair since 1907.⁶¹

Despite Stephen Mather's vision for inner-canyon development, park managers declined to renovate remote trails when nearly all visitors seemed content with mule rides along the central corridor and Hermit Trail. During 1919-24, they instead spent modest appropriations on simple maintenance of the most used paths, stationing "repairmen" at intervals along the Hermit and corridor trails. In addition to clearing rock slides, the small trail crew—mostly Havasupais armed with picks and shovels—made modest improvements to the Tonto Trail from Hermit to Bright Angel in 1920 and to lower portions of Rust's trail as far upstream as Cottonwood during 1920-26. In 1921 administrators also built a wooden suspension bridge to replace Rust's old cable across the river and rebuilt portions of the Dripping Springs Trail in 1924.⁶²

Effective trail construction and repair coincided with advancements in road-building technology. Using the Hermit as a standard for tread width and associated features, the trail crew went to work reconstructing the lower



segment of Rust's trail to the North Rim through "The Box" in 1920-21, eliminating forty of the original ninety-four crossings of Bright Angel Creek. During the next few years, superintendents and park engineer Tillotson considered alternate routes to the Tonto Platform to avoid the box canyon, but rejected all of them due to excessive grades, consequent exposure to

Figure 11. Employee housing along the railroad tracks near the wye, 1932, with the post office (former Cannon Hotel) in the right background. GRCA 11887.

“the blazing heat of a desert sun,” and the distance required to escape the original route. By 1925 Eakin and Tillotson had decided to raise the trail out of the creek bed and widen it through The Box to Cottonwood, eliminating all but seven crossings of the creek, which were spanned with steel beam and concrete bridges in the following year. During 1926–28 the crew continued the work to Bright Angel Point, bypassing Rust’s original upper alignment in favor of an entirely new trail up Roaring Springs Canyon to intersect the North Entrance Road.⁶³

Construction of the South Kaibab Trail to complete a reengineered central corridor was motivated by the controversy surrounding acquisition of the Bright Angel Trail. Federal officials, from Arizona’s first senators down to forest and park service rangers, had been anxious to acquire the Bright Angel Trail from Coconino County since 1906, and by 1924 Congress had offered to build a new South Approach Road in exchange for the only toll trail remaining within the National Park System. Administrators as well as civic leaders in the gateway towns agreed that the deal would serve everyone’s interests, the park service eliminating an inholding and gaining control of inner-canyon access, town merchants receiving benefit from a more accessible national park. Local opposition, however, inflamed by Senator Ralph Cameron and his canyon cronies, prompted county officials to place the measure on the 1924 ballot where it was soundly rejected. Congressman Hayden and NPS officials, long accustomed to local opposition and prepared for such an outcome, had written the act authorizing trail purchase in a manner that would allow a new trail to be built as an alternative, and Tillotson had already completed surveys from Yaki Point to The Tipoff. The votes had hardly been counted when indignant administrators began construction in December 1924.⁶⁴

Miner Tillotson, always the engineer throughout his long NPS career, was particularly proud of the \$73,000 “Yaki Trail,” as it was called for a brief time after its completion in June 1925. Built where no trail had gone before, the route was chosen for both practical and aesthetic reasons. Except for the unavoidable, precipitous one-third-mile segment below Yaki Point, engineers chose alignments to afford protection from landslides, exposure to year-round sunshine and summer breezes, and unobstructed canyon views. Portable Ingersoll-Rand air compressors powering jackhammers and drills allowed workmen to chisel grades not exceeding 18 percent on the most difficult cliff-side sections. John Brown, an Arizona Strip resident, led a crew of fifteen local Mormon laborers from the Colorado River up to The Tipoff, realigning the old cable trail to the Tonto Platform. Chick Seavey, who would later supervise CCC crews at the canyon, guided twenty laborers who worked below Yaki Point. Good-natured rivalry between the two

teams resulted in a superb, 6.5-mile-long, five-foot-wide “mountain” trail. Four buildings and corrals located near the trailhead were built in 1926–29 to serve as a Fred Harvey Company guides’ residence, a ranger residence, and NPS and Fred Harvey Company mule barns. The \$40,000, 440-foot-long, five-foot wide Kaibab Suspension Bridge was completed in 1928, replacing the seven-year-old bridge immediately downstream.⁶⁵

The suspension bridge was just nearing completion in 1928 when Coconino County, free at last of Ralph Cameron’s influence, ceded the Bright Angel Trail to the federal government in exchange for the new approach road. Administrators faced with the maintenance of two trails leading to the same place considered abandoning the Bright Angel Trail, but soon recognized its advantage as an alternate path to the river and as access to Indian Garden, the future source of South Rim water.⁶⁶ Tillotson and Carrell therefore undertook its reconstruction and realignment in three phases: the middle segment (1929–30), the upper segment (1930–31), and the lower segment (1938–39), at a total cost of \$70,000. Upon completion, the Bright Angel Trail would end at the Colorado River Trail (finished in 1936), thereby offering greater flexibility for inner-canyon visitors.⁶⁷

Roads and trails were engineered to entice motorists to the park and to allow them to access in comfort and safety scenic vistas beside and beneath canyon rims. As this strategy paid dividends, administrators assumed responsibility for developing formal campgrounds to accommodate the swelling number of park visitors. NPS policy ceded indoor accommodations to the Fred Harvey Company, which had housed upscale clients in the El Tovar and visitors of more modest means at the Bright Angel Hotel and Camp since 1905. These establishments satisfied those visitors, called “dudes” by early residents, who arrived by rail with little more than cash, cameras, and suitcases, but did not serve the new wave of “sagebrushers” who came by private automobile with less money but plentiful camping gear strapped to running boards.⁶⁸ Park managers decided that formal campgrounds would best attract and please the new type of tourist and at the same time limit the number of more-intrusive hotels. In terms of administrative control, these sites also posed a better solution than at-large camping, the de facto policy tolerated by former forest service managers.

NPS philosophy concerning campgrounds in the 1920s and 1930s entailed three concepts: that they would remain free on a first-come, first-served basis; that as many as possible would be equipped with every amenity administrators could furnish and visitors demanded; and that their number, placement, and level of amenities would coincide with visitor demographics. By the summer of 1920 the park had improved a single public campground southeast of the Fred



Figure 12. Grand Canyon Village, ca. 1924, from an army biplane facing west/southwest. Major structures like the depot, Hopi House and El Tovar are visible on the lower left with the Brown Building (a Fred Harvey Company dorm), Bright Angel Hotel complex, and Powell Lodge visible on the upper right. Informal paths along the rim (right), the original alignment of the Hemit Road, and the railway wye are also clear references. Note that the space in the center now occupied by the Thunderbird Lodge and Arizona Steakhouse was open and used for rimside parking until the 1930s. GRC A 17923.

Harvey Garage, conveniently accessed by roads from Grandview and Rain Tanks. In 1921 the Babbitt-Polson company built its general store adjacent to the campground to provide more convenient service. In 1922 park laborers enlarged the camp and opened another near Sanford Rowe's operations three miles south of the village. By 1926 administrators had added primitive campgrounds at Grandview and Desert View.⁶⁹

The number of motorists visiting Grand Canyon exceeded rail passengers during the summer months of 1925, for the entire season of 1926, and ever after, prompting administrators to add campgrounds. At the same time, in anticipation of new roads, they began charging a one dollar automotive entrance fee.⁷⁰ The park added a developed campground at Bright Angel Point on the North Rim in 1926 and in 1927 relocated the headquarters camp to the vicinity of the Fred Harvey Company's new Motor Lodge (today's Maswik Lodge), which served motorists with a central lodge, delicatessen, and twenty "housekeeping cottages."⁷¹ In the

same year 13,500 automobiles brought 43,500 campers to the South Rim, most of whom chose flush toilets, fire grills, tables, running water, and firewood at the new headquarters camp. The Grandview campground was abandoned about this time, but with the number of campers increasing to more than 52,000 in 1929, additional sites were added below the rim at Ribbon Falls and Indian Garden, with still more planned for Point Imperial, Point Sublime, Havasupai Point, and other rimside locations. In the same year the Fred Harvey Company increased the number of its housekeeping cottages at the Motor Lodge to fifty-seven, added twenty-five tent cabins to the Bright Angel Lodge, and began to plan for an enlarged Bright Angel Point complex.

On the North Rim, the Wylie Way cabins and NPS campground at Bright Angel Point were moved to the location of today's camp area in late 1927 to make room for the new Grand Canyon Lodge. In 1928 administrators designated "temporary" or "secondary" (undeveloped) campsites throughout the park at Roaring Springs, the foot of the Bright Angel Trail, Cedar Ridge, McKinnon Point, "Purple River," and Neal Springs. The latter site, at the intersection of the Cape Royal and Point Imperial Roads, had been set aside as a construction camp along the Cape Royal Road in 1928 and was later used as a CCC camp before abandonment. In 1929 the Utah Parks Company added more cabins to the Grand Canyon Lodge, bringing the total to one hundred standard duplexes and fifteen deluxe four-room cabins, and considered a similar development at Cape Royal.⁷²

As the 1920s drew to a close, the National Park Service and its private partners had gone a long way toward recreating Grand Canyon into one of the more popular tourist destinations in the American West. Opposition presented by pioneer residents had been mostly overcome by a new alliance among federal legislators and bureaucrats, county businessmen, and corporate concessioners who attracted and satisfied nearly 200,000 annual visitors with in-park utilities and services that nearly everyone thought essential. Relying on Stephen Mather and Horace Albright to bolster federal appropriations and on the Santa Fe and Union Pacific Railroads to help market the "all-season resort," local administrators focused on concession agreements that ensured control over millions of dollars in private investments to house, feed, supply, and entertain scenic consumers. The NPS kept its half of the federal-private bargain by investing its appropriations in administrative buildings, roads, trails, and campgrounds. All of the principal players agreed that much remained to be done, but the pattern and plans had been set for additional building programs that promised to fix management policy to one of meeting unlimited visitor numbers and demands.



Chapter Three

Ironic Golden Years

1930 - 1941

The 1930s at Grand Canyon National Park witnessed a seamless progression of building programs begun in the mid-1920s. The two decades were linked as well by persistence with earlier efforts to enhance visitors' experiences and protect the landscape through educational programs, boundary extensions, and the elimination of private and state inholdings. The continuity seems odd at first glance, as it accompanied the deepest economic depression the nation has yet endured. This cyclical malady of world capitalism might have resulted in reduced federal spending, a return to traditional extraction of resources, or a nonstructural approach to park management. Instead, it triggered federal subsidies in the form of emergency building funds and a ready supply of desperate low-wage laborers. Under Miner Tillotson, one of the better park superintendents by NPS standards, a mature administration took full and efficient advantage of national economic woes to complete structural improvements that, given World War II and subsequent financial scrimping, might never have been built. In contrast to the misery of national unemployment, homelessness, dust bowls, and bread lines, financial circumstances combined with a visitational respite to produce a few golden years at many of the West's national parks, including Grand Canyon.

From an administrative perspective, staffing and base funding remained at late-1920s levels through 1932, as if there had been no stock market crash and deepening financial collapse. Permanent employees in 1930 consisted of the superintendent, an assistant superintendent, chief ranger, assistant chief ranger, six rangers, two permanent naturalists, and half a dozen clerks.¹ Tillotson hired eleven seasonal rangers and naturalists, as well as day-wage laborers as various projects required. By 1933, at the depression's depths and immediately before the onset of New Deal programs, permanent staff numbered between forty-two and forty-four, a slight increase over 1930, consisting of the superintendent, assistant superintendent, chief ranger, two assistant chief rangers, and six rangers among the "protection" ranks, two naturalists, a clerical staff of six, and sixteen workers within the engineering department.² While visitation declined each year from 184,000 in 1929 to 105,000 in 1933, easing administrative demands, base appropriations remained at late 1920s amounts, ranging from \$145,000 to

\$172,000 annually. Normal road and trail funds diminished, causing several new projects to be delayed, but deficits were offset by modest emergency funds of the Hoover Administration that allowed those projects already in progress to continue unabated.³

The park fared even better after mid-1933, as work-relief and emergency funding programs of the Roosevelt Administration supplied all the workers that managers could reasonably employ and all the money they could spend for the remainder of the decade. Tillotson wrote in 1933 that

from a purely mercenary point of view the park [will] gain more in the form of physical improvements by the National Recovery Act than would have transpired for a number of years—in some instances not at all—under a normal trend of park affairs.⁴

His insight proved correct. While NPS base appropriations servicewide rose from \$10.8 million in 1933 to \$27 million in 1939, Congress injected another \$218 million during the same years into emergency relief projects within the parks and monuments. Of the handful of work-relief agencies created to spend this money, the Public Works Administration (PWA) and Civilian Conservation Corps (CCC) figured most prominently at Grand Canyon.⁵



Figure 13. Park rangers R. Redburn and George Collins in front of the new administration building (today's ranger operations), September 1931. Collins was an avid capable photographer who recorded many of the construction projects taking place in the early 1930s. GRCA 64.

Administrators considered PWA workers, who labored for private contractors on dozens of projects like the East Approach Road and West Rim Drive, to be bonuses since they did not require park service management. The quasi-military CCC, on the other hand, relied on NPS managers to select camp sites within the park, supply equipment and transportation, assign rangers, engineers, and landscape architects for technical planning and supervision, and perform associated clerical duties in order to benefit from the workers and funds.⁶ The first two contingents arrived on 29 May 1933, when Company 819 under command of Capt. L.C. Dill settled in at a former contractor's camp near Avenue A (Apache Street), and Company 818 under Capt. W.O. Poindexter occupied the former Cape Royal Road construction camp at Neal Spring. From mid-1933 until the last enlistee left in mid-1942, six permanent camps labeled NP-A-1 through NP-A-6 were established at Grand Canyon National Park. On any given day for nearly a decade, two to three companies numbering 400-600 young men sallied forth from these camps to undertake construction, maintenance, conservation, and educational projects of every sort other than management and major road construction.⁷

The park's concessioners fared worse than their administrative partners in light of customer downturns and an understandable trend among visitors to economize. Smaller operators offering low-cost goods and services with minimal investments lost volume but remained slightly profitable. However, with rail travel down 30 percent in 1931, the Fred Harvey Company posted "big losses" that

only got bigger in 1932 and 1933. Capital outlays by the Utah Parks Company in 1927-30 that had been gambled on the immediate promise of North Rim tourism could not have been made at a worse time. The \$500,000 loss of the Grand Canyon Lodge to fire in September 1932 only sharpened their financial problems. Recognizing the importance of their private partners, administrators responded quickly by acceding to the postponement or cancellation of planned capital investments and taking a more flexible posture concerning rates, the extent of services, and hours of operation.⁸

Beyond immediate assistance, the nation's comptroller general ruled in April 1932 that the NPS could renegotiate concession agreements before their expiration. At Grand Canyon, administrators chose to relieve financial burdens of the Fred Harvey Company by executing a new twenty-year contract, effective January 1933, that required payment of 22.5 percent of *profits* after allowing 6 percent for capital investment. Contractually, nothing could be done for the Utah Parks Company whose agreement already stipulated a franchise fee based on profits and included the capital investment clause. Still, the company's 1928 pact allowed losses to be carried forward, and the difficult depression years ensured that it would never pay franchise fees. Verkamp's store remained profitable through the 1930s and began to pay a percentage of earnings when John Verkamp signed his first ten-year contract in January 1936. Emery Kolb, who appeared unaffected by the depression, continued to pay 4 percent of gross receipts for the remainder of the decade. Babbitt Brothers Trading Company wrote letters to NPS managers and Arizona's congressmen complaining of financial hardship in hopes of securing a new contract based on profitability, but could convince no one to renegotiate since their income statements remained in the black.⁹



Figure 14. Uniformed personnel, ca. 1934. Left to right, top: Dale S. King, Arthur L. Brown, Joseph Bryan, Ranger Lund, Elliot Betts, Ranger Sturgill. Middle: Louis Schelksh, James P. Brooks, Miner R. Tillotson, Edwin D. McKee, Perry Brown. Bottom: Ranger Hawkins, Russell Gaier, Ranger Dishar, Hubert R. Lauzon, Albert Turner. GRCA 1077.

Concessioners' financial difficulties and plummeting visitation played decisive roles in arresting early plans to decentralize Grand Canyon's facilities and services. In 1930 park managers agreed to a five-year, \$3.5 million Santa Fe Railroad building program that would have replaced the El Tovar and Bright Angel Hotels with a grand hotel in the

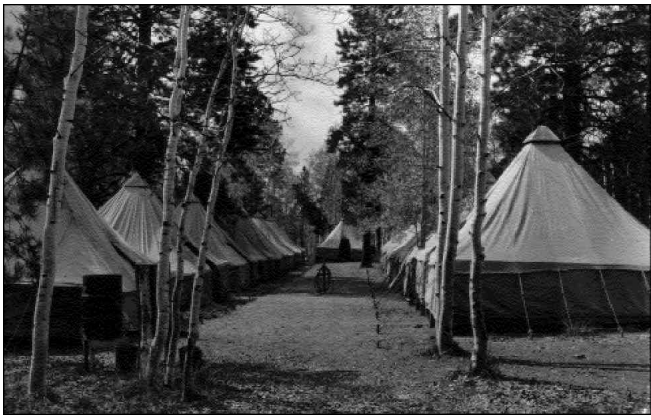


Figure 15. October 1936 view of the North Rim camp for Civilian Conservation Corps Company 818, while worked on road, trail, and landscape projects at the rim during summers and on the Colorado River, Clear Creek, and North Kaibab Trails, and at Phantom Ranch during winters, 1933-38. GRCA 294.

same location and added a “subsidiary” hotel at Desert View, a “development” within Havasu Canyon, and lesser facilities at Bass Camp. At the same time, the Utah Parks Company seriously considered a hotel complex at Cape Royal similar to their Grand Canyon Lodge. These remote

overnight facilities would have required more roads than already scheduled and ancillary developments that may have approached the dimensions of Grand Canyon Village. Worsening financial conditions derailed these intentions. The park service had the money, manpower, and willingness to proceed, but given the already entrenched NPS-concession relationship, it made little sense if their partners could not follow up with tourist services.¹⁰

The Great Depression ended immediate thoughts of decentralization but by no means inhibited structural enhancements within the central corridor. The Utah Parks Company continued to improve the state-of-the-art water and power system it had built on the North Rim in 1927-29. Given fewer than 10,000 annual North Rim visitors in those years, this half-million-dollar project represented a remarkable investment. The system, which still satisfies water and power needs at Bright Angel Point, tapped the plentiful flow of Roaring Springs to power water through a 3.5 inch pipe nearly 4,000 vertical feet to a 50,000-gallon water tank at the rim. The hydroelectric plant built beside Bright Angel



Figure 16. Aerial view of the South Rim, facing east, 1932. Kolb Studio is at center left, the Brown Building and Bright Angel Hotel tent cabins at center top and the post office (former Cannon Hotel) in the center. This photograph was taken three years before demolition of the Bright Angel Hotel and tent cabins, construction of the Bright Angel Lodge and wood-frame cabins, and reconstruction of the Hermit Rim Road. The power house laundry building, and wastewater settling ponds are visible at upper right. GRCA 9543; Fred Harvey Company photo

Creek included two 100-horsepower turbines that delivered three-phase, sixty-cycle current at 2,300 volts three quarters of a mile up to the pump house below the springs. Here it was stepped up to 4,000 volts for transmission, then stepped down to 220 and 110 volts for administrative and concessioner use. Construction required a 10,000-foot-long temporary tramway to supply materials and machinery to the base of Roaring Springs, and a 4,000-foot-long, redwood-stave penstock down to the power plant.¹¹

The Utah Parks Company’s effort probably inspired the Santa Fe Railroad to get on with a resolution to the more serious water problem at Grand Canyon Village.

Appropriating the ample springs at Indian Garden for rimside use had been considered since 1920, but the railroad thought it economically unfeasible until alarming trends in water consumption and experience gained from the Roaring Springs system prompted construction to begin in 1930. Completed in August 1932, the new system consisted of a pumping plant with two sets of two turbine pumps, together capable of delivering eighty-five gallons per minute (gpm) from a 70,000-gallon concrete reservoir through 12,000 feet of six-inch pipe against a static head of 3,300 vertical feet. Some of its more sophisticated features included remote operation from the village power plant, auxiliary pumps at lower springs that fed the upstream reservoir, a photoelectric cell that automatically diverted silty water before reaching the pumps, thermostats that warned plant operators to start idle pumps to keep pipes from freezing, water softeners, and chlorinators. Despite conservation measures, consumption during the 1930s required the Santa Fe Railroad to upgrade the pump house to one set of eighty-gpm and two sets of 160-gpm pumps. The improved system delivered water to rimside tanks totaling one million gallons, eliminated the steady stream of water trains, and reduced rates from \$3.09 to \$1.66 per 1,000 gallons.¹²

Aside from water and hydroelectric projects, concessioners expanded, improved, and maintained other utilities and services to meet demands of visitors whose number increased each year from 147,000 in 1934 to 437,000 in 1941. At Grand Canyon Village, the Santa Fe Railroad bore the expense of producing, metering, and delivering electricity; pumping, distributing, and metering fresh water; improving the reclamation system as well as treating, metering, and distributing reclaimed water; extending and maintaining sewer and fire-suppression lines; and building homes for its key personnel within the residential area west of Center Road. It also spent tens of thousands of dollars on seasonal employee quarters, including men's and women's dormitories in 1937 and 1938, respectively, and nearly one million dollars in capital improvements during 1930-41 on utilities alone, excluding labor costs.¹³ At the North Rim, the Utah Parks Company built a 3,600-square-foot building in 1933 atop the ashes of the original lodge to function as a temporarily business office, post office, curio store, and entertainment center. They also built more cabins and by 1935 had finished a motor lodge with housekeeping cabins and cafeteria (named the Grand Canyon Inn) beside the NPS campground, an "industrial" complex consisting of a service station, garage, and utility buildings, and an employee dormitory. They opened the new Grand Canyon Lodge in July 1937 and fifteen-bedroom men's and women's dormitories in November of the same year. Aside from these investments, the Utah Parks Company extended water, sewer, and electrical lines to its developed areas and supplied most utilities to NPS administrative buildings free of charge.¹⁴

Superintendent Tillotson characterized the year 1931 as the "biggest building construction program in the history of the park," alluding to concessioner investments but also to the number of NPS structures built or begun in that year. He could well have made the same claim in succeeding years as emergency resources poured into the park and efforts were efficiently guided by the administration's first all-inclusive master plans. Prompted by the depression's onset and the Employment Stabilization Act, Horace Albright had ordered superintendents to develop six-year plans encompassing parks' "entire development scheme" to include road and trail systems, general layouts of all tourist, parking, and administrative areas, utility plans, relocation and rearrangement of buildings, and other aspects of construction.¹⁵ Grand Canyon's plan, begun in 1930 and revised periodically as money and manpower arrived, retained the 1924 village blueprint as an integral component. With completion of the new administration building in 1929, NPS laborers renovated the earlier (1921) office into a larger superintendent's residence and museum of natural history. The park's first hospital was completed in early 1931 and a ten-year contract let to Dr. B.G. Carson.¹⁶ In 1935 the Del

E. Webb Construction Company finished a new post office and postal quarters and CCC crews built a new community building. In 1939 CCC and PWA workmen completed a three-room school with an auditorium southeast of the Fred Harvey Garage. Other NPS buildings erected within the village during the 1930s included several dozen laborers' cabins and permanent-personnel bungalows in the residential area east of Center Road, a gasoline station and oil house beside the central warehouse, and a few minor utility structures.¹⁷



Figure 17. Twenty 10,000-gallon tankers deliver water from the Chinle Valley to South Rim storage tanks, 1961. The Santa Fe supplied water in this manner from 1901 until the late 1960s—daily until 1932 and as needed thereafter. GRCA 3605.

Administrators continued limited development outside the village as they had since 1925, finishing natural history exhibits at Yavapai Point in 1928-30 and the MacCurdy Wayside Museum of Archeology at Tusayan Ruin in 1932.¹⁸ CCC recruits cleaned up the tiny community called Supai Camp west of Rowe Well Road in 1935 and 1939, demolishing shacks and building fourteen- by twenty-foot, two-room cabins to house Havasupais with regular village jobs. Caretakers' cabins and utility buildings sprouted annually at Indian Garden and at the mouth of Bright Angel Creek. NPS laborers strung a cable across the river at the latter location in 1931 to acquire driftwood fuel for Phantom Ranch.¹⁹ Construction at Bright Angel Point on the North Rim also proceeded apace at the NPS "industrial-residential" area, where employees' quarters and a bunkhouse, mess hall, oil shack, equipment shed, and ranger cabin were added in 1930 and 1931.²⁰

Other than substantial water, power, and building projects undertaken by the Utah Parks Company, Santa Fe Railroad, and NPS civilian contractors, most of Grand Canyon's physical infrastructure during the 1930s came about through emergency relief funds and labor. CCC

forces built and/or maintained nearly all administrative buildings in these years and strung the park's new, two-wire, transcanyon telephone line in 1936.²¹ They extended sewer, water, steam, and electrical lines to reach all public buildings at Grand Canyon Village, Bright Angel Point, and Desert View, and during the late 1930s relocated overhead utilities underground. They built, expanded, rehabilitated, and maintained village residences, laborers' cabins, and housekeeping units, as well as mess halls, paint and machine shops, mule and equipment sheds, the first village jail, the second community center, and cabins at Supai Camp. In addition to new construction, they furthered administrators' goals to beautify developed areas by razing many old structures, removing debris, obliterating old road and trail alignments, and reseeding or replanting previously disturbed areas.²²

■ ■ ■

Entrance roads and all scenic drives envisioned in 1925 but one were completed by 1931, but administrators were far from finished directing traffic to and through the national park. The 1924 village plan relied upon a south entrance road (completed in 1928) to separate concessioner housing from NPS residential and service districts and a village loop road that would separate the tourist zone along the rim from the railroad's industrial zone south of the tracks. The loop would also enable a smoother passage around and through the tourist and administrative zones. A wagon road of sorts followed the desired path prior to 1919. Contractors began to realign and upgrade it to automotive standards in 1928 by continuing the new South Entrance Road to meet with the new East Rim Drive at the Fred Harvey Garage. In 1930-31 the park road crew reconstructed and realigned the wagon path south of the mule barns to facilitate passage from the South Entrance Road to the new headquarters campground and Motor Lodge, and continued the new road north across the tracks to end at Hermit Rim Road.²³

The final segment of the village loop was rebuilt as the eastern leg of West Rim Drive, a \$185,000 emergency-works project completed by the G.R. Daley, Vinson and Pringle Company of Phoenix in 1935. Beginning at the Fred Harvey Garage, the 2,800-foot-long village segment was built immediately above the railroad tracks as a through road, bypassing the earlier alignment of Hermit Rim Road that is used today as a service driveway on the south edge of the El Tovar. From a point just below Colter Hall, the new road was built atop Hermit Rim Road to the west end of the village where road crews rubbed shoulders

with workmen completing the Bright Angel Lodge. West Rim Drive's scenic segment ascended Hopi Hill in reduced grades, then curved sharply north to snugly parallel the rim, providing access to new overlooks at Trailview I, Trailview II, and Maricopa Point. After making a wide detour around the Orphan Mine, the new alignment rejoined the old at Hopi Point and continued to the Great Mohave Wall (the Abyss) where it again left the rim until reaching Hermits Rest. West Rim Drive was the last major inner-park road constructed at Grand Canyon. NPS engineers and landscape architects designed it as a compromise between high-speed highways like East Rim Drive and slower-going, meandering byways like the Hermit Road it replaced.²⁴

The 1924 village plan also delineated several curvilinear residential and service streets south of the industrial and administrative zones. Construction began with NPS and concessioner forces grubbing and rough-grading Avenue A (Apache Street) in 1926, then going to work on Avenue B (Boulder Street) and Avenue C (southwest of the recreational field) until all three streets were finished in 1931. After May 1933, CCC Company 819 enlistees built Tonto and Juniper Streets to NPS residences and service buildings; regraded and surfaced Avenues A, B, and C; built most of their masonry features; prepared residential sites; and laid utilities to individual homes. Bungalows, cabins, and utility buildings went up along these service and residential streets, beginning with Avenue A, from 1926 through the 1930s as funds became available.²⁵

National work-relief programs also benefited regional approach highways. Grading and subgrading of the long-anticipated South Approach Road began the day after the county ceded the Bright Angel Trail to the park, but bridges, surfacing, and finishing touches were completed with men and money of the first emergency employment acts of

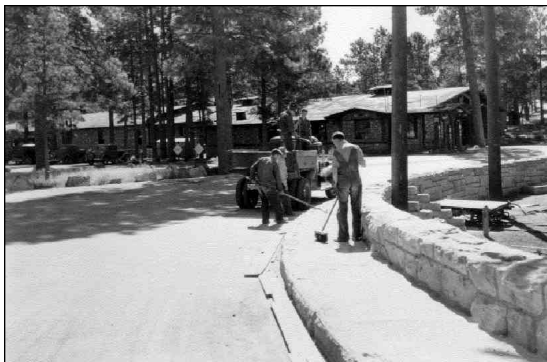


Figure 18. Civilian Conservation Corps recruits constructing today's wall and walkway across from the Fred Harvey Company garage, September 1937, following completion of West Rim Drive. GRCA 336.

1930-32. The fifty-three-mile-long highway began several miles east of the old road and town of Williams at the National Old Trails Highway, wound its way through volcanic hills beyond Red Lake, then made a beeline across the Coconino Plateau to meet the South Entrance Road at Moqui Lodge, cutting travel time from Williams from nearly a full day to less than two hours.²⁶ Although designated Arizona State Route No. 64 soon after completion,

Superintendent Tillotson had an embarrassing time convincing the Arizona Road Commission to assume maintenance. After meeting with commissioners in Phoenix in February 1932, he wrote that the

Highway Department continued to hold that they have always held that our checking station is a "toll gate" and they state that it is their unalterable policy not to build or maintain roads leading to a "toll gate." I explained in great detail the manner in which the one dollar entrance fee is charged, what the camper gets in the way of free campground service, etc., and although they conceded that the auto visitor got his dollar's worth, they continued to insist that... we were charging a "toll" and operating a "toll gate."²⁷

No doubt the state brought up the irony of the park's long battle to eliminate the Bright Angel Trail toll, only to impose its own fee of an equal amount, but Tillotson managed to iron out the disagreement by May 1933 when the state assumed maintenance of the South Rim's first automotive approach highway.²⁸

Plans to build a new East Approach Road from Cameron originated with the Santa Fe Railroad's ire at maintaining the Navahopi Road. The railroad spent \$3,000 to build the latter in 1924 and another \$40,000 for improvements by 1929, when 8 percent of visitors used it to reach the South Rim. The existing road and proposed path of a replacement ran through lands administered by the National Park Service, State of Arizona, U.S. Forest Service, and Bureau of Indian Affairs (BIA). Officials of each refused to spend a dime on the concessioner's road, but did ante up \$15,000 in 1930 to survey a 31.7-mile-long automotive highway across difficult terrain connecting the Painted Desert to the Coconino Plateau. Superintendent Tillotson personally worked harder making this road happen than any other, garnering varied agencies' support, arguing its financial benefit to each (particularly to residents of the Navajo Reservation), and finding funds for construction in years when the NPS juggled a dozen such projects throughout the West. He was assisted by a 1931 amendment to the National Park Approach Roads Act that allowed the Department of the Interior to build roads and bridges to national parks on the "seven-percent system" (93 percent matching federal funds) if the distance from the nearest public road was thirty miles or less and if 90 percent of the land traversed was managed by a public agency. The latter condition was made to order, and Tillotson circumvented the former requirement by cannily arguing that the final 3.5 miles of the proposed highway actually ran within park boundaries and therefore constituted an "entrance" road.²⁹

Although the forest service, BIA, and state were ambivalent at best to the eastern approach, they gave permission for construction, which began with funds appropriated in Fiscal Year 1931. During the next four years, BPR engineers, NPS landscape architects, and private contractors completed the highway in nine related phases costing



Figure 19. The bridge spanning Dead Indian Canyon along the original East Approach Road from Cameron, ca. 1935. Today's approach road from Cannon was rebuilt to the north (left) of this bridge in the 1960s, although the bridge still stands. GRCA 2920.

\$1,060,000. As the only "mountain road" within or approaching the park, rising from an elevation of 4,370 feet at Cameron to 7,438 feet at Desert View, the sinuous highway completed in 1935 offered majestic vistas comparable to those obtained from canyon overlooks. A walk today along the original alignment down Waterloo Hill reveals the intent of NPS Landscape Architect Thomas Carpenter to afford the best panoramas. National Park Service architects also designed or approved plans for the extant Dead Indian Canyon Bridge, completed in 1934 but later bypassed by a highway realignment. Although the park erected another "toll gate" at Desert View in 1934, the state assumed maintenance for the entire approach as far as the park boundary in 1935. It immediately became a segment of the half-loop State Highway 64—an important link in regional tourist travel, convenient connection between South and North Rims, and entryway to the park's South Rim that was driven by nearly 100,000 visitors in 1940.³⁰

On the North Rim, concessioner improvements at Bright Angel Point were closely tied not only to the imminent promise of a North Entrance Road within the park (completed in 1931), but to certain knowledge that state road agencies with federal money and expertise planned to construct automotive highways throughout southwestern Utah and northwestern Arizona.³¹ The Bureau of Public Roads and U.S. Forest Service built the North Approach Road (replacing the old Grand Canyon Highway) from Jacob Lake in the early 1930s, then rebuilt it in 1937-40 to the approximate alignment of today's State Highway 67.³² While the Utah Road Commission fulfilled its promise to build highways linking Zion, Bryce, and Cedar Breaks to the Arizona Strip, the Arizona Road Commission undertook construction of Navajo Bridge spanning Marble Canyon. Its completion in January 1929 prompted the commissioners to replace the old Mormon emigrant road with U.S. Highway 89 in a thirteen-year-long series of uninter-

rupted projects that connected Kanab to U.S. 66 east of Flagstaff just prior to the outbreak of World War II.³³

In support of Navajo Bridge and U.S. 89 Superintendent Eakin wrote in 1927 that “the tourist crop never fails and we should cultivate this crop in order to secure the greatest yield possible.”³⁴ By 1940 Grand Canyon’s administrators could delight in the fulfillment of Eakin’s dream as all regional, approach, and inner-park roads had been rebuilt to exacting federal standards, completing the intricate highway network originally envisioned by Stephen Mather. Reconstruction of U.S. 66 from Gallup to Needles in the 1930s facilitated transcontinental access to the Grand Canyon region. The South Approach Road from Williams and East Approach Road from Cameron, in combination with the South Entrance Road, East Rim Drive, and the East Entrance Road, ensured that motorists along the southern edge of the National Park-to-Park Highway would visit Grand Canyon National Park. These roads joined with U.S. 89 to open a new circle tour connecting the canyon with Wupatki National Monument, the Painted Desert, and national forests of the southwestern Colorado

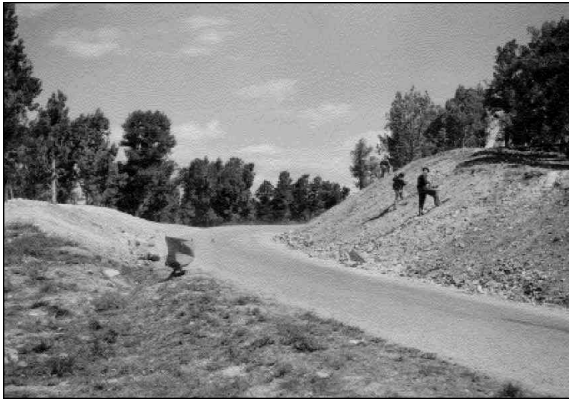


Figure 20.A 1937 Civilian Conservation Corps are rounding slopes along West Rim Drive. GRCA 281.

Plateau. New highways reaching Utah’s southwestern national parks and monuments joined U.S. 89 from

Kanab to Jacob Lake, the North Approach Road (State Highway 67), and the North Entrance Road to capture the North Rim in another popular circle tour promoted by the Union Pacific Railroad since 1922. Sixty years later, with only minor realignments and replacement of U.S. 66 by Interstate 40, these highways still form the backbone of regional travel.

The 1930s also witnessed completion of the park’s inner-canyon trail system. Reconstruction of the pre-park corridor had been advanced during 1922–28 with the building of the South Kaibab Trail and Kaibab Suspension Bridge and realignment of the North Kaibab and Bright Angel Trails, but additional flexibility was achieved with completion of

the Colorado River Trail in 1936.³⁵ CCC Company 818, stationed at Camp NP-3-A (Bright Angel Campground) during winter months, began construction in December 1933 with experienced foremen and hard-rock miners guiding enlistees in techniques perfected on the South Kaibab Trail. Although only two miles in length and relatively level, the work proved anything but simple. Inexperienced youths found themselves wielding jackhammers while dangling from granite cliffs to plant powder charges that frequently placed crews below in jeopardy of landslides.³⁶ Difficulties working the granite of the Inner Gorge added to the danger and the project’s duration, but safety measures limited serious injuries to only three. Completion coincided with improvements to the Bright Angel Trail, thereafter affording a popular south side loop when combined with the South Kaibab Trail and an alternate path from Phantom Ranch to Indian Garden.

While three CCC crews concentrated each winter on the river trail, others of Company 818 worked on North Kaibab spur trails to upper Ribbon Falls and Clear Creek. A.T. Sevey, with the assistance of Lloyd Davis and Harry Moulton, supervised construction of the nine-mile-long Clear Creek Trail. Beginning at a point just north of Phantom Ranch in November 1933, the young recruits moved up the solid schist with compressors, jackhammers, and 10,000 pounds of black powder, building trail as they blasted their way up to and across the relatively level Tonto Platform. Rangers stocked Clear Creek with rainbow trout even before the trail’s completion in April 1936. Advertisements in 1935 promoted mule trips from Phantom Ranch, “excellent trout fishing,” and visits to Indian ruins beside the now easily accessed side canyon.³⁷

During their three-year stint at Camp NP-3-A, Company 818 and others working along the central corridor were supplied by the U.S. Army’s 7th Pack Train, headquartered at Ft. Huachuca, Arizona, but stationed at Yaki Point year-round. The train consisted of army as well as civilian packers, fifty pack mules, and ten saddle stock divided into sections of twenty mules and four packers each. Packers were responsible for making one trip per day, five days per week, hauling coal, mail, and foodstuffs averaging six thousand pounds. In winter, when snow drifted as high as five feet on the upper trail, men preceded the pack animals to clear the way. In the event of landslides blocking the upper trail, the train descended the Bright Angel, Tonto, and lower South Kaibab Trails to reach the river. In three years of operation, “the 7th,” as proud and disciplined as the men they supported, never missed a scheduled delivery.³⁸

The centralization of tourist services was advanced in August 1930 when the park service authorized abandonment of the Hermit Trail and Hermit Camp. Permission came from the NPS Washington office but seems puzzling,

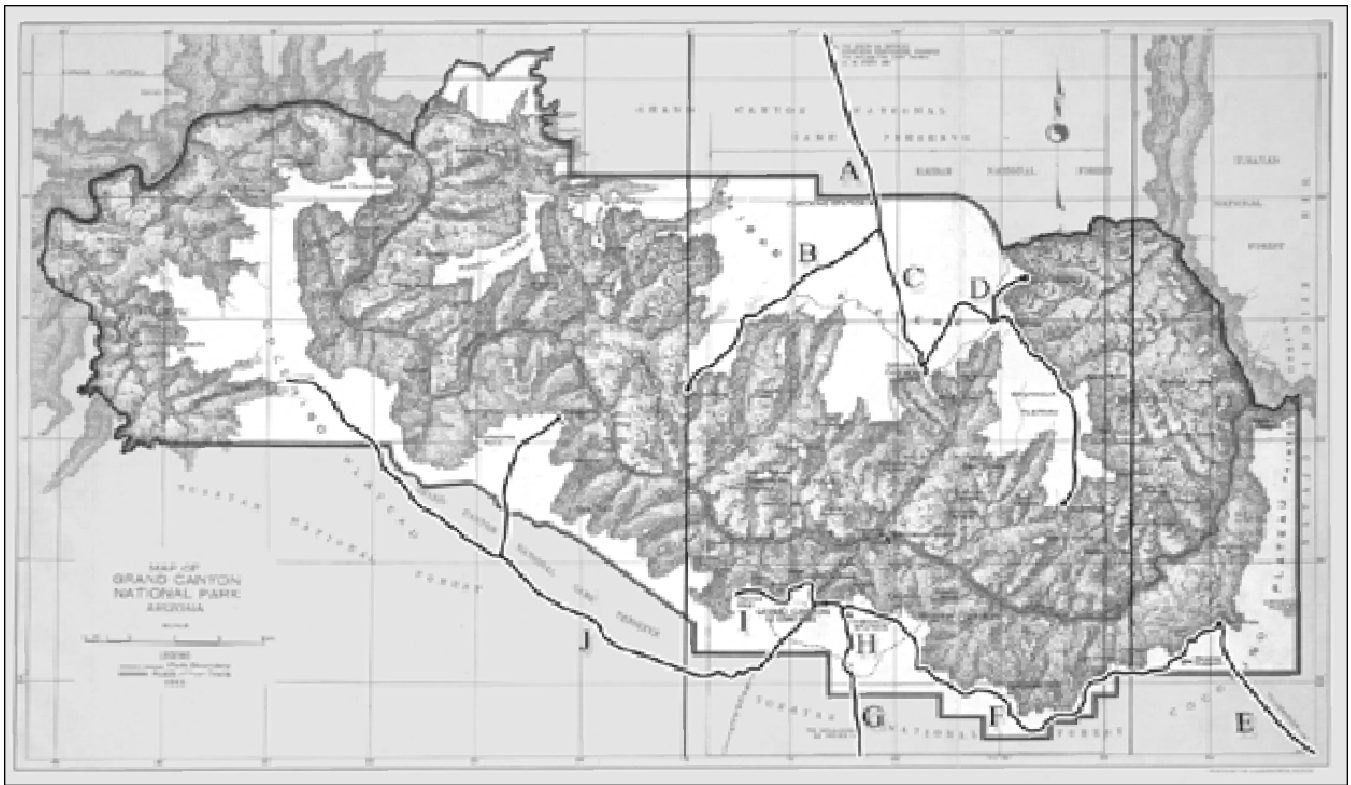


Figure 21. Map of Grand Canyon National Park road system pre-1940. Prior to 1919 all roads approaching and alongside Grand Canyon had been built or worn by cattlemen, pioneer entrepreneurs, and the Santa Fe Railroad for horse and mule conveyances. With creation of the national park, the federal government undertook reconstruction of these roads to automotive standards, relying on the expertise of the Bureau of Public Roads (today Federal Highway Administration). A: North Approach Road, 1937. B: Original alignment of the Point Sublime Road, 1924-25, never rebuilt to full automotive standards, but

maintained. C: North Entrance Road, 1931. D: Cape Royal Road and Point Imperial spur, 1931. E: East Approach Road, 1935. F: East Rim Drive, 1931. G: South Approach Road, 1932. H: South Entrance Road, 1928. I: West Rim Drive, 1935. J: Road to Topocoba Hilltop and Tusupai Point, built by Bill Bass and others beginning in the 1880s, never rebuilt to full automotive standards but occasionally realigned and maintained by the park service and forest service.

given construction of West Rim Drive a few years later, the engineering excellence of the trail and four associated rest houses, and the camp's profitability at a time when the Santa Fe Railroad and Fred Harvey Company were losing money on overall operations. Nevertheless, in 1930, and without recompense, the concessioner abandoned the trail, camp, tram, and other developments that had cost more than \$100,000. In 1936 the park service ordered the railroad to dismantle and salvage what it could, and on a cold winter night village residents gathered at the rim to watch the spectacle of the torch applied to what remained.³⁹

Park managers briefly deviated from centralist plans with minor developments near Swamp Point and Thunder River in the mid-1920s and 1930s. Since they had already begun to consider park expansion to the west and were sensitive to criticisms that they had never opened the park's northwest lands to recreational use, administrators undertook a few projects aimed at limited access, including the bridle path to Swamp Point and the Muav Saddle snowshoe cabin in 1925.⁴⁰ In 1925-26, coincident with development of a private hunting camp at Big Saddle, Ed Laws and several other rangers built a rough trail from the rim at Indian Hollow down to Thunder Springs. Laws retained an interest in the area as a backcountry ranger through the

1930s, occasionally making his way down to the springs to plant trout. It was only in October 1939 that the park service hired a crew of Arizona Strip residents to finish the trail from the springs to Tapeats Creek. After arguments over the creation of Grand Canyon National Monument abated, administrators once again abandoned the area to cattlemen and a trickle of adventurous tourists led by post-season hunting-camp guides.⁴¹

■ ■ ■

Fortuitous emergency funds and cheap labor accounted for the completion of park infrastructure envisioned in the 1920s but did not ensure that consumers, feeling the pinch of the Great Depression, would continue to buy the scenery. As it turned out, the National Park System did not suffer as greatly as private enterprise. The depression struck harder at the poor than those of the middle and upper-middle economic classes who, by the 1920s, had supplanted the wealthy as the parks' principal clientele. Although belt-tightening might preclude expensive trips, a supposition supported by the headlong decline in rail travel and hotel patrons, Americans by 1930 owned thirty million automobiles and, with cheap gasoline and camping equipment, did not need to forego vacations entirely. NPS administrators

and concessioners astutely analyzed the depressed economy, improved upon marketing strategies, and enhanced the park experience according to reduced consumer demands.

Success in selling the economic value of parks to Congress and presidents since the 1910s was evidenced by federal money invested in park infrastructure during the depressed 1930s, but Horace Albright found additional arguments for continuing federal support. Recognizing social unrest during this period of economic decline, he wrote that “in a time of anxiety and restlessness [the parks] were immensely useful to large numbers of our people” and were “a strong influence for stabilization and good citizenship.” He observed that many people were extending their stays because “simple camp life offers [greater] economy that oftentimes can be found at home.” Albright made it clear that this new use of the parks, “particularly to people in financial difficulty, gave us unusual satisfaction.” Although it cannot be known how many of the depression’s dispossessed took up residence at Grand Canyon National Park while searching for work, NPS policy allowed unlimited campground stays for the price of admission, and Miner Tillotson expressed his personal satisfaction at employing an average 300-500 day laborers during summer months prior to 1933.⁴²

The National Park Service, though it welcomed the new class of visitors, did not market the parks as retreats for the homeless; rather, it continued with its partners to promote western travel to the middle class. Successful arrangements were made with chambers of commerce and other tourism offices to distribute park literature printed by the Department of the



Figure 22. Off-duty Civilian Conservation Corps recruits meet Hawey Girls, 1936. GRCA 12148; photo by Ernest Lee Burns.

Interior. Mather’s NPS travel division did not materialize until 1936, but the railroads’ Bureau of Service continued to solicit tourist travel from around the world. Given global economic conditions, it was unnecessary to highlight the See America First campaign, which, nonetheless, continued as a marketing undercurrent appealing to citizens’ patriotism as well as their pocketbooks. NPS directors encouraged new editions of the *National Parks Portfolio* a bound collection of Western landscape art that had helped secure a National Park Service in the 1910s. The Department of

the Interior published voluminous circulars of general information for the major parks including Grand Canyon, and the park service continued to issue press releases and diligently respond to individual requests for information. As one of the better known jewels of the park system, Grand Canyon naturally benefited from these national promotions.

Local administrators also answered all inquiries of potential visitors and maintained contacts with chambers of commerce and tourism offices in the gateway communities, but concentrated on enhancing, or “adding value,” to the visitor’s experience while leaving most regional advertising to their concession partners. Roads, trails, convenient traffic flow, and aesthetic constructions, of course, were all part of the strategy to attract and please as well as accommodate customers. Recognizing that the depression increased the ratio of motorists over rail arrivals and stimulated visitors’ interest in cheaper, motorist-friendly accommodations, managers persisted with their policy to develop campgrounds and roadside picnic areas according to demand, adding primitive campgrounds at Point Sublime and Cape Royal and a picnic area at Shoshone Point in 1931.⁴³ Throughout the decade, CCC crews added sites, utility lines, parking spaces, and walkways to campgrounds at Bright Angel Point, Desert View, and Grand Canyon Village. NPS landscape architects in 1931 designed two attractive housekeeping cabins—a two-bedroom with kitchen separated by wood partitions and a one-bedroom with kitchen and optional partition—that would henceforth be added by concessioners at park motor lodges and gain in popularity as moderately priced alternatives to camp sites and hotel rooms.⁴⁴

While administrators left most services to concessioners, they considered education within their purview and an important park enhancement. Since assuming his directorship, Stephen Mather had been keenly interested in the parks as classrooms for the humanities and natural sciences and as laboratories for scientific investigations, delegating the latter responsibility to the nation’s scientists but taking an aggressive posture toward visitor education. The Le Conte Memorial Lectures and Nature Guide Service at Yosemite, ethnological and archaeological lectures at Grand Canyon, campfire talks at Yellowstone, a museum at Mesa Verde, and natural history publications at a number of western parks had all appeared by 1920. Each of these areas of public education flourished in the succeeding decade.⁴⁵ At Grand Canyon, as at other western parks, rangers were expected to be conversant in the natural sciences and to impart their knowledge to curious visitors on demand. Formal attention to education began in 1922, when money donated by the *Brooklyn Daily Eagle* funded the park’s first museum: an information room consisting of natural history



Figure 23. Early naturalists (left to right) Fred Waight, Eddie McKee, Vernon Bailey, and Glen Sturdevant at Grand Canyon, 1929. GRCA 17577.

exhibits and a reference library within the old administration building. In the following year, the nature guide service begun at Yosemite and Yellowstone reached

Grand Canyon on an experimental basis and was formally adopted in 1926. In the same year, the park began to distribute a monthly periodical called *Nature Notes* and for the first time assigned a ranger to conduct nature hikes, present campfire talks, and collect natural history exhibits. In 1928 the observation station at Yavapai Point was completed, and the park's first ranger-naturalist, Glen E. Sturdevant, began daily lectures with the help of two summer seasonals.⁴⁶

The National Park Service took public education to a higher level with a formal survey of educational opportunities and creation of the NPS Branch of Research and Education under Harold C. Bryant in 1930. In its first year, the new branch hired additional ranger-naturalists and furthered their training at the University of California at Berkeley, added educational activities to the first formal master plans, and accelerated museum construction. It also developed a wide range of programs consisting of guided hikes and automobile caravans, lecture series, exhibits and signs along nature trails, and training of concessioner guides to better interpret park resources. At Grand Canyon in the same year, seven permanent and seasonal ranger-naturalists staffed museums at Yavapai Point, the old administration building, and within Grand Canyon Lodge; initiated evening programs at the North Rim; guided nature hikes and auto caravans along both rims; conducted daily lectures and nightly campfire talks; and enlarged natural history collections and exhibits. Administrators continued to expand facilities, exhibits, and programs, reporting 85,000 educational contacts in 1930, 126,000 in 1931, and 107,000 in 1932. These numbers multi-

plied as economic conditions improved after 1933.⁴⁷

In March 1932 park residents organized the Grand Canyon Natural History Association (GCNHA, today's Grand Canyon Association) to help offset decreased NPS appropriations for visitor education, interpretation, and research. Although the organization's immediate goal was to continue publication of *Nature Notes* (discontinued in 1935), aspirations of the first executive secretary, Eddie McKee, and 132 charter members matched the objectives of those who had created the Branch of Research and Education two years earlier. In GCNHA's first year the association's members began to build the park's nascent museum collection, research library, and scientific publications through wildlife observations, bird-banding programs, specimen collections, collecting books, subscribing to scholarly journals, granting funds for research, and publishing and selling natural history monographs. By the outbreak of World War II, the GCNHA had also funded the park's first botanist (Rose Collom), mycologist (Inez Haring), and historical researcher (Edwin Austin); supplied a part-time librarian and clerk-typist for the interpretive program; purchased shop and laboratory equipment; and taken on the formidable task of answering public inquiries for park information.⁴⁸



Figure 24. Pauline "Polly" Mead Patraw (1904-), first woman ranger-naturalist at GCNPPolly may have worked for the NPS at the North Rim as early as 1927 while earning her M.S. in botany from the University of Chicago. She is dressed here in the standard NPS uniform, but with a "more feminine" Fred Harvey courier hat chosen by Mine Tillotson. GRCA 176.

Along with educational programs that helped sell the parks during the depression, NPS officials paid closer attention than ever to pricing. Congressional arguments of the 1920s had led to legislative approval of modest entrance fees (automobile permits), but to a prohibition of campground fees.⁴⁹ With the economy's slump, Congress continued to argue the nature of fees while Horace Albright equivocated. He acknowledged in 1932 that those who entered the parks and stayed in concessioner accommodations had a right to complain about those who paid the same amount then stayed at free campgrounds, yet wrote later in the year that the NPS "should seek primarily the benefit and enjoyment of the people rather than financial gain and such enjoyment should be free to the people without vexatious admission charges and other fees."⁵⁰ Arguments for and against federal charges persisted

through the 1930s, yet policy at Grand Canyon remained unchanged. The one dollar admission for motorists, no charge for others, entitled visitors to road and trail usage, unlimited campground stays and amenities, and attendance at all educational facilities and programs.

Major concessioners suffered financially through the mid-1930s despite NPS efforts to ease their losses, yet adjusted well enough with centralized investments, vigorous marketing, and affordable pricing. By 1929 the Fred Harvey Company's tourist facilities had been concentrated at Grand Canyon Village, Hermits Rest, Hermit Camp, Desert View, and Phantom Ranch. In the ensuing decade, major changes outside the village entailed abandonment of Hermit Camp, improvements at Phantom Ranch including a swimming pool built by CCC crews in 1935, completion of the Watchtower at Desert View with its first-floor curio shop in 1932, and construction of a one-pump gasoline station at Desert View in 1939. Rimside overnight facilities and formal dining services remained in the village. The Santa Fe Railroad continued to add cabins at the Motor Lodge where it also opened a cafeteria with inexpensive meals in 1940 and completed the Bright Angel Lodge in June 1935 that replaced the old Bright Angel Hotel and adjacent tent cabins. The new lodge included a central services building with restaurant, curio shop, and entertainment rooms; a renovated and expanded Buckey O'Neill Cabin; a reconverted dormitory immediately to the west (today's Powell Lodge) that became seventeen-room and twenty-five-room guest houses; and new, all-wood cabins. Conversion of the El Tovar music room into four suites in 1940 represented the only new, higher-priced accommodations.⁵¹

Advertising to a regional audience consisted of the National Park Service's annual circulars of general information, which emphasized park rules, facilities, and services, and an annual series of Santa Fe Railroad brochures detailing railroad timetables, tourist facilities, services, guided trips, and rates. Both types of marketing literature briefly sold the beauty of Grand Canyon but focused primarily on the convenience afforded by roads, trails, overlooks, utilities, lodging, restaurants, and similar amenities. Rates remained at or below 1920s levels, the most significant allowance to hard times being the introduction of the European Plan (rooms without meals) when, in the prior decade, rooms and most cabins had been available only on the American Plan. In 1930 one could stay at the El Tovar, American plan, for \$7.00; at a Bright Angel cottage for \$1.50-2.00; in a housekeeping cabin for \$1.50; in a tent cabin at Hermit Camp for \$5.00, American plan; or Phantom Ranch for \$6.00, American plan. Meals at the El Tovar ranged from \$1.25-1.75. Automotive services like storage (\$.75), wash (\$3.00), repair (\$1.75-2.00/hour), and

towing (\$1.00/hour) were available, as were guided trips ranging from \$4.00-5.00 for a mule ride to Plateau Point to \$16.00 for a 160-mile automotive trip to Moenkopi. By 1940 a room at the El Tovar could be had for only \$2.50, with three meals adding another \$3.50. A room at the Bright Angel Lodge rented for \$1.50-4.50, with cafeteria meals as low as forty-five cents. A housekeeping cabin cost \$1.25-2.25, with a ten percent discount for stays of four days or more. A Phantom Ranch cabin went for \$6.00, American plan. Guided trips by trail or road also remained at or slightly lower than 1930 rates with a variety of mule tours available for \$5.00 per day. The all-day adventure to Moenkopi had been reduced to \$12.00, including lunch.⁵²

The Union Pacific Railroad proved no less demanding than the Santa Fe Railroad in pressing for improved roads during the 1920s, and it was equally aggressive in selling the scenic wonders of southwestern Utah, the Arizona Strip, and its facilities at Bright Angel Point. The Union Pacific's passenger agent, Douglas White, ran into some opposition when arguing for improved regional access, illustrated by Utah Governor Simon Bamberger's response to his and Horace Albright's lobbying in the late 1910s: "Doug Vite, I build no more roads to rocks!"⁵³ But despite such difficulties, the Union Pacific, with NPS assistance, BPR expertise, and the Utah Road Commission's cooperation, managed to coerce and cajole construction of modern highways among southern Utah's parks during the 1920s and 1930s. It also built a rail spur from Lund to Cedar City in 1923 specifically to stage its tourism ventures.⁵⁴

Strategically, from the 1920s until the 1970s, the Union Pacific Railroad tied North Rim investments, advertising, and pricing into what it had named its "circle tourism route." This Stephen Mather concept included, with a few variations, Cedar City, Zion and Bryce National Parks, Cedar Breaks and Pipe Springs National Monuments, and other scenic attractions along its 460-mile path. Investments at Bright Angel Point followed more than \$3 million that the railroad had poured into Zion and Bryce in 1923-25. Like the Fred Harvey Company, the Utah Parks Company profited from the *National Parks Portfolio* See America First campaigns and publications, and other national promotions, and advertised heavily on its own. The circle tour and parks it touched also received considerable exposure in the tourism periodical, the *Union Pacific Magazine*. In 1925 the railroad added its "Red Book," a glossy annual similar to Santa Fe Railroad brochures celebrating the route and detailing its facilities, services, tours, and prices.⁵⁵

In 1925 circle tour schedules offered by the Parry brothers included six packages beginning at the railroad's El Escalante Hotel in Cedar City, including an all-expense-paid, two-day excursion to Zion and Grand Canyon's

North Rim and an all-expense-paid, five-day tour of the entire circle for \$86.75. By 1930 the cost of the latter trip had been reduced to \$74.50. In the same year, visitors not associated with multi-day packaged tours could rent a Grand Canyon Lodge deluxe cabin for \$13.00 and standard cabin for \$7.00, American plan, or choose the latter without meals for \$2.50. Overflow tents were available for \$1.25 and meals ranged from \$1.25 to \$1.75. Guided auto-stage trips were offered along newly reconstructed roads from Bright Angel Point to Point

Imperial (\$3.00), Cape Royal (\$4.00), or both scenic overlooks (\$5.00). Regular guided trail trips ran to Point McKinnon (\$5.00) on the west (today known as Widforss Point) and to Natchi Point (\$3.00) and Point Imperial (\$5.00) on the east. Saddle horses rented for \$5.00 per day, and the concessioner would

outfit visitors for adventures along the rim for as little as \$15.00 per day in groups of seven or more. By 1940 less costly housekeeping cabins had been built at the Grand Canyon Inn, while prices for lodge cabins had been discounted and services unbundled. Deluxe cabins dropped to \$5.00 per day or \$8.25 for three persons, standard cabins to \$2.25, and housekeeping cabins (sleeping three) to \$2.00. Cheap cafeteria meals had been introduced, and guests could opt to buy their own groceries at the store adjacent to the housekeeping complex. The railroad had reduced the price of the all-expense-paid circle tour (extended to six days) to \$58.75. Sightseeing rides to Cape Royal, which included Point Imperial and stops at Farview and Vista Encantada, had been reduced to \$3.00, while the cost of guided saddle trips and stock rental remained the same.⁵⁶

Advertising, reduced prices, better roads, and improved economic conditions after 1933 combined to generate an even steeper spurt in visitation than had been experienced in the 1920s. Concessioners added affordable accommodations each year and administrators responded with new and expanded campgrounds, but the boom outpaced infrastructure as had visitation upturns of the mid-1910s and late-1920s. In summer 1937 Superintendent Tillotson began to recognize that South Rim accommodations of all types were full by early evening, and on 4 July of that year, a new one-day record was set when 3,400 people entered the park. Additional records were set with 93,000 arrivals in August 1939 (3,828 on 8 August) and on 5 July 1941 when 4,763 showed up in 1,256 automobiles.⁵⁷ Clearly the village and park roads had once again begun to clog.

INITIAL BOUNDARIES AND INHOLDINGS

Physical boundaries for national parks and monuments have usually been drawn from the political agendas of congressmen, land managers, and an assortment of private sector allies. Prior to World War II, NPS administrators fought tooth and nail to carve new parks and expand existing ones from lands managed typically by U.S. Forest Service administrators, who battled equally hard to retain the forests for traditional economic uses. Both agencies



Figure 25. The temporary ranger staff of 1939. Left to right: Shirley Allen, Frank Bynam, Charles Hurst, Perry Brown (Chief Ranger), Glen Harmon, Ralph White, John Carlock, Harold Barow, Freddie Gillum. Seasonal and "temporary" rangers made their appearance at Grand Canyon in the mid-1920s and have been hired every year since to meet demands of the peak summer season. GRCA 1223.

masked their bureaucratic struggles with ostensibly logical, high-minded arguments for one agency's management over the other's. Forest administrators relied principally on utilitarian aspects of conservationism. As aggressive newcomers, NPS managers proved somewhat more creative, building credibility for the economic value of western tourism, which aided in the creation of new parks, but more often citing the protection of game animals, inclusion of outstanding facets of local scenery, and efficient management of administrative units to fight for enlarged boundaries.

Determining the original boundaries of Grand Canyon National Park involved a smattering of each of these political, economic, and administrative arguments. Benjamin Harrison's Senate Bill 863, introduced in 1886, identified an arbitrary, 3,864-square-mile rectangle extending fifty-six miles from the Little Colorado River to the vicinity of Havasu Canyon and sixty-nine miles north and south to envelop much of the Coconino and Kaibab Plateaus. Harrison's inclusion of valuable timber and grazing lands accounted in large part for northern Arizona's early resistance to park designation. Resistance persisted into the 1910s as interest groups like the American Scenic and Historic Preservation Society countered no-park advocates by suggesting a preserve that would extend from Lees Ferry to the Arizona-Nevada border, encompassing the entire canyon as well as the Coconino, Kaibab, and Dixie National Forests, 7,154 square miles in all. Adjudicated boundaries, however, were owed to land managers, especially the forest service, which delineated the original 1,279-square-mile national monument in 1908, then negotiated

with the Department of the Interior to formulate boundaries for a national park. Chief Forester Henry S. Graves, though generally in favor of a park, argued with the Department of the Interior's E. C. Finney throughout 1910-15 and with Stephen Mather thereafter to exclude grazing and timber lands and USFS administrative sites along both rims, resulting in Henry Ashurst's bill that settled on a total of 958 square miles (613,120 acres). Understandably, there was little debate with the new park's east-west extent, the forest service conjuring no economic value for a mile-deep canyon and easily accepting the breadth proposed by Harrison thirty-three years earlier. But irregular north and south boundaries drawn primarily along sectional lines tightly squeezed both rims, reflecting political victories for the forest service and local extractive users.⁵⁸

The park had no sooner been created than Mather renewed his arguments to expand boundaries, contending that additions were necessary on the North Rim to protect the Kaibab deer herd, to include springs necessary for tourist developments, and to provide for new roads. In 1923 Superintendent Crosby argued the necessity of bringing east-west roads beside the South Rim within park boundaries to create an identifiable straight line separating hunters in the adjacent forest from park developments. In the same year, Mather asked U.S. Geological Survey engineer R. T. Evans, who was mapping the park, to recommend new boundaries. Evans's report to the President's Committee on Outdoor Recreation in March 1925 suggested a northern boundary that would include scenic features and deer habitat in the Tapeats Basin, Indian Hollow, and the Big Saddle area to the west; part of Dry Park and all of VT Park to facilitate administration and road construction; and the East Rim, Pagump Valley, South Canyon, and thirteen miles of Marble Canyon for its tourism potential and deer range. At the South Rim, Evans suggested only modest expansion, arguing for a straighter boundary about a mile south of the existing line to facilitate administration, road building, and maintenance; to more effectively fence cattle out; to increase the deer range; and to afford a boundary facade of virgin ponderosa pine forest.⁵⁹

The forest service preempted Evans's suggestions with its own report to the president's committee in April 1924, advocating the addition of 43,160 acres to the park's northern boundary but opposing other extensions. Forest managers maintained that the park should be only as large as required to "provide for public use and enjoyment of the canyon," that the Kaibab Plateau was not of national park caliber, and that its best use lay in a nonexistent, but promising, million-dollar-per-year lumber industry. They also argued that jurisdiction over the Kaibab deer herd should not be split between the two agencies and that residents of the Arizona Strip had been led to believe that the

park would not seriously impinge upon grazing lands. The forest service agreed to redraw lines at the South Rim but enlisted the aid of Senator Hayden, representing Coconino County's cattle and timber interests, to limit changes to slight administrative adjustments. A compromise brokered by Hayden resulted in new boundaries that included representative portions of the Kaibab forest, lands north of Bright Angel Point as far as Little Park, the mouth of Havasu Canyon, and eight sections at the park's southeast corner to facilitate a road to Cape Solitude. It rejected additions desired for wildlife habitat and scenic views, however, and removed Beaver Canyon and the area north and east of the Little Colorado River confluence from the park. All in all, House Bill 9916, enacted on 25 February 1927, added a net fifty-one square miles to the national park, bringing the total land area to 1,009 square miles (645,760 acres).⁶⁰

In 1929 and 1930 Chief Field Naturalist Vernon Bailey of the U.S. Biological Survey resurrected debates to expand boundaries to add range for regional mule deer, mountain sheep, antelope, and buffalo. Writing at NPS request, Bailey couched his pleas in terms of saving what remained of the region's native vegetation and wildlife, advocating the addition of 196 square miles of ponderosa pine and pinyon-juniper forest at the South Rim as well as substantial portions of House Rock Valley and the Kaibab Plateau. Based on Bailey's conclusions, the NPS lobbied for an additional two to ten miles southward and five to fifteen miles northward, a total of 620 square miles, arguing that "every national park should be and is a game preserve." These recommendations went nowhere. Bailey's superiors and USFS administrators disagreed with the presumption that parks should be complete game preserves, arguing that the precedent would require park expansions throughout the West. Sportsmen feared that hunting would be curtailed, and one can safely surmise that local cattlemen and lumber companies protested as they had in every prior effort to create and expand the park. Arguments favoring the parks as natural preserves had been raised but had not yet acquired the vitality necessary to overcome politically drawn boundaries.⁶¹

Debates surrounding creation of Grand Canyon National Monument in 1932 and its reduction in size in 1940 further elucidate early NPS philosophy concerning park creation and expansion. In 1927, when Arizona Governor George H. Dern visited the Toroweap Valley and suggested that its scenic wonders be preserved for recreational use, it would have been difficult to locate a more remote area in the United States. The land remained unassigned public domain and certainly did not appear on tourists' itineraries. E. T. Scoyen, superintendent of Zion National Park, visited the area in 1929 and hailed its scenic

wonders, but the NPS did not consider adding any part of it to the park until President Hoover forced the issue in 1930 when he added lower Grand Canyon to a tract withdrawn to facilitate creation of Hoover Dam and its reservoir.⁶²

In May 1932 a party composed of Miner Tillotson; Pat Patraw, superintendent at Zion; Roger Toll, superintendent at Yellowstone; L.C. Crampton, special attorney to the secretary of the interior; and highway engineer W.R.F. Wallace visited the canyon portion of Hoover's 4,212-square-mile withdrawal to assess recreational opportunities and suggest disposition. Toll's report revealed the group's antipathy for the larger area, based on the region's lack of "national interest" and their assessment that the lower canyon's scenery was of the "same type" existing in Grand Canyon National Park.⁶³ The party agreed that the entire lower canyon would make a suitable park addition, but it was not necessary and most of it was "not readily accessible and would be expensive to make accessible." Still, they suggested that 392 square miles consisting of the Toroweap Valley and a segment south of the river from the existing park boundary to the Hualapai Reservation would be worth preserving. Because the Bureau of Reclamation planned to build a 570-foot-high dam and power plant at Bridge Canyon, creating a seventy-eight-mile-long reservoir that would flood the river as far upstream as Havasu Canyon, and because the NPS abhorred such water projects within the National Park System (but supported them elsewhere), the group recommended a national monument rather than park expansion. But Toll also wrote that should the state oppose the additions, "it would seem to be in the public interest to cancel the withdrawal of this portion of the area."⁶⁴

Following Toll's report, Tillotson delineated specific boundaries to include the Toroweap Valley and south side of the river but exclude most patented lands and cattle range to the north. Horace Albright defended the boundaries as they allowed automotive access, once a road could be built, to Grand Canyon's Esplanade with easily accessible views of the Inner Gorge. He also favored inclusion of nearby volcanic cones beside the rim and lava flows exposed along the river, geologic features not present within the park. So defined, Conrad Wirth forwarded Toll's, Tillotson's, and Albright's recommendations to President Hoover, who proclaimed the 426.79-square mile (273,145-acre) Grand Canyon National Monument on 22 December 1932.⁶⁵ The monument would remain a separate NPS unit under park supervision until 1975.

Creation of the national monument revealed NPS ambivalence toward creating parks or adjusting boundaries if the land in question did not promise tourist access. The ensuing decade offered proof of the agency's willingness to

protect such areas only in proportion to visitation. Arizona Strip cattlemen were a bit tardy in raising objections to the monument's creation, but afterward enlisted the aid of the Arizona Cattle Growers Association and Carl Hayden to abolish it. After eight years of on-and-off deliberations, Tillotson, who never showed great enthusiasm for the monument, negotiated the return of a three-mile strip along the northern boundary and upper Toroweap Valley (71,855 acres) to the U.S. Grazing Service. This was effected by President Roosevelt's proclamation of 4 April 1940.⁶⁶ In the following year, NPS administrators expressed their willingness to change the designation of what remained to "national recreation area" to accommodate "the new uses and values which the Bridge Canyon developments would bring about."⁶⁷

Administrators were unconcerned for monument boundary reductions and prospects for a dam, power plant, and reservoir along the river because they expected few visitors and planned little construction of their own. Most developments of the 1930s were, in fact, effected by a surplus of men and funds afforded by emergency works programs. They built and maintained drift fences, cisterns, game tanks, and a telephone line from Fredonia prior to 1935, and worked annually to improve these minimal features through 1941. Olds Brothers of Winslow, Arizona, completed today's ranger station, combination barn/garage, and water catchment system under contract in August 1935.⁶⁸ Rangers from the South Rim occasionally made the long trip around the canyon to inspect the monument, noting appalling range conditions and the ineffectiveness of partial drift fences oft-vandalized by local cattlemen. No concession was ever awarded for visitor services, and no ranger took up residence until William and Gertrude Bowen reported for work in October 1940. John Riffey replaced Bowen and began an illustrious thirty-eight-year career as caretaker in 1942. No services of any kind were offered (then or now) other than information gladly given by Riffey, a small undeveloped campground, and occasional maintenance of the sixty-two-mile dirt road from Pipe Springs. Funds for administration, protection, maintenance, repairs, and equipment in 1940 totaled \$200. Only nineteen tourists visited the monument in May and June 1941, and annual visitation did not top 1,000 until the 1960s.⁶⁹

The National Park Service considered the eradication of private lands and rights-of-way within its units of higher priority than boundary extensions, since they struck at the heart of management control. In order to obtain revenue from concessions, manage physical developments, prevent obnoxious or destructive uses, harmonize structures with natural environments, enforce rules and regulations, and generally clean up developed areas, administrators believed that they had to eliminate these interests that were

protected to some extent by each park's enabling act. Congress passed many laws during the 1920s and 1930s to exchange private for public lands to the benefit of individual parks and sometimes reduced boundaries to eliminate concentrated groups of inholdings. Generic legislation toward this end began with the Sundry Civil Act of June 1920, allowing the secretary of the interior to accept gifts of land, rights-of-way, buildings, and money that could be used to purchase properties and rights.⁷⁰ Securing title to private inholdings moved up to number eight on the director's list of priorities in 1921, but by 1926 the parks still enclosed more than 81,000 acres of private and state lands servicerwide, about 1 percent of the system's total area.⁷¹ In 1928 Congress adopted a specific policy to eliminate inholdings, and in 1929 it authorized the power of condemnation (the "taking" of private lands) and a fund of \$3 million to match private donations to purchase properties. Appropriations for this fund peaked at \$1.75 million in 1931, then abruptly dropped to nothing for 1933, another casualty of the national depression.⁷²

Grand Canyon National Park's enabling act in most ways resembled those of other western parks. Sections Two through Nine granted the secretary of the interior broad latitude in allowing varied uses and grandfathered particular rights in place at the time of creation. Circumscribed interests of the Havasupai people were protected, as were "any valid existing claim, location, or entry...whether for homestead, mineral, right of way, or any other purpose whatsoever." The act also acknowledged Coconino County's right to the Bright Angel Trail and permitted the secretary to authorize irrigation and reclamation projects, easements for railroads, and the development of mineral resources. During the 1910s-1930s, NPS administrators in Washington D.C. fought successfully to preclude new railroad rights-of-way as well as private irrigation and reclamation proposals from Grand Canyon, while local managers concentrated on gathering data to invalidate mining claims, acquire patented lands, and limit the commercial use of private parcels.

In 1919 interests not altogether under control of the National Park Service at Grand Canyon, in approximate order of priority, consisted of Ralph Cameron's invalid mining claims; the Bright Angel Trail; mineral claims or homesteads patented by Dan Hogan, Sanford Rowe, Pete Berry, and John Hance; unpatented but valid mining claims held by W.I. Johnson, George McCormick, and William Bass; two unpatented homestead entries totaling 320 acres in the process of reconveyance to the federal government; state school sections totaling about 25,000 acres; and the linear rights-of-way and depot grounds of the Grand Canyon Railway.⁷³ Since administrators considered the railroad a financial and philosophical ally in the orderly development of Grand Canyon Village, their control of about thirty acres

in the heart of the village caused little trepidation. The railroad held these lands, in fact, until 1982, long after passenger trains had ceased to roll into Grand Canyon Depot.⁷⁴ School lands comprised the largest inholdings, but administrators did not consider this a threat since the state could not develop them and proved amenable to trades for public lands elsewhere.⁷⁵

The National Park Service and General Land Office worked aggressively to invalidate all bogus and unpatented mining properties within the park during the 1920s. George McCormick's claims near the Little Colorado River were abandoned by 1930.⁷⁶ Ralph Cameron's had been discredited by the U.S. Supreme Court in *Ralph H. Cameron et al vs. United States* on 19 April 1920, and although Cameron defied the court for the following few years and resisted efforts of the U.S. Attorney General to dispossess his caretakers in 1924, his interests evaporated after his senatorial defeat in 1926. Without Cameron's goading, the county yielded its trail rights two years later. Administrators took a gentler approach to the Bass family, Stephen Mather convincing the Santa Fe Land Development Company to buy out the aging pioneer and his wife Ada in 1926. The properties passed to the government by donation immediately following railroad divestitures in December 1956.⁷⁷

In their quest to acquire valid mining claims and patented lands, park officials generally exercised a great deal of patience and used most legal, persuasive, and coercive means at their disposal. Johnson's claims within Havasu Canyon were actually desirable adjacent lands that the park would acquire through purchase in 1957.⁷⁸ John Hance's patented parcels south of the river and homestead beside the rim had passed to James Thurber and Lyman Tolfree in 1895 and to Martin Buggeln in 1906. Buggeln had become a potent force among private residents at the South Rim by the time the park service arrived, and he was an impediment to development thereafter as his homestead and refusal to grant a right-of-way delayed construction of East Rim Drive. He also ran cattle on the inholding and adjacent forest lands until his death in 1939 when his widow, Eva Moss Buggeln, initiated negotiations to sell the property. The park service took out an option in 1943 and effected the purchase in 1948, eliminating the last rimside inholding east of Grand Canyon Village. Hance sold his patented asbestos claims along the north side of the river, totaling 325,827 acres, to the Hance Asbestos Mining Company in 1901, and administrators did not learn of their existence until 1930. Subsequently the property came into possession of the Hearst family. Limited mining activity took place at these claims into the 1950s; thereafter, owners occasionally revealed resort or residential plans for the inholding that is accessible only by trail, raft, and, since the 1940s, by helicopter. Known as the Hearst Tract today, it

remains the only private inholding within the park's original boundaries.⁷⁹

While administrators feared Buggeln's development of an independent tourist business, they found it easy to suppress his plans with a few well-placed threats. William Randolph Hearst's acquisition of Pete Berry's and the Canyon Copper Company's patented lands in 1913, totaling 207.7 acres, posed a much greater threat, as the newspaper magnate clearly had the political clout to disregard informal pressure and the capital to develop anything he wished. Hearst did taunt the NPS with rumors of grand developmental schemes but generally cooperated with authorities, agreeing to exchange 48.9 acres at Grandview Point for 25.8 acres elsewhere in 1926, and occasionally discussed the gift or sale of his lands to the government. Cooperation vanished, however, when Hearst's attorneys once again broached the subject of a sale and the NPS responded with a Declaration of Taking in September 1939. Park officials sustained criticism from the regional press, chambers of commerce, local residents, and the county board of supervisors for employing condemnation, the only time it has done so in park history, and for offering only \$25,000 for the prime real estate. Hearst's appraisers estimated its value at \$367,000, and his lawyers fought for the higher figure until October 1941, when federal judge David W. Ling ordered the payment of \$85,000. The taking, however, was legally effected in July 1940.⁸⁰

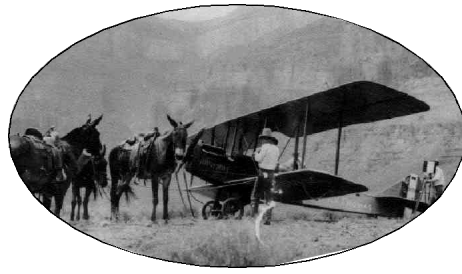
Administrators might well have taken the same approach to acquiring Sanford Rowe's and Ed Hamilton's properties at Rowe Well and Dan Hogan's Orphan Mine had they the same tourist visibility as Grandview Point. Many visitors to the South Rim did pass Hamilton's motor camp until completion of the South Approach Road, but in the 1920s administrators were just as happy that he stayed in business to accommodate growing numbers of visitors. After 1932 Hamilton and a succession of owners, lessees, and managers including Jack and Gladys Harbin, Walter Wilkes, and the Barrington Brothers added a motel, dance hall, bowling alley, and saloon to create an alternative to more staid village services and a favored "watering hole" for residents. The park service kept a wary eye on the Rowe Well properties throughout the 1930s and 1940s, but did not come up with the sale price, \$42,500, until 1956.⁸¹

Given its subsequent history, later administrators might well have wished that Miner Tillotson had offered more than \$5,555 to buy Dan Hogan's 20-acre Orphan Mine in 1931.⁸² There seemed no reason to suggest that it was worth more until 1936, when Hogan began to develop the site for tourism. He called his initial developments the Grand Canyon Trading Post, and over time it unfolded along lines similar to Rowe Well with cabins, store, and a saloon. World War II ended Hogan's modest business, but in 1946

he sold the property to Madeleine Jacobs, who reopened the facility as the Kachina Lodge. Jacobs then leased the property in 1949 to Will Rogers, Jr. and John Bonnell, who renamed it Rogers' Place. Rogers left the following year and the facilities were purchased by James D. Barrington and renamed the Kachina Lodge by 1952. Barrington and his brother operated the facility (in 1955 renamed the Grand Canyon Inn) until 1966. As if uncontrolled rimside tourist facilities were not enough, the site—highly visible from the Powell Memorial—witnessed some of the most intensive uranium mining in the Southwest during 1953–69. An 1,800-foot-long cable tram added in 1955 did nothing to improve the eyesore. In 1962, when the mine's operator, Western Equities, threatened to build an 800-room grand hotel that would spill "down the side of the precipitous cliff like a concrete waterfall," Congress stepped in with a law prohibiting tourist operations after 1966 and mining after 1987, when the property passed to the United States. Mining ended earlier, in 1969, only because of a declining uranium market and prohibitive costs to ship ore.⁸³

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From today's perspective, it is easy enough to criticize park administrators' consistent management philosophy of 1919–41, their anthropocentric motivations and priorities, their emphasis on mass marketing, services, and structures aimed at attracting ever more visitors. But from the viewpoint of early twentieth-century NPS managers and their myriad allies, as well as those who continue to believe that national parks are principally for the people's enjoyment, they did nearly everything right. Some visitors and businessmen would have appreciated still more developments at Bass Camp and Grandview, at Cape Royal, and at the heads of the Thunder River and North Bass Trails. Admittedly, remote areas were saved primarily through concessioners' economic equations influenced by the depression, but centralization also resulted in part from the notion that most of the park should remain undeveloped, if only to protect game animals—a hazy, incomplete, yet emerging sense of the value of wild ecosystems. By 1935 construction had subsided along the rims and central corridor with the completion of planned administrative, concessioner, utility, and residential buildings, as well as approach and inner-park highways, scenic drives, and inner-canyon trails. A calm, comfortable, economical interlude prevailed for the several hundred thousand who visited each year for the following decade. Reveling in the resort atmosphere of easy access, ample accommodations, breathtaking scenery, and profit, no one cared to consider the ephemeral nature of such an experience, given the inevitable outcome of managing the park as an inexhaustible scenic commodity.



Chapter Four

World War and Its Wake

1942 - 1955

New Deal programs completed the tourism infrastructure envisioned by early Grand Canyon administrators but also hastened national recovery, such that by the late 1930s visitors once again strained the limits of park amenities.¹ The National Park Service planned to persist with its proven strategies to attract and accommodate tourists, but was once again interrupted by world war and altered national priorities. The war itself caused tourism to drop more precipitously and bottom more deeply than it had during the depression, providing some administrative respite, but concomitant reductions in appropriations and staff left buildings, roads, and trails in disrepair by the war's end. Despite the nation's emergence as the world's economic power, the National Park Service once more suffered from postwar financial readjustments while the American people returned to the parks in unprecedented numbers. Thinking in terms of structural solutions, seasoned managers addressed enduring visitational problems by focusing limited dollars and manpower on maintenance while soliciting new construction funds that would not arrive until the middle 1950s.

With the spread of war throughout Europe after 1939, U.S. political leaders began to turn from domestic issues toward national defense and aid to European allies. Emergency Conservation Works projects lingered into 1942, but with substantial reductions in funds and the clear trend in world affairs, NPS administrators understood that their construction bonanza was nearing an end. Strategies shifted to finishing projects in progress and planning for the protection of assets, which numbered 164 national parks, monuments, and miscellaneous units enclosing 21,609,000 acres.²

Throughout World War II the National Park Service followed a consistent policy of assisting the war effort while preventing irreparable damage to parks' scenic attributes. Well before Secretary Ickes's call to "full mobilization of the Nation's natural resources," NPS Director Newton Drury in November 1940 had defined the agency's role. First, it would forego efforts to attract visitors and enhance the parks, eliminate building programs, and hunker down to bare-bones administration, interpretation, and essential maintenance of existing structures. Second, Drury set the

procedure by which the parks could be tapped, insisting that special-use applications strictly follow presidential and congressional directives and that applicants prove the necessity of using parks as opposed to other alternatives. Third, in order to protect its patriotic image as well as shelter resources, the NPS would offer non-destructive uses for wartime needs. To help ensure success, Drury reiterated old arguments for establishing the parks as national icons that would "stimulate love of country and national pride," and as places where military and civilians alike might retire to "restore shattered nerves."³

Administrators successfully defended the parks from despoliation while opening them up for wartime uses, but they suffered nonetheless from sharp declines in appropriations and staff. As the government shut down the U.S. Travel Bureau, restricted NPS advertisements, forbade nonessential travel, and imposed rationing on gasoline and rubber, and as men went off to war and wives took jobs to support families at home, visitation servicewide fell from a 1941 peak of 19,300,000 to a low of 7,460,000 in 1944,

rebounding only slightly to 8,550,000 in 1945.⁴ Reduced appropriations actually preceded the decline in visitation as the nation prepared for war, plummeting from \$26,200,000 in 1939 to \$13,500,000 in 1940, then hitting bottom at \$4,500,000 in 1944.⁵ More serious, however, was the loss of emergency dollars that had funded most NPS architects and engineers, many of its naturalists, and thousands of manual laborers. The latter had for nine years pursued tens of thousands of building, maintenance, and protection projects on which administrators had become dependent. Their departure proved all the more serious when combined with the loss of experienced personnel to military assignments, as permanent staff fell from 5,145 in 1941 to 1,573 in 1944.⁶

World War II's consequences at Grand Canyon in most ways followed those of the system in general, although few threats to natural resources arose. No particular demands were placed on ponderosa pine, pinyon, or juniper, the dominant tree species within the narrow strip of park lands south of the rim. More valuable fir and spruce dominated larger woodlands to the north, but the Arizona Strip remained distant from convenient transport, and its forest industry would not develop until the late 1940s. Pioneer families had long ago determined that few minerals of commercial value lay buried within or beside the canyon, and the Orphan Mine's rich uranium deposits that would later fuel the nation's atomic energy program had not yet been discovered. The war spawned only one mining venture within or adjacent to the park: the reopening of early twentieth-century mines in Carbonate Canyon by the Havasu Lead and Zinc Company in the fall and winter of 1943-44. The NPS rejected the company's request to build a tramway from Manakacha Point to facilitate extraction, which probably hastened the venture's demise. Havasupais continued to graze livestock in the vicinity of Great Thumb Mesa as they had since long before park creation, and ten or so permittees ran cattle and sheep on several thousand acres of the national monument as they had since 1932, but allotments did not increase.⁷

Military uses of Grand Canyon National Park were slight compared to some parks and more or less representative of the larger system. Superintendent Harold Bryant wrote in 1944 that men in uniform who arrived with their families, in transit to duty stations, on maneuvers, or to stay in temporary rest camps, represented about a third of park visitation, which declined from a peak of 436,500 in 1941 to a low of 64,500 in 1944, before rebounding to 170,000 in 1945. Forty-four special permits authorized overnight bivouacs of one to three days for more than 19,000 troops, who apparently spent more time sightseeing than field training.⁸ Several army groups were allowed to use the recently abandoned village CCC complex as a recreational camp, and the Kingman Army Air Group settled in for the

duration in August 1944, renovating some of the buildings as barracks, officer quarters, mess hall, and post exchange. Until June 1946 this facility resembled a military post beside any resort village, troops rotating from active duty at Kingman to recreate a few weeks at a time. Men wore Class A uniforms when not on work detail, shopped at the PX to avoid taxing limited supplies at Babbitts Store, and were cautioned to carouse at camp rather than crowd the El Tovar bar. Otherwise, they were invited to mingle with residents, shop at curio stores, and take advantage of curtailed concessioner services. The men apparently did mingle, to

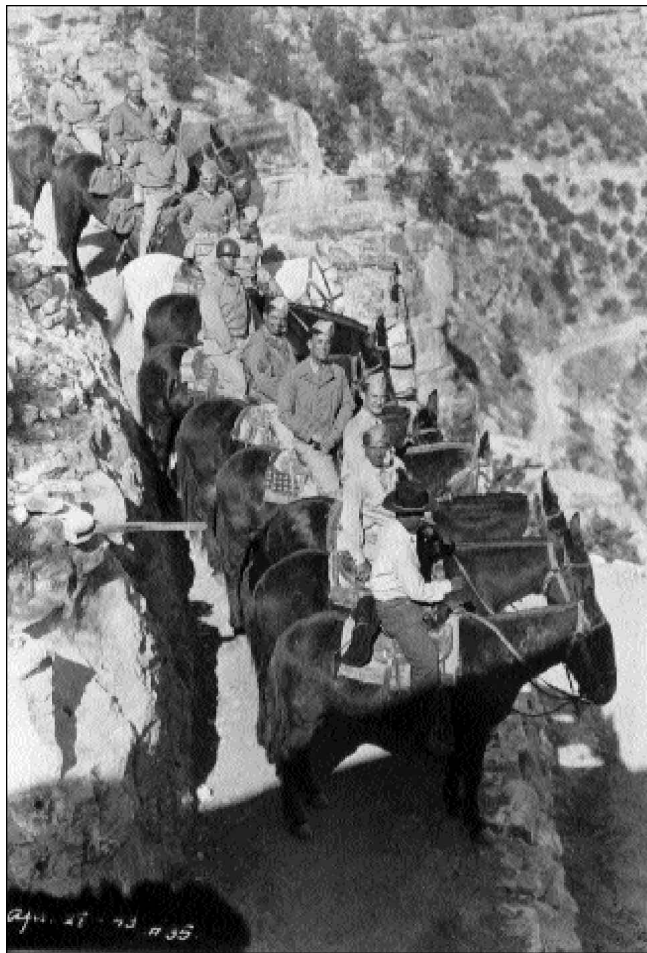


Figure 26. Members of the 51st Armored Infantry along the Bright Angel Trail in April 1943. During World War II nearly a third of park visitors were servicemen on leave, on maneuvers, or en route to duty stations. GCR 15214; photo by Emily Kolb

the extent that noncommissioned officers were cautioned to monitor their men's activities. "Guests" were not allowed in camp after midnight and never to the barracks, and military police were stationed at the El Tovar as well as the women's dormitory.⁹

National Park Service personnel, concessioner employees, and other village residents responded to the war much like civilians in towns across the nation. Immediately after Pearl Harbor, Bryant was named coordinator of the local

civil defense organization. The village was zoned for fire and blackout contingencies, and residents served as air raid wardens, participated in elementary military drill and fire-fighting classes, guarded strategic points against sabotage, and manned lookout towers to spot forest fires as well as enemy aircraft. They continued to participate in varied social and business clubs, but spent considerable free time organizing bond drives, collecting scrap paper, rubber, and metals, and tending victory gardens that numbered more than sixty by war's end.¹⁰ Park Naturalist Louis Schellbach served on the state's Committee on the Conservation of Cultural Resources, a presidential body established nationwide to protect assets like the park's study collections and libraries from enemy mischief. The Japanese never got around to invading the continental United States nor did sabotage touch the park, but special training demanded of residents, rangers, and military alike helped limit the spread of wildfires that were numerous during regional drought years of 1942-48.¹¹

With dramatic reductions in staff and appropriations, special wartime duties made it all the more difficult to address routine operations and maintenance. Bryant, who had served briefly as acting superintendent in 1940, returned from Kings Canyon National Park in July 1941 to replace Frank Kittredge, while longtime assistant superintendent Jimmy Lloyd moved on to Lassen Volcanic National Park and was replaced by John M. Davis. These men, new to their jobs though veteran NPS managers, found it difficult to pursue a consistent management plan as employees left with little notice and could not be replaced because of diminishing funds. By summer 1944, seventeen regular employees—nearly half the park staff—had left for war-related work, and the park made do with a ceiling of thirty-one employees throughout Fiscal Year 1945. Special appropriations for fire fighting, utilities construction, and road building dried up entirely, and base funding dropped to mid-1920s levels, averaging slightly more than \$100,000 per year.¹²

With the men and money at hand, war-related responsibilities, and considerable time expended on fire suppression, management was forced to scale back construction, maintenance, and services to bare necessities. New construction nearly ended with the departure of the CCC, but minor projects continued such as crafting rustic road signs and log benches along rim drives and footpaths. Maintenance was hampered by shortages in materials diverted to the war, but most resources still went toward essential upkeep of rim roads, corridor trails, and administrative buildings.¹³ A few rangers patrolled the backcountry on multi-purpose field trips, searching for fire, fixing trails, sighting wildlife, trapping deer for relocation, shooting feral burros, and planting trout, while north and east entrance

stations went unstaffed in all but summer months. Visitor education and interpretation was left to Grand Canyon Natural History Association and Louis Schellbach, who conducted all lectures, campfire talks, and nature hikes by himself. Bryant and Davis staffed the Yavapai Observation Station to keep it open throughout the war.¹⁴

Most visitor services remained the province of concessioners and their railroad backers, who were harder pressed by the war than they had been in the darkest years of the depression. Still they managed to maintain utilities, improve their own formidable infrastructure, and serve reduced tourist demands. In late 1941 and early 1942 the Santa Fe Railroad built six two-room cabins, a duplex, a community wash house, and twelve three-room employee residences along Avenue B (Boulder street) to replace shacks and boxcars that had survived prior renovation programs. In 1943 and 1944 the Union Pacific Railroad rebuilt the power line from Roaring Springs to Bright Angel Point and augmented employee housing while persisting with a program to remodel visitor cabins and residences through 1945.

In the face of declining business, the principal concessioners, like their federal partners, spent almost nothing to expand park infrastructure and, by War Department order, cut services far deeper than they had during 1930-33. Before the end of Fiscal Year 1942, the Fred Harvey Company closed Lookout Studio and eliminated bus tours. It also closed Bright Angel Lodge, although its cabins could still be rented from the lobby of the El Tovar Hotel. Similarly, on the North Rim the Utah Parks Company closed Grand Canyon Lodge but rented its cabins from the Grand Canyon Inn, which remained open with sharply reduced services. By the end of Fiscal Year 1943, rationing and travel restrictions had ended passenger train service, tours along both rims, NavaHopi Tours' bus service from Flagstaff, and commercial stages to Bright Angel Point. The Watchtower, Hermits Rest, and Hopi House also closed for the duration, as did the Motor Lodge and associated cafeteria, Dan Hogan's facilities, and most of Jack Harbin's business at Rowe Well. Visitors could still take a mule ride down to Phantom Ranch (which remained open), participate in the park's limited interpretive services, and shop at Babbitt's Store, Kolb Studio, and Verkamps Curios. The Kaibab Lodge at VT Park also managed to remain in business.¹⁵

POST-WAR BOOM

NPS administrators had accurately predicted World War II's effects on national park operations and, before the war was over, forecast a postwar surge in visitation that would inundate existing facilities. Congress, however, focused on higher national priorities during the late 1940s and early 1950s, including the war debt, aid to debilitated allies, an

escalating cold war, and reconversion of industry to peacetime production. Slighted by postwar appropriations, the NPS did what it could given its policies of enhancing the park experience to customer tastes and accommodating all who chose to visit. It covered old political ground by pleading as strenuously as ever the economic importance of tourism and the park system's critical role in attracting western visitation. Pragmatically, it tried to promote recreational use during winter months in order to arrest summer peaks, utilized war-surplus equipment to maintain roads and trails, and allocated scarce resources to structural maintenance. Efforts to keep up proved futile, however, as units were added to the system, their need of initial development bled allocations, and visitation soared from 16 million during Fiscal Year 1946 to more than 50 million by 1955.¹⁶

Historians identify the quarter-century beginning in 1945 as a period when "the United States experienced a prosperity and world economic hegemony unparalleled in history."¹⁷ By-products of economic strength included the flow of federal dollars to the West that had begun with the depression and world war, accompanied by southwestern population growth, a second program of interstate highways, and a plethora of power and water projects, all bringing significant pressures to bear on the western parks. While extractive industries prospered during the postwar boom then fell on more volatile times after 1970, service industries, including regional tourism, continued their steady climb toward economic dominance. During 1945-60 Arizona's population grew from 500,000 to 1.3 million, while southern California residents, who had since the 1910s visited Grand Canyon more frequently than any other state's residents, more than doubled. By 1950, two-thirds of all Americans took annual vacations and four of every five set out in private automobiles to see (as they had long been urged) America first. As Stephen Mather had argued, tourism did bring significant cash (if few high-paying jobs) to the Southwest. In California alone in 1949 three million tourists spent \$457 million, and tourism-related services ranked number two among southern California industries. The rise of another popular tourist destination, Las Vegas, Nevada, added to east-west travel along U.S. 66.¹⁸

National and southwestern prosperity and demographic trends were reflected in visitation to Grand Canyon during 1945-56. Superintendent Bryant, one who foresaw the human avalanche and tried to plan for it, wrote in 1946 that

until VJ Day, travel was relatively light, although showing a slight increase over 1945 fiscal year. However, with the end of the war, it appeared that everyone who had had a trip planned and interrupted by the war immediately resumed his plans in many instances starting the same day. He was joined by thousands of others who were simply enjoying the relief from war tensions...¹⁹

Only 74,000 people entered the park during the closing twelve months of the war. With national travel restrictions lifted in August 1945, 334,000 arrived in the ensuing twelve months. In 1947 annual visitation for the first time topped one-half mil-



lion, then reached 621,000 in 1948 before assuming a gentler curve, surpassing one million for the first time in 1956.²⁰ Bryant cited the one-million automobile permit sold on 11 April 1947, and laconically added that "another twenty-one years will not be required to sell the next one million." He reported in 1946 that seasonal travel patterns persisted from prewar years. June through August were the most popular months, and Easter, Memorial Day, and Independence Day remained peak twenty-four-hour periods, with a record 98,545 arriving in June 1947—4,262 on 19 June alone. Other trends included a proportionately greater number of arrivals through the north and east entrance stations and a rise in rail travel for a few years followed by a steady decline after 1949, despite the Santa Fe Railroad's launching of a new transcontinental train named The Grand Canyon in June 1947.²¹

Figure 27. Left to right: Jim Crook, Havasupai council member and Episcopal minister; Harold C. Bryant; Tom Dodge, superintendent, Truxton Indian Agency; Lemuel Paya, tribal council chairman; Reed Watahomigie, interpreter; Dudley Manakaha, first chief of the Havasupai Tribe and council member; William H. Zeh, regional director of Indian services; Big Jim Gvetna, Havasupai chief and council member; Lon Garrison; and Foster Marshall, tribal council member and mail carrier. Grand Canyon Village, September 1947. GEA 982.

Base appropriations and permanent staffing in 1946 approximated those of 1941 in terms of dollars and head-count but did not reflect the loss of prewar emergency laborers and special appropriations, or postwar inflation for equipment, materials, supplies, and labor. Musing over postwar reductions in 1953, NPS director Conrad Wirth lamented that the National Park Service operated with 25 percent less manpower than it had in 1941, despite a 10 percent increase in system units and more than twice the number of visitors, and that its “patch-on-patch” program of facility maintenance had lost considerable ground.²² Again, canyon administrators faced similar dilemmas. Appropriations in 1945 totaled \$106,000, and in 1946 were, in Bryant’s words, “hardly sufficient to continue to operate on a wartime basis,” making it difficult to rehire men returning from the war. Bryant summarized the financial situation in another way when he wrote that in 1935, regular appropriations had equaled 47 cents per visitor; in 1940, 33 cents; and by 1948, the administrative low point following the war, only 29 cents.²³

Funds for Fiscal Year 1947 reached \$282,000, but the forty-hour work week imposed on federal agencies combined with personnel ceilings severely limited manpower for protection, patrol, and public contact. In 1948 the ranger force resembled that of the mid-1920s with only a chief ranger, two assistant chiefs, and eight permanent rangers.²⁴ Even working six and seven days per week, these men could do little more than operate entrance and interpretive stations, sometimes only eight hours per day, yet remained responsible for forest insect and disease control programs, trapping and removing surplus deer, fire suppression, and a host of other duties. Men and money increased marginally during the early 1950s, but were more than matched by visitors who introduced new problems and exacerbated old ones. Human-caused fires had increased, search-and-rescue operations became more frequent, traffic accidents consumed considerably more time, and village congestion—worsened by “deer jams” and inadequate parking—often demanded a full-time ranger just to prod traffic. Although the park hired more Havasupais as short-term, low-wage, manual laborers than they had in the past, administration remained, as Bryant had implied in 1946, a ceaseless effort to keep many steps behind escalating demands of soaring visitation.²⁵

Canyon administrators also noticed disheartening postwar sociological changes that consumed ranger time and increased costs. Bryant and Chief Watahomigie wondered at the unruly nature of young Havasupais returning from

the war and the need to police their activities and eject several from the park. Far more troublesome were proliferating acts of vandalism and littering on the part of tourists. Beginning in 1946, Bryant compiled a litany of abused signs, interpretive displays, trees, and shrubbery; graffiti; and damaged or stolen binoculars and fossil specimens at Yavapai Observation Station. He then lamented his staff’s inability to prevent such “vicious acts of destruction.” The renewed automotive invasion along with visitor trends to economize by camping and eating packaged goods from their vehicles produced a “mess of papers, picnic lunch remains, and other trash...wantonly strewn across the landscape.” Shortages of picnic areas, hotel rooms, cabins, and camping spaces caused widespread at-large camping, resulting in the “carving of names on trees and buildings, picking of flowers and many other misdemeanors” throughout the park. The park began to address littering

in 1949, spending \$8,000 per year over the next few years to clean it up, strategically locating trash cans “adorned with little jingles” to invite their use, and distributing trash bags and topical leaflets at entrance stations, but Bryant despaired of reversing the trend.²⁶

Probably the most significant and costly management trend following the war and continuing today was a new attention paid to visitor and employee safety, an inner-park manifestation of popular beliefs emerging from the New Deal that the federal government owed its citizens cradle-to-grave security, an idea driven home by increased litigation. In 1946 NPS director Conrad Wirth wrote that although the use of wilderness parks carried inherent hazards to life and limb, the NPS

“recognizes that the protection of visitors is a serious and sobering responsibility, and the effort to assure adequate protection is constant.” This opinion has been echoed by Wirth’s successors ever since, evidenced by proliferating warning and informational signs as well as spiraling safety-related duties and associated expense.²⁷ Administrators systemwide had always been concerned for public health in terms of safe water supplies, sewage systems, and concessioner food-handling, but with multiplying tort claims they were compelled to pay closer attention to visitor and occupational safety. At Grand Canyon this led to corresponding increases in safety regulations, hundreds of ugly signs mar- rying the landscape, formal search-and-rescue operations with more elaborate equipment, frequent safety seminars, safety engineers, committees, endless meetings, better emergency facilities, and upgraded utility and fire suppression systems within old and new buildings. Safety concerns also led to the first trailhead registers and permit require-



Figure 28. Assistant Superintendent James V. “Jimmy” Lloyd. GRCA 16377.

ments for river trips on the Colorado River. By 1947 increased duties and paperwork combined with added safety requirements and policing consumed fifteen man-days per week, roughly 30 percent of the ranger staff.²⁸

Development plans drawn during the war years reiterated earlier decisions not to expand the village westward beyond the base of Hopi Hill, to devote the rim to public use, and to restrict employee housing to the residential area south of the railroad tracks.²⁹ Given new operating costs and scanty appropriations, such plans were hardly necessary as almost no new development could occur during the immediate postwar era. Still, recognizing that inadequate housing was “more harmful to morale than any other difficulties” and that employees had changed from prewar bachelors to married men with families, work focused on improved housing through small painting, roofing, wiring, flooring, and insulation projects. At the village in 1947-48, workmen remodeled three CCC barracks into eight apartments for seasonal personnel and two others into permanent residences. At the North Rim, five small CCC buildings were relocated to the administrative area at Bright Angel Point and remodeled for the same purposes. Two three-bedroom residences were completed at Grand Canyon Village in late 1949, two two-bedroom homes in 1950, and another two in 1951 before the paltry construction program turned to miscellaneous structures. These included a “modern rest room facility” at Hermits Rest constructed during 1951-53; a recreational hall at Supai Camp and new south entrance station in 1952; and reconstruction of the Hopi fire tower, a three-room addition to the Grand Canyon School, and a duplex teachers’ residence in 1953.³⁰

POST-WAR CONCESSIONS

Inadequate resources to serve employees and visitors to NPS standards was by no means new to park managers. They had long been subject to congressional dictates, but managers had always been able to count on concessioners to invest during periods of visitor expansion. Despite such expansion in the postwar era, however, operators were dissuaded from major investments. Their reluctance began during the war with reduced revenues and profits and the government’s unwillingness to renegotiate or execute new contracts. Uncertainty was compounded early in 1946 when congressional criticism of monopolies, prices, and profits again delayed new contracts while a Concessions Advisory Group studied the charges. In February 1948 this panel agreed with NPS officials who argued that concessioners had played essential roles through the years, risking capital the federal government refused to invest on seasonal operations with an average return of only 3 to 7 percent. The findings, and Secretary of the Interior Julius Krug’s policies following the report, appeased Congress but failed to elicit

venture capital. Therefore, Krug’s successor, Oscar L. Chapman, loosened the investment logjam in October 1950 by setting policy that granted preferential treatment to existing concessioners, allowed contracts to be renegotiated before their expiration, further protected concessioner assets, added flexibility to the manner of calculating franchise fees, and provided other inducements to expand facilities. Also, by 1952 standard contracts began to spell out types of improvements to be made along with their dollar values and timetables and carried up to thirty-year terms for multi-million dollar expenditures. Along with a reinforced NPS Concessions Division to monitor compliance, Chapman’s policies began to have the desired effect.³¹

Canyon administrators’ postwar relationships with their investment partners corresponded to national policies. At the North Rim, the Utah Parks Company had received permission to curtail services during the war and for a “reasonable period” thereafter. After the war, the company continued to experience losses owed to the brief summer travel season, maintenance of the costly Grand Canyon Lodge and landslide-prone Roaring Springs water system, and NPS-imposed rates that were pegged to prices in Fredonia and Kanab eighty miles to the north.³² During the war the NPS and the concessioner had decided to tie all of the Utah Parks Company’s regional operations into one contract to help offset these losses. With expiration of the original North Rim agreement on 31 December 1946 existing contracts for individual parks were renewed annually until 1948 when a new twenty-year pact was signed including Bryce, Zion, Cedar Breaks, and Bright Angel Point.³³ In the ten years following, the National Park Service allowed the company to write off more of its park-related expenses, but the short travel season, high costs, fixed rates, and economy-minded tourists would guarantee losses for another quarter century.³⁴

Despite a new contract and return to the prewar trend of escalating visitation, the Union Pacific Railroad held back on major tourism-related investments. This was due partially to policy uncertainties, but also to limited space at Bright Angel Point and administrators’ unwillingness to develop the Walhalla Plateau or westward along the rim. Seasonal operations returned to normal with the reopening of Grand Canyon Lodge in June 1945, but even with all cabins operating, some visitors by 1947 had to return to Jacob Lake to find overnight accommodations during peak periods.³⁵ Rather than build new facilities, company managers focused on maintenance and renovations to existing cabins and utilities. In 1947 they modernized the lodge and cafeteria to the high end of county health standards and in 1949 converted the incinerator to burn fuel oil, upgraded sewer lines, added hot water heaters, showers, and toilets to thirty lodge cabins, rebuilt 1,000 feet of penstock to the

hydroelectric plant, and erected a new machine shop and powerhouse. In 1950 and 1951 contractors refurbished twenty-six standard two-room lodge cabins, eighteen one-room cabins at the Grand Canyon Inn, and the men's and women's dormitories with showers, toilets, and individual water heaters. In 1952 the company built a 568,000-gallon water tank and installed hot water heaters in each of its luxury cabins. The Union Pacific invested in these types of improvements each year during 1947-55, but chose to tolerate peak overflows rather than build rooms that might be rented only a few weeks per year.³⁶

Visitation at the South Rim continued to outdistance the North Rim by ten-

to-one, yet contract renewals lagged even longer and services fell further behind demand. The Verkamps's 1936 contract technically ended in April 1944 with the death of canyon pioneer John Verkamp. Administrators who coveted the store's prime location preferred that the business be sold to another operator and the "unsightly" studio removed. James E. Babbitt, however, representing the interests of John's wife, Catherine, and her children, Margaret, Mary, Catherine, and John, Jr.,

persuaded them to transfer the pact to surviving family members until its expiration on 31 December 1945.³⁷ Consistent with postwar policy, Superintendent Bryant and Regional Director Tillotson allowed year-to-year extensions beyond 1945. Meanwhile, they negotiated with the family to build a new studio immediately east of the original, erect new employee housing, and increase franchise fees or reduce product costs to produce a net return of 6 to 8 percent rather than the 30 to 45 percent the store had earned since the 1920s. In 1948 the NPS advertised for a new contract but received only one bidder who had no greater financial resources than the Verkamps. The family therefore retained the concession through preferential right until securing a ten-year contract in 1954.³⁸

The Verkamps had always been in the enviable position of selling luxury items at a high markup, which, in combi-

nation with low overhead and family labor, explained the store's profitability. The Babbitts's general merchandise business, on the other hand, consisted of food and other consumable items with prices tied to those in the nearest communities more than fifty miles distant and with competition to some extent posed by the Fred Harvey Company.³⁹ Members of the Babbitt family, busy elsewhere with regional ranches and trading posts, also incurred greater overhead in terms of hired-labor and employee housing and had since 1921 invested far more in capital improvements.⁴⁰ Still, the adeptly managed store weathered the war with marginal profits and benefited greatly from the tourist

boom and return to economy travel after 1947, posting gross revenues of \$121,800 in 1945 that grew to \$380,400 by 1949. Its well-connected and business-savvy owners had managed to secure a ten-year contract in 1941 that required an annual grounds fee of \$1,500 plus 25 percent of profits beyond an initial 6 percent of the value of its capital investments, terms which afforded comfortable returns.⁴¹

With rising revenues and profitability following the war, Babbitt Brothers expressed a willingness to invest

more, an offer that pleased administrators and became the prime ingredient in negotiating a new agreement. The company asked for a twenty-year contract to allow for a "stable business" and adequate time to amortize investments, continuation of the \$1,500 grounds fee, and a formula that would allow the company to keep all profits on the first \$50,000 in sales with the

NPS receiving 1 percent of gross or 50 percent of profit beyond \$50,000.⁴² After lengthy bargaining, the company gained much of what it had sought with a new fifteen-year contract in April 1952 that required payment of a \$1,200 grounds fee and .5 percent of gross to \$500,000, 1 percent for the next \$200,000, and 2 percent above \$700,000. Like all contracts consummated since the early 1950s, it called for periodic fee renegotiation, but the company would do very well on these terms. An accompanying agreement required



Figures 29-30. Fred Gurly, president of the Santa Fe Railroad (left) and Byron Harvey, Jr., president of the Fred Harvey Company (right) below Mooney Falls in Havasu Canyon, 1950. GRCA 2002, GRCA 2005.

the company to invest \$50,000 in improvements over the ensuing few years.⁴³

Emery Kolb, like the Verkamps, hung on to his meager merchandise, lecture, and photographic concession beside the rim because administrators could not conjure a way to be rid of him without risking the ire of highly influential friends—in Kolb's case, Arizona Senators Carl Hayden and Barry Goldwater. In truth, Superintendent Bryant and successors Pat Patraw and John S. McLaughlin valued Kolb as a canyon pioneer but, like Miner Tillotson in the 1930s, did not believe the concession necessary, thought his lectures and films anachronistic by the 1950s, and frankly did not want the curmudgeon's uncensored version of canyon management expressed directly to visitors. They considered a number of options, including purchase of his possessory interest or a short-term pact with an option to buy at its expiration—in either case, fully intending to raze the studio and adjacent garage. They also considered demanding that he update his lecture, films, and photographs, or simply ending the concession upon his retirement or death, one or the other of which they mistakenly thought imminent. They settled on five-year contracts executed in 1952 and 1956 that required Kolb to pay a \$250 grounds fee plus 4 percent of gross receipts, 3 percent in the 1956 accord, with agreement among regional administrators that they would veto investments that increased his possessory interest.⁴⁴

Of course, administrators looked to the Santa Fe Railroad to fulfill nearly all demands of burgeoning visitation, and the railroad proved even more reluctant than the Union Pacific to invest. By early 1946 the Fred Harvey Company reopened all South Rim facilities and transportation services that had been closed during the war and the Santa Fe Railroad resumed rail service to the rim.⁴⁵ In the second half of their twenty-year contract with no prospect for renegotiations, however, Santa Fe Railroad officials balked at building anew and stated their intention to confine new construction to their twenty-acre depot site. With visitor trends continuing to emphasize economy, the Santa Fe Railroad concentrated on additional capacity at the Motor Lodge. They installed twenty-four prefabricated cabins beside the wye in 1946, another twelve by the following spring, and moved twenty-two cabins from Bright Angel Lodge in 1948 while modernizing 120 older units with baths and/or hot and cold running water.⁴⁶ Even so, Fred Harvey Company managers, with NPS approval, found it necessary to impose a seven-day stay limit at the El Tovar and Bright Angel Lodge during summer months in 1945 and a three-day limit in 1946 which continued for several years thereafter. By 1949, village "pillow count" (the number of people who could be accommodated indoors) totaled only 1,100 in a year when 103,000 visitors arrived in

June, 119,000 in July, and 122,700 in August. Administrators estimated that as many as 15 to 30 percent of those seeking accommodations had to be turned away. Long lines at Bright Angel Lodge, El Tovar dining room, and the Motor Lodge cafeteria also made it clear that eating establishments designed in an era of leisurely sit-down meals could not keep pace with more—and more hurried—customers.⁴⁷

Although the railroad did invest considerable sums in renovations to existing structures, facility shortages by 1950 prompted Region Three Director Miner Tillotson to urgently suggest a new contract in return for a definitive building program.⁴⁸ Echoing the posture of the Union Pacific president a few years earlier, Santa Fe Railroad president F.G. Gurley wrote Congress in late 1949 that

in the light of our interpretation of the views of the Department of the Interior, including public statements of belief in ownership by the Federal Government of Park facilities, Santa Fe looks upon any further investment at Grand Canyon with grave misgivings.⁴⁹

Bryant heartily agreed with Tillotson, setting priority needs at 200 additional rooms, more dining seats, and more housing, which, despite an increasing number of employees since 1946, had consisted solely of trailers moved into "Tent City."⁵⁰ The Santa Fe Railroad instead viewed federal ownership and contract uncertainties, as well as its decline in passenger service and financial difficulties on a national scale, as signs that it should shed its national park investments. The railroad might have sold or ceded all of its non-rail related properties to the Fred Harvey Company, with whom it had always been generous, had not Congress and the Department of the Interior in the late 1930s begun to reconsider ownership of in-park concessions and experiment with government-owned structures operated by private concerns. Given the government's still-uncertain policy in this regard, managers and attorneys in the early 1950s began to plan instead to transfer some properties to the concessioner and others to the National Park Service, deliberations that further postponed new construction.⁵¹

The railroad's generosity posed one of the greater difficulties. Over the years it had provided many services to the Fred Harvey Company free of charge while deducting the expense in its own financial statements. On the other hand, the concessioner had determined its return on investment, integral to its payment of franchise fees, based in part on these expenses it had not paid. In order to unravel the overlap as well as determine accurate costs of providing utilities, the Sessions Engineering Company was called in to study the issue in 1954.⁵² Meanwhile, the Santa Fe Railroad executed an "instrument of donation" on 9 March 1954, transferring all interests in its water, power, road, and trail sys-

tems, valued at \$1.1 million, to the federal government, along with easements for West Rim Drive, trails, and footpaths through its twenty-acre depot site.⁵³ Recognizing that the National Park Service was in no position to operate the utilities, the railroad agreed to run them temporarily under permit.⁵⁴

Administrators who had no desire to operate the park's power systems contracted with Arizona Public Service (APS) in June 1954 to provide electric service to Grand Canyon Village.⁵⁵ They turned over the recently acquired power grid and equipment to APS, but bringing electricity to the canyon required the company to spend another \$700,000 to string a 69,000-volt, three-wire, three-phase transmission line from Williams to a new substation at the village, with lines extending from the substation to the emerging town of Tusayan. Superintendent Pat Patraw threw the ceremonial switch in January 1955, celebrating the first commercial



however, with the prospect of acquiring the railroad properties, the concessioner became as eager as the National Park Service to restart talks. In determining franchise fees, adminis-

Figure 31.A A new generation of Fred Harvey buses line up at the new canyon pullout at Mather Point in autumn 1954. GRCA 2726; photo by Steve Leding

utility other than telephone to reach the park, capable of meeting needs of the village's 800 year-round residents as well as peak visitor demands. Two of the power plant's three generators were decommissioned with APS's arrival, but the plant itself and one generator were saved as an auxiliary source of power and for steam generation essential for building heat and laundry services.⁵⁶ Under cooperative agreements thereafter, the Fred Harvey Company generated the steam, APS operated the auxiliary generator, and the NPS took over the water system's control equipment. As a part of the division of responsibilities, administrators agreed to remove the 167-foot, reinforced-concrete smokestack, and Fred Harvey paid for induced-draft fans to replace the outdated eyesore.⁵⁷

Coincident with the transfer of utilities, the Santa Fe Railroad sold its tourist facilities to the Fred Harvey Company later in 1954 for \$1.5 million.⁵⁸ Holdings ranged from Hermits Rest on the west to Desert View on the East, at Pipe Creek, Yaki Point, and Phantom Ranch. Important assets included Hermits Rest; Lookout Studio, El Tovar Hotel, Hopi House, Bright Angel Lodge, and Motor Lodge, as well as the women's, men's, Indian, and Mexican dormitories, all located in the village along the rim; an employees' campground, service station, garage, barns, corrals, laundry, and assorted parking areas, also within the village; the Watchtower at Desert View; and facilities at Phantom Ranch. These buildings sat on less

than one hundred acres; some of it was federal land used under permit extending for the life of each concession contract, the rest was railroad grant lands. Since it intended to continue passenger and freight service, the Santa Fe Railroad retained its 200-foot right-of-way and depot site, as well as the depot, trackage, employee housing on Avenues A, B, and C, and all rail-related structures.⁵⁹

Considering the railroad's reluctance to invest and the Fred Harvey Company's inability to bargain without its financial partner, it is understandable that negotiations for a new contract went nowhere during 1950-53.⁶⁰ By late 1953,

trators considered the Fred Harvey Company's average annual net profits of only \$100,000 per year in the early 1950s, its need to retire the purchase debt to the Santa Fe Railroad and to borrow more to build anything new, and operation without the railroad's financial safety net, which they realized would be "fraught with great difficulties" for a few years.⁶¹ Terms therefore appear generous to today's eyes, with fees reduced from 3 percent of gross over \$600,000 (per the 1933 contract) to a flat grounds fee of \$5,000 plus .75 percent of gross. The greatest stumbling block to the new twenty-year contract, which became effective 1 August 1954, was the new NPS policy allowing either party to renegotiate fees every five years for the life of a long-term agreement. The NPS insisted on the clause but compromised with a provision that total increases could not exceed 50 percent of the initial fee for the life of the contract.⁶² With gross receipts averaging \$3.5 million over the following five years, the new pact would yield net profits of \$250,000 per annum yet allow the National Park Service's highly valued concession partner to get on its own feet and undertake projects to keep in step with administrative developments on the horizon.⁶³

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Intellectually, NPS managers understood as early as 1945 that they would no longer need to attract visitors to the parks. Newton Drury wrote immediately before war's end that

the policy of refraining from all activities which would tend to promote travel [begun with wartime travel restrictions] was continued. No effort will be devoted to that end in the near future. It need not be. After the war many areas in the System will have many more visitors than can be accommodated satisfactorily with existing facilities. Efforts need to be directed rather toward effecting a more even distribution of travel....⁶⁴

In practice, however, the National Park Service had a difficult time escaping its promotional roots. Most direct advertising did shift to the state, county, and private sectors, but the NPS continued to assist with publicity that was limited



Figure 32. Assistant Superintendent Lon Garrison (1903-1984), at far right, with Fred Harvey manager W. D. Rouzer (far left, standing) and a group of Williams business people at a South Rim "Show-Me" day GRCA 1978.

only by reduced appropriations. One of Drury's principal post-war regrets, in fact, centered on deep cuts in federal printing budgets, limiting response to inquiries for educational materials, brochures, and other pro-

motional literature. In his annual reports to the secretary of the interior, he rarely failed to lament insufficient funds to print and distribute informational data to editors, writers, publishers, automobile clubs, travel organizations, newspapers, public libraries, and schools.⁶⁵ He also voiced a keen interest in attracting winter visitation to redistribute the load, but recognized the challenge posed by few suitable cold-weather accommodations and the danger to resources unless "sound winter-use policies" could be developed. He hoped to promote noncommercial skiing, snowshoeing, ice skating, and sledding that would inflict "no undue disfiguration of important landscapes." The reluctance of Congress and concessioners to invest in seasonal facilities that promised only limited use, combined with the public's unwillingness to use them to any great degree, would impede this postwar initiative.⁶⁶

Canyon administrators also felt the pinch of reduced promotional literature, and although the Fred Harvey Company advertised for winter visitation, neither the company nor park staff encouraged backcountry winter use. Rather, they tried to lure more tourists to developed facilities that languished each year from October through April.⁶⁷ Park managers began to rely more on Arizona's private tourism sector, which was growing at a healthy pace, largely owed to the canyon's magnetism, while they placed greater emphasis on regional public relations. Superintendent Bryant and Park Naturalist Schellbach both accepted invitations to speak on national radio, and some of the 3,000 individuals who attended the 1949 Easter sunrise

service protested its broadcast as a blatant commercial. Bryant and Assistant Superintendent Lon Garrison frequented chamber of commerce and other business meetings throughout the state and encouraged organization of a South Rim Rotary Club in March 1946 as well as a canyon chapter of the Business and

Professional Women's Club in May 1952. Bryant boasted of 263 packaged rail tours in 1952, enjoyed the General Petroleum Corporation's Mobilgas-Grand Canyon Economy Run that reached the South Rim each year in the early 1950s, and took great pride in helping to organize the park's "Show-Me" days, wherein regional tourism leaders gathered at the village to inspect its accommodations.⁶⁸

Given concessioners' unwillingness to develop additional accommodations and inadequate NPS budgets, even indirect promotion suggested institutional schizophrenia. This diagnosis is substantiated by administrators' inability to keep up with trail and road systems, campgrounds, or interpretive services. In 1947 the park trail crew began to station men responsible for certain sections of the most heavily used corridor paths at strategic points, while more remote trails, including the once-popular Hermit Trail, received no attention at all.⁶⁹ In the same year Bryant reported that the corridor had become so congested with mule trips and an increased number of inner-canyon day hikers that mule parties returning from Phantom Ranch had to be rerouted to the South Kaibab Trail to avoid hikers along the Bright Angel Trail.⁷⁰

Similar congestion and deterioration was noted for park

roads. Without funds for improvements, the park road crew addressed only the worst problems with war-surplus equipment, stabilizing shoulders, removing vegetation to ease raveling of edges, and resurfacing short segments at a time. Realignment of the South Entrance Road was the only major project undertaken during 1945-55. It had been planned in 1946 so that visitors would, in Bryant's words, "bypass the present confusion of roads in the village and reach the rim of the Canyon more easily," but work did not begin until 1952 when highway funds began to reappear. In that year the Bureau of Public Roads rejected the only bid submitted as far costlier than engineers' estimates—another manifestation of postwar inflation. In the following year, the Fisher Contracting Company submitted a high but acceptable bid and began work on the first three miles of roadway from the boundary toward Mather Point. The Givens Construction Company of Phoenix completed the 7.42-mile entrance highway in November 1954, affording visitors, as Bryant had hoped, an option to reach the rim, view the canyon along East Rim Drive, and exit the park at Desert View.⁷¹

The new entrance road did give day-use visitors an option to peer over the rim while avoiding the village, but it did not cause a discernible decrease in the number of motorists seeking overnight accommodations. Acute shortages of hotel rooms and cabins as well as trends toward economy vacations brought on by inflationary travel costs—all in the summer season—taxed limited camping facilities at both rims. Increased numbers of travel trailers, which equaled the number of tents by the mid-1950s, incited demands for utility hookups and added to the crowding. The practice of housing NPS and concessioner employees within and beside the campground only compounded the problem.⁷² In spite of crushing demand, administrators abandoned the prewar policy of opening undeveloped campgrounds at less congested areas, reflecting increased concerns for littering, vandalism, fire, and visitor safety. Instead, they crammed tents and trailers alike into the single developed campground beside each rim's automotive lodge, a policy that created an inner-village slum at the South Rim. The park did nothing to improve the main campground other than rebuild tables and, in 1951, renovate the campfire circle with new lighting and benches. Meanwhile, some 56,800 campers filled the single village facility in summer 1951, 65,500 in 1952, and by 1953 campgrounds on both rims were "filled to overflowing." They also suffered from antiquated sanitary facilities that elicited a growing number of complaints.⁷³

Sheer numbers also strained the park's interpretive programs. With the arrival of Assistant Park Naturalist Paul Schultz in April and seasonals' return in June 1946, naturalists reopened existing facilities and expanded programs to

the prewar scope, although for obvious reasons they never resumed automotive caravans. Yavapai Observation Station remained open every day as it had during the war, and the Wayside Museum of Archaeology (known today as Tusayan Museum) reopened five days per week in July 1947, both sites offering twice-daily lectures. Seasonal staff also resumed campfire lectures at both rims in summer 1946 and evening talks at the Bright Angel and Grand Canyon Lodges in the following year, while Schellbach renewed his popular "Naturalist's Workshop" program.⁷⁴ The "horde" of visitors, as Bryant had taken to calling them, immediately outpaced these efforts. In June 1949 summer contacts topped 50,000 per month, with 2,000 attending ranger-led nature hikes, 20,500 appearing for varied lectures, and



Figure 33. The Naturalist's Workshop (formerly the Grand Canyon School, 1930s) in January 1957, one of three early South Rim interpretive facilities (the others being Yavapai Observation Station and Tusayan Wayside Museum). GRCA 3194.

another 26,600 visiting Yavapai Observation Station.

The pressure proved so great that administrators began to experiment with innovative techniques like trailside exhibits installed along village paths, inner-canyon trails, and at Phantom Ranch, and motion pictures incorporated into campfire lectures. They also offered special talks to tour groups and increased scheduled lectures at Yavapai Observation Station to four per day during the summer. This facility, the only one in the park offering Grand Canyon's "full story," had become so crowded by 1950 that motorists parked in the woods along the road a quarter mile away to attend programs. Visitors at scheduled talks could not even get into the building, while an estimated one-third to one-half of those inside could not see or hear the naturalist. Conditions improved somewhat in 1953 when workers doubled lecture space by removing the interior partition and, while they were at it, added new exhibits and enclosed the front porch with glass to

allow viewing during inclement weather. Plans were made that same year to replace the aging building with a contact station at the same or another location but were set aside a few years later with construction of the park's first visitor center.⁷⁵

Visitors had reason to be upset with village congestion, inadequate parking and overnight accommodations, long lines to obtain meals, and crowded interpretive facilities, but they could not complain about things to do or about prices, which remained tightly controlled despite postwar inflation.⁷⁶ In 1946 one could still enter the park for a dollar and stay forever at a free campsite. This offer proved so attractive that returning veterans, their families, and others stayed at the park's campgrounds while searching for regional housing, in short supply following the war. As for concession facilities, a single room without bath in the El Tovar cost only \$2.50, a one-room furnished cabin without bath in the Motor Lodge only \$2.25. Rooms at the El Tovar and Bright Angel Lodge (single room without bath, \$2.00) could be had on the European or American Plan, while the cost of meals at the El Tovar remained in line with the pre-park era: a dollar for breakfast and lunch and \$1.50 for a full dinner. Cheaper meals were offered at the Motor Lodge cafeteria and Bright Angel coffee shop. The Fred Harvey Company still offered auto, bus, horse, and mule trips into the canyon, along rim paths, and atop East and West Rim Drives at bargain prices: \$7.00 for an all-day Hermits Rest to Desert View ride with refreshments, \$6.00 for a full-day mule trip to the river with lunch, \$6.00 for a room and three meals at Phantom Ranch, and \$18.00 for an overnight Phantom Ranch trip that included room and meals.⁷⁷

By 1955 prices had increased but remained well below inflation. One could enter the park for a dollar and remain fifteen days or pay two dollars for an indefinite stay, enjoying a campsite and all NPS interpretive services and facilities at no additional charge.⁷⁸ The cheapest rooms at the El Tovar cost only \$3.50. Bright Angel and Motor Lodge cabins had undergone substantive upgrades—including hot



Figure 34. Interior of the Naturalist's Workshop 1948. Louis Schellach is shown giving a personalized tour GRCA 1568:photo by M. Eden.

and cold running water, individual baths, and water heaters—but still rented for only \$3.00. Meals at the El Tovar had increased to \$1.50 for breakfast and lunch and \$2.00 for dinner, but cheaper repasts and à la carte service were still available at the coffee shop and cafeteria. The Fred Harvey Company had expanded its tours, and the cost of the all-day Hermits Rest-to-Desert View excursion had increased to only \$8.00 and the one-day mule trip to the river to \$10.00. Two-day trips to Phantom Ranch had become so popular, however, that the price jumped to \$32.75, with reservations required well in advance.⁷⁹ A stop at the El Tovar or Bright Angel Lodge transportation desks would secure multi-day trips to the Hopi villages and Havasu Canyon, Rainbow Bridge, Petrified Forest, the North Rim, and many other regional sites at reasonable cost. Fred Harvey literature still advertised the park as “an all-year-round resort,” and proffered many entertainments free of charge. These included the El Tovar's art studio, Indian dances beside the Hopi House each afternoon, “cowboy musical programs” and dances several nights per week at Bright Angel Lodge, movies twice per week at the community building (open to tourists), and admission to Hermits Rest, Hopi House, Lookout Studio, and the Watchtower. The Fred Harvey Company also offered family rates and winter package tours in an effort to balance the summer boom/winter bust visitation cycle.⁸⁰

PROTECTION ISSUES

While park managers devoted more time and money to protection of employees, visitors, and aesthetic features of developed areas, administrators at the headquarters level continued to play the lead role in looking after the park's integrity, with varying degrees of success. Boundary studies had been completed immediately after the war, but the only adjustment made in ensuing years was the acquisition of 1,120 acres in the vicinity of Hull Tank and Moran Point, known collectively as the "Hull Tank Addition." This transfer from the national forest took place in August 1951 and created a greater buffer between hunters and tourists along East Rim Drive.⁸¹ The General Land Office through the 1920s, 1930s, and 1940s methodically exchanged parcels of the public domain for tens of thousands of state-owned inholdings. By 1942 the last of these had been acquired, bringing total federal holdings to 645,120 acres. The government bought the Buggeln ranch in 1948 and the Rowe Well mining claims in 1956, adding another 200 acres. The land office also exchanged several thousand acres of state lands within Grand Canyon National Monument during the 1930s and 1940s, bringing total federal acreage there to 196,051 by 1949.⁸²

Since the 1930s, National Park Service, U.S. Forest Service, and Bureau of Indian Affairs (BIA) officials had worked together to keep Grand Canyon's approach roads free of billboards, tawdry enterprises, unnecessary developments of any type, litter, and logging to maintain a natural-looking veneer for tourists nearing the park. In the mid-1930s Superintendent Tillotson had successfully lobbied John Collier of the BIA to keep Navajos from setting up craft and jewelry stands beside the new road from Cameron and persuaded John Verkamp to remove billboards he had erected along the road from Williams. As the Arizona Strip lumber industry began to emerge in 1948, Harold Bryant, aware of forest service plans to harvest trees within the central Kaibab Plateau, requested a 1,200-foot "scenic easement" along the road from Jacob Lake. In the same year Bryant observed that mining claims had been filed at the intersection of U.S. 66 and AZ 64, ostensibly to harvest building stone, which the superintendent did not believe for a minute. When the claimants applied for patent several years later to build a service station and automotive camp, park and forest officials foiled the entrepreneurs' plans. By 1950 park officials had convinced Arizona's senators to introduce bills to protect "scenic values" along canyon approaches, one of which was signed into law in July 1951 protecting the South Approach Road. It is also probable that they offered their support, certainly their gratitude, for the passage of Arizona's anti-littering law in 1953.⁸³

More complicated and tenacious issues concerning the park's integrity made their appearance soon after the war. Foremost were imminent threats to build dams creating reservoirs within western parks and monuments. Entrepreneurs had envisioned smaller dams within Grand Canyon soon after the turn of the century, including somewhat serious intentions to impound the Colorado River at the mouth of Diamond Creek and tributaries at the mouth of Bright Angel Creek, within Tapeats Narrows astride Garden Creek, and among the waterfalls of Havasu Canyon. Greater danger was posed by the Colorado River Compact (signed in 1922), river surveys of the 1910s and 1920s, and the federal government's commitment to build dams to supply water and power to support a new wave of western immigration and extractive industries.⁸⁴ These projects, to be undertaken with the technical expertise of the U.S. Army Corps of Engineers and the Bureau of Reclamation, fostered debate at congressional, presidential, and judiciary levels of government, reducing the National Park Service to one special interest group among many.

Although they lacked legislative authority, NPS administrators since 1919 had successfully fought dozens of efforts to invade the parks with water projects large and small.⁸⁵ In the early 1930s they had not opposed construction of Bridge Canyon Dam because they did not recognize the lower canyon's scenic value and tourism potential and because the dam site had been selected before creation of Grand Canyon National Monument. As more definitive building plans emerged after the war, conservation groups like the Sierra Club were similarly unconcerned for a high power dam at the site, reasoning that it and the resulting reservoir would be unobtrusive in the remote location, flood nothing of great significance, and open that portion of the canyon to recreation.⁸⁶ In 1948, however, the NPS began to speak out against the dam, apparently forgetting earlier administrators' apathy and taking a line more consistent with Stephen Mather's opposition to all such proposals within the parks and monuments. They also condemned what they considered a more serious threat: a proposal to build a dam within Marble Canyon that would divert the Colorado's flow through a fifty-four-mile-long tunnel beneath the Kaibab Plateau to a hydroelectric plant beside Kanab Creek, just above the headwaters of the proposed Bridge Canyon reservoir.⁸⁷

The Kaibab project was eliminated from Colorado River Storage Project considerations by 1949. NPS director Conrad Wirth expressed relief that the river between Marble Canyon and Kanab Creek would not be reduced to the flow of the Little Colorado, but debates over Bridge Canyon Dam persisted.⁸⁸ Secretary of the Interior Oscar Chapman, although he had approved the construction of



Figure 35. The first (and only) plane to land within the canyon, at Plateau Point, on 8 August 1922. G&A 5235; Fred Harvey Company photo

dams at Dinosaur National Monument in 1950, was successful in his efforts to amend Senate Bill 75 to limit Bridge Canyon Dam to an elevation of 1,877 feet above sea level. This was a compromise position,

since a dam this size would still flood the river through the monument and eighteen miles within the park, but given the political atmosphere and Bureau of Reclamation's power in the mid-1950s, it is unlikely that the NPS or anyone else could have accomplished more.

In any event, the issue faded temporarily when the House Committee on Interior and Insular Affairs tabled the dam's authorization until California and Arizona resolved their battles over Colorado River allocations. This would not happen until the following decade when the two states worked out agreements that would authorize Arizona's Central Arizona Project, triggering a new round of controversy over dams within Grand Canyon.⁸⁹

A more persistent issue taking shape after the war concerned the presence and role of aircraft within the parks. Stephen Mather first addressed the matter in 1919 when he noted their presence at Yosemite and Grand Canyon and began to receive proposals for scenic flight tours at Yellowstone and Glacier.⁹⁰ Mather understood that aviation would play some role within the parks, perhaps encouraging an airway above his cherished park-to-park highway or scenic flights above some units, and almost certainly approving of flights for administrative and fire-sup-

pression purposes. His principal concerns were for passenger safety, given aircraft's experimental nature, and for allowing "greater accessibility to the park regions in this manner." Uncertainty persisted, but by the early 1930s Horace Albright had begun to set policy whereby air service would be considered on a park-by-park basis but, in nearly all cases, would not originate nor terminate within park boundaries.⁹¹

This limited policy continued through the war years, but with renewed attention and technology advanced by World War II, administrators knew that the

entire issue of aircraft and the national parks would have to be addressed. In 1944 the NPS clarified its policy that landing fields and associated buildings, like rail and bus terminals, would be located outside park boundaries, as would experiments with "air-transport, helicopter, or private plane." This decision was based on beliefs that landings and take-offs were the most dangerous moments of air travel, that facilities within parks were unnecessary intrusions since they could easily be built on adjacent lands, and that noise at take-off would disrupt the "serenity and peace" sought by visitors and might also bother wildlife. Administrators held fast to their ban on inner-park airports despite protests from aviators and their growing industry, but assisted the Civil Aeronautics Administration and inter-departmental committees to build adjacent airports to serve park visitors. At the same time, they tried unsuccessfully to implement regulations that would set overflight ceilings and otherwise control operations surrounding the parks.⁹²

Aircraft appeared within hours of Grand Canyon becoming a national park when, on the twenty-fifth and twenty-sixth of February 1919, Lieut. R.O. Searles, in command of a squadron of DeHaviland 450-horsepower bombers, followed a triangular pattern out of Kingman to make several flights above and below the canyon's rims from Diamond Creek to the Little Colorado River.⁹³ In the same year Stephen Mather wrote that private operators proposed to establish regular service connecting the North and South Rims. He acknowledged the advantages in bypassing the trail corridor and treacherous wagon roads, as well as the fact that the most comprehensive views could be obtained

from the air. Still, he questioned the efficacy of air service, citing the need for aircraft to climb as high as 14,000 feet for safety, and welcomed additional tests. Lieutenant Alexander Pearson flew up from Nogales in June 1921 and, based out of Williams Field, made fourteen flights totaling twenty-two hours above and below the rim. Pearson judged that a rim-to-rim connection was feasible if landing strips were located at least two miles back from the abyss to afford space to gain altitude. In August 1922 R.V. Thomas, with Ellsworth Kolb as cameraman, flew from Williams and made the first landing and takeoff within the canyon at a promontory of the Tonto Platform called “Turtle Head” near Plateau Point. Thomas made a return flight ten days later with a cameraman from the Fox Weekly motion-picture company.⁹⁴

These early trips, without serious mishap, persuaded administrators that planes could be used at Grand Canyon for administrative purposes, but they rejected requests for landing fields within the park and remained uncertain about the future of commercial sightseeing flights. Scenic Airways established such a service in 1927, obtaining a forest service permit to build facilities and a landing strip just north of Red Butte. In 1929 they inaugurated transcanyon flights after clearing a strip on the North Rim at VT Park, just south of the Kaibab Lodge. Because Scenic Airways had safely served 7,200 passengers by that year with dependable tri-motor planes, Superintendent Tillotson agreed to a contract between the airline and Fred Harvey Company whereby business was solicited and flights sold from the El Tovar and Bright Angel Lodge. Scenic Airways ceased operations in 1929, but the following year sold its interests to another reliable operator, Grand Canyon Air Lines, which reinstated regular flights in April 1930 and expanded tours to other regional panoramas. The airline won the support of park administrators, who considered a concession contract the following year and began to send NPS naturalists along on flights in 1932.⁹⁵

If flight operations had remained based at Red Butte and VT Park (about fifteen miles back from each rim) and overflights few, unobtrusive, and without mishap, it is unlikely that aircraft would have become a major issue at Grand Canyon. Nothing remained as it was after the war, however. More tourists with greater wealth flocked to the national park, and entrepreneurs with technological innovations and designs on visitor dollars crept closer to its boundaries. Administrators would not equivocate in their prohibition of landing fields along the rim, but did welcome the appearance of a third airfield at Valle that would be served by national airlines and promised to bring more visitors to the park. At the same time, Superintendent Bryant as early as 1947 considered “air-borne” visitors “one of the most important policy matters” facing the service, akin to the

challenges posed in 1913 when automobiles had first begun to impact the parks.⁹⁶

Bryant’s personal concern stemmed from low-flying planes that had begun to buzz the village and mule parties below the rim, but he took even greater exception to the arrival of commercial helicopters—machines that could hover a few feet above ground and land just about anywhere. His genuine distaste arose from the efforts of Edwin J. Montgomery, president of a small company named Arizona Helicopter Service, to base scenic flights within the park in 1949. When Bryant rejected his proposal, Montgomery tried a few political end runs, then arranged to fly out of the Tusayan Auto Court, where he also operated a nightclub and restaurant. His operations lasted only a few months, from June through November 1950, but in that brief span he unnerved park staff and visitors alike by hovering near interpretive programs at Yavapai Observation Station and elsewhere along the rim. He also approached Madelaine Jacobs and managers of the Hearst estate to establish landing facilities at the Orphan Mine beside the rim and on the Hearst Tract along the river. Threats ended only when Montgomery wrecked one of his two helicopters (while airlifting members of the Hudson-Marston river party) in June and the other in November. Grounded and awaiting parts, the superintendent’s “air-borne” nemesis gave it up and moved to New Jersey, but the experience caused park administrators to look askance at this recreational activity from that year forward.⁹⁷

■ ■ ■

Dams, aircraft, and other complex issues that were begun or aggravated by national wealth, new technology, regional immigration, and greater exploitation of the Southwest would loom large at Grand Canyon in the years ahead, but in the period bracketed by the second world war and financial readjustments administrators clung to the ups and downs of ingrained policy. Their principal goals remained the proliferation and maintenance of administrative and concession facilities for the comfort and edification of visitors, followed by protection of the scenic resource. The war itself mitigated administrative demands, but the tourist onslaught in its aftermath, along with static funding, post-war inflation, personnel ceilings, and reduced work weeks, produced a sense of failure. Systemwide, the National Park Service lost some of its focus as it was called upon to do more for national recreation planning. At the local level, managers faced new challenges like utility operations, safety precautions, vandalism, littering, and escalating complaints from the public they tried to serve. Caught in the maelstrom and, by these years, not inclined to think in terms of limits to visitation, it is small wonder that they longed for more funds and personnel to catch up with tourist demands.

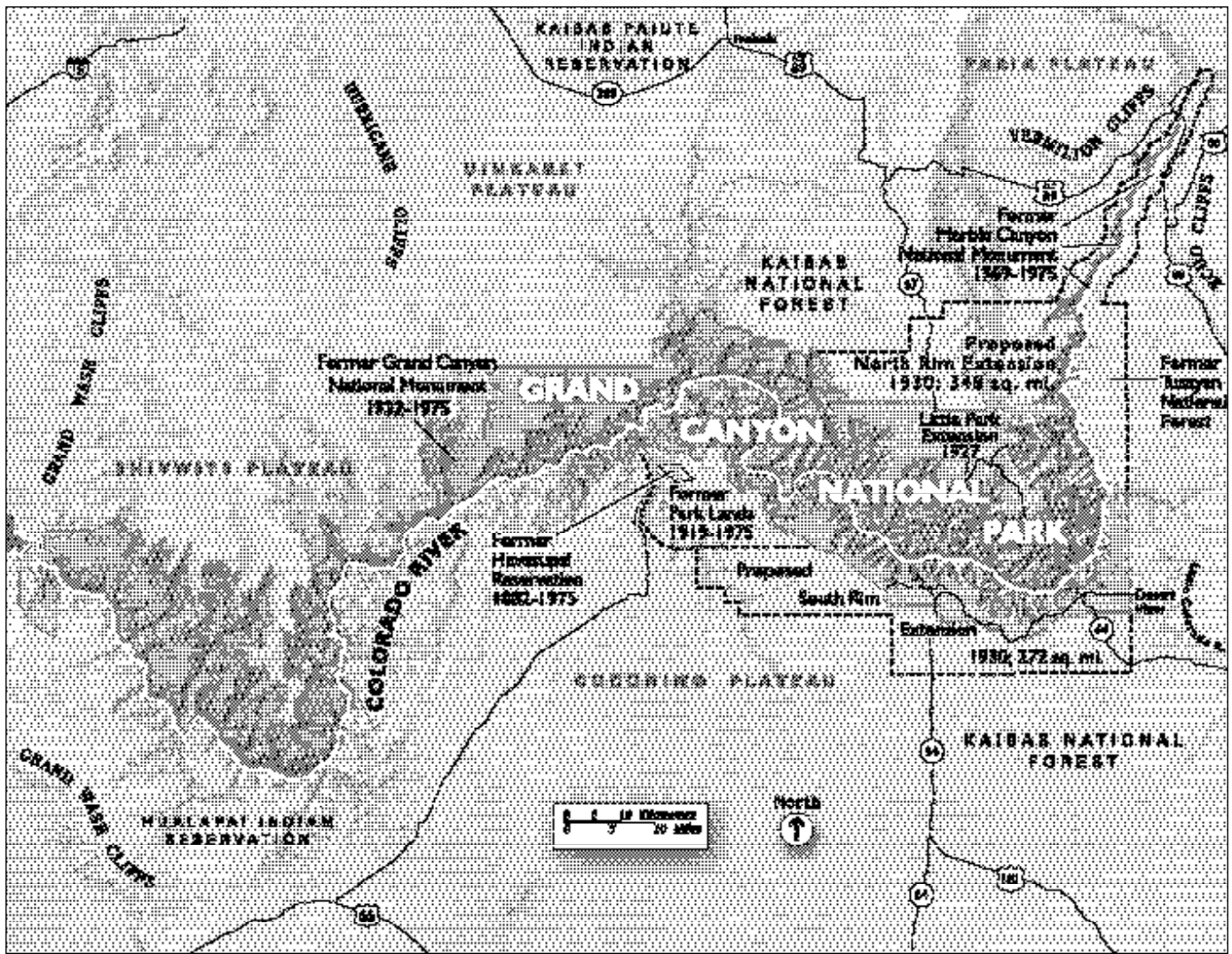


Figure 36. Grand Canyon National Park boundaries reflect more than a century of political struggle among presidents, Congress, National Park Service, U.S. Forest Service, American Indian tribes, regional economic interests, national environmental groups, and concerned citizens. This map depicts the present park boundaries extending from Lees Ferry to the Grand Wash Cliffs, but superimposes the major boundary shifts and attempted additions over the years. The park lost ground when the 1,279-square-mile monument (see figure 1)

was reduced to a 958-square-mile park in 1919 (compare to figure 2) also lost lands encompassing Great Thumb Mesa to an expanded Navajo Reservation in 1975 and failed to secure North and South Rim additions proposed in 1930. The greatest land gains were achieved with the Little Park extension in 1927 and with the 1975 Grand Canyon National Park Enlargement Act, which added Grand Canyon and Marble Canyon National Monuments along with other public lands to form the present park.



Chapter Five

Infrastructural Last Hurrah

1956 - 1975

In the mid-1950s National Park Service administrators, disheartened for a decade by visitor complaints, media critics, and their own perception of deteriorating buildings, roads, and trails, finally gained political support to launch a massive structural improvement program named Mission 66. Proponents envisioned a systemwide effort to catch up with administrative needs and provide more and better tourist facilities, posing the program's end date to coincide with the bureau's fiftieth anniversary. But construction did not end in 1966, since visitation surpassed projections and almost no one thought to reconsider fundamental policies of unlimited accommodation. The building spree, undeterred by war or financial depression and incited by the vacationing middle-class, continued at some western parks well into the 1980s. At Grand Canyon, construction of visitor services actually accelerated after 1966 and did not subside until 1983, belatedly catching up with Mission 66 objectives but once again far in arrears of consumer demand. Meanwhile, administrators' focus on development angered others more concerned with external threats to the park's integrity, which helped trigger the modern environmental movement and erode managerial consensus.

Mission 66, as envisioned by NPS director Conrad Wirth at its onset in July 1956, aimed to “wipe out the deficit in park staffs, facilities and maintenance that had been accumulating since the outbreak of World War II and to move ahead of the rising tide of public use.”¹ Superintendents' wish lists—reviewed, edited, and approved by regional and headquarters staffs—were translated into “prospectuses” for each of the National Park Service's 181 units, which in turn became the mainstays of individual master plans.²

Preceded by a year and a half of intensive preparation and aided by congressional funding that increased handsomely in each succeeding year, administrators completed much of what they set out to do by the target date, even though additional park units, inflation, and conservative visitor forecasts bloated the program beyond its initial \$460 million scope to approximately \$1 billion.³ During the first seven years alone the NPS built or rebuilt 100 visitor centers, 250 administrative and utility buildings, 650 single-family employee residences, and 122 employee dormitories

and apartment houses; more than 300 campgrounds with nearly 17,000 sites, 170 picnic areas, 50 campfire circles, 630 road- and trail-side exhibits, and 150 comfort stations; 578 miles of roads, 413 miles of trails and paths, and 1,080 parking lots; 360 water, sewer, and power systems; and two training centers, along with thousands of minor administrative structures.⁴ The building frenzy raised the annual cost of maintaining the parks from \$9.1 million in 1956 to \$21.6 million in 1964. Reflecting on Mission 66 achievements in 1976, Wirth judged that catching up to visitor demand represented the program's significant accomplishment. From another perspective, it further reinforced management bias toward structural solutions to visitor accommodation in an era when many Americans had grown weary of runaway western development.⁵

Grand Canyon's Mission 66 Prospectus fit perfectly within overall program objectives. Local administrators' highest priority was to provide, as they had always tried to provide, “physical facilities and staff to care for existing and

projected use.” Major problems, identified within fixed assumptions that more and more modern services must be supplied to an unrestricted number of consumers, included an “outmoded physical plant” designed and developed during the railroad era, a substandard road system impeded by a maze of railroad tracks in the heart of the village, and severely limited parking. Other challenges covered the spectrum of human needs and past park concerns, including inadequate staffing, housing, utilities, maintenance, campsites, interpretive services, protection of park features, insufficient overnight accommodations and restaurants, and village congestion. The sweeping answer entailed more (and decentralized) development, but water remained a fundamental roadblock. Summarily, park staff concluded that

the answer is this simple—to keep pace with visitation we must find more water. If additional supplies are found we should decentralize. If, on the other hand no new sources of water are made available, we need not decentralize, and the limits on accommodations for visitors will be automatic. In that case from an operational sense the park will have to be geared predominantly to day use

But administrators, like all park boosters, had no intention of letting water interfere with development.

The blueprint for decentralization resembled Stephen Mather’s 1919 concept as well as Conrad Wirth’s contemporary model of concentrated developments and improved backcountry access. Anticipating an appropriations windfall and determined to redistribute the visitational load, Superintendent John McLaughlin immediately went ahead with development of a new “Mather Business Zone” less than a mile east of the old village and planned to expand facilities at Desert View, Indian Garden, Phantom Ranch, Bright Angel Point, and within Grand Canyon National Monument. These developments consisted of those traditionally supplied by the National Park Service: more campgrounds, campfire circles, and comfort stations; information, interpretation, and protection buildings; and parking lots, utilities, and service roads. Ranging beyond developed areas, managers laid plans for paved and graded gravel roads to penetrate remote sites like Havasupai Point and Signal Hill, Point Sublime, Tiyo Point, Cedar Mountain, and Toroweap Overlook. Looking to encourage and distribute inner-canyon use as well, they intended to reconstruct the Bright Angel, Kaibab, Hermit, Grandview, Tanner, Tonto (Hermit to Grandview), and Lava Falls Trails and place ranger cabins or trailside shelters along most inner-canyon paths.⁷

Grand Canyon’s prospectus, like systemwide plans, also called for an across-the-board boost in personnel, housing, utilities, and amenities required to manage 1,750,000 annual

visitors by 1966. Peak daily visitation was expected to reach 16,000 by that year, with an overnight population of visitors and employees cresting at 10,000. Plans called for steady increases in management and protection staffing during 1956–66 from twenty-four to forty permanent personnel with the number of seasonal employees rising from thirty-eight to sixty-three full time equivalents (FTEs). Similar growth was forecast for maintenance and rehabilitation, which would increase from twenty to thirty-two permanent employees and twenty-five to forty-four seasonal FTEs.⁸ Excluding salaries and benefits, administrators expected base funding for management and protection to swell from \$221,000 in 1956 to \$414,000 in 1966, while maintenance and rehabilitation would increase from \$173,000 to \$398,000. Costs to expand water, sewer, solid waste, propane, power, and telephone systems to accommodate new staff were included in estimates to supply such services to visitors. Projects planned strictly to better employee living conditions included a new community building, hospital, two playgrounds, thirty-three two- and three-bedroom homes including a new superintendent’s residence, twenty-five multiple-housing units for permanent employees, 118 multiple units for seasonals, and two trailer parks. The price tag for the entire program would top \$25 million, an amount of money beyond past managers’ dreams but deemed appropriate by regional and headquarters administrators.⁹

Grand Canyon’s Mission 66 Prospectus quickly became the park’s master plan.¹⁰ Since they first appeared in 1930, such plans had merely outlined developmental schemes, serving as building guidelines as money became available for specific projects. Given national priorities, year-to-year appropriations, and changing tastes of superintendents, regional managers, and directors, these plans had never been implemented without frequent revision and considerable downsizing, particularly when it came to decentralizing and opening remote regions to the average vacationing family. The Mission 66 blueprint proved different as it was a well-funded, well-executed, multiple-year plan that continued without interruption, though with many alterations, into the 1970s and did effect a partial shift away from corridor development to dispersed facilities at Desert View and the new village commercial center.¹¹ It also heralded a departure from NPS Rustic architecture to the Mission 66 style, characterized by today’s architects as “simple, boxy, functional designs,” progressive in materials and technology, cheaper and quicker to build, but inconsonant with natural environments and quick to deteriorate.¹²

The Grand Canyon Visitor Center, completed in February 1957 at a cost of \$437,000, served as the focal point of decentralization. It was the first structure built within the new business zone during 1957–70, and the first

NPS visitor center completed during the Mission 66 years. One of more than forty centers designed by architect Cecil Doty, it was intended as the first administrative building visitors would encounter along the new South Entrance Road, thereby taking most of the interpretive burden away from Yavapai Observation Station. It would also provide quarters for the chief naturalist, U.S. commissioner, and South Rim ranger district employees, as well as space for the park's scientific collections, library, darkroom, and auditorium.¹³ Relocation of NPS services to the business zone included Mather Campground (opened in 1960 with 238 campsites); the park's first, 193-pad "trailer village" (opened in 1961, under Fred Harvey Company management); and an amphitheater near the visitor center, completed in May 1961.¹⁴ Consistent with their new role as sole utility providers, administrators contracted with the Arizona Mining Supply Corporation of Prescott to extend water and sewer lines to the new developed area in 1957. They temporarily ensured its water supply by building two two-million-gallon storage tanks and one 300,000-gallon tank in 1957, and another three-million-gallon tank in 1961.¹⁵

Initial projections for increased staff were met during 1956-65, although the actual ratio of permanent to seasonal personnel leaned more heavily to the former than had been forecast, and the park took on more responsibilities than it had planned, including operation of the Albright Training Center, completed in 1963.¹⁶ Headcount increased steadily each year from sixty-nine permanent and sixty seasonal employees in 1956 to ninety-five and ninety in 1965. Visitation, however, also rose from a little more than one million in 1956 to 1.8 million in 1966, which sustained a postwar trend away from casual, personal interaction with visitors toward impersonal informational services, traffic control, and law enforcement.¹⁷ The "disproportionate expenditure of time" spent on the latter duty was not entirely attributed to an increased number of unruly visitors. In 1961 administrators wrote, with prejudice, that the village experienced

all of the police problems oftown reaching a population of 7500 persons...[and] magnified by the fluctuating park vis

itation; the low calibre, itinerant, seasonal employee; the presence ofacial groups exemplified by four diffent Indian Tribes;and numerous Spanish-Americans. [NPS rules] are entirely foreign to some ofthese peopleand the accepted facets ofgood citizenship are often absent.

They added that the two hundred employees working the Orphan uranium mine participated in "activities which require surveillance and control," and that a policy of fingerprinting concessioners' seasonal employees was well in place. By 1960 all rangers had been appointed deputy county sheriffs, two serving as deputy U.S. marshals, and the park had acquired a U.S. commissioner to try federal cases, although most miscreants were still processed through local justices and the county superior court.¹⁹

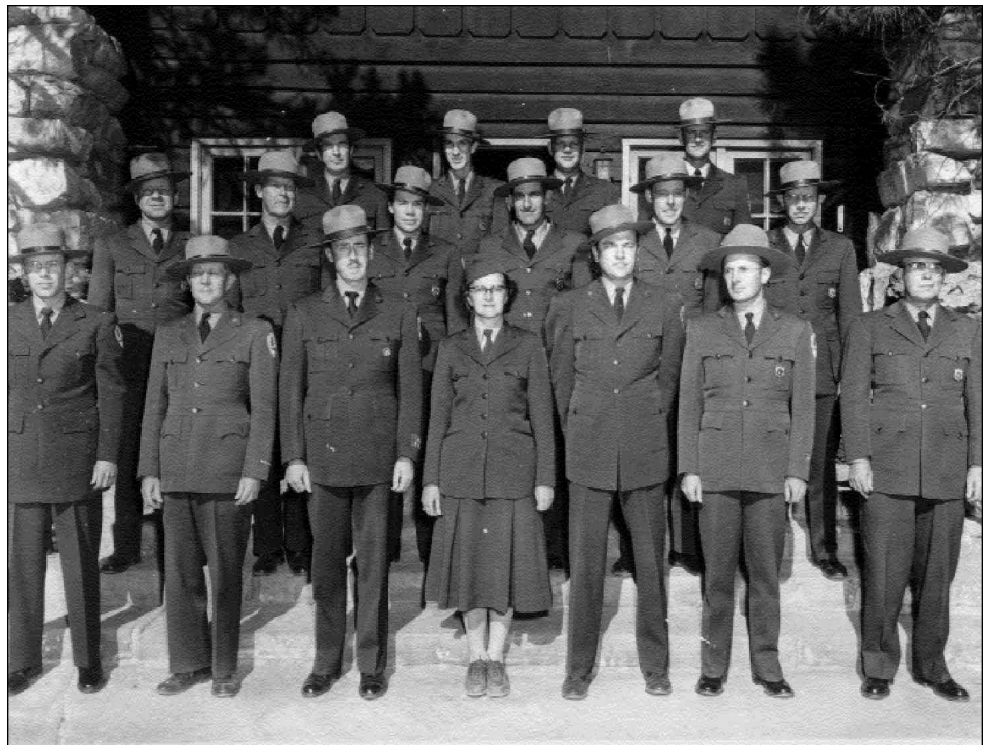


Figure 37. Uniformed personnel, April 1956. Left to right, rear: Assistant Superintendent Charles Shevlin, ranger Lloyd Hoena, District Ranger Joe Lynch, ranger Phil Iversen. Middle: Assistant Chief Ranger Pete Schuft, Assistant Naturalist Willard Dilley, District Ranger Joe Rumburg, rangers Vernon Ruesch and Dan Davis, Chief Ranger Lynn Coffin. Front: biologist Bob Bendt, naturalist Louis Schellhuth, Superintendent John McLaughlin, clk-stenographer Louise Hinchliffe, Management Assistant Sve Leding, ranger Clyde Maxey, and Chief Ranger Carl Lehner. GRCA 3196.

In response to the needs of its employees, the park lagged far behind projections and actual need as did the rest of the National Park Service. During the first six years of Mission 66, contractors erected only two four-unit apartment buildings in the village, one each in 1957-58 and 1960-61, and two three-bedroom homes, one each in the same years. The residential area began to creep southward from

the original avenues of the 1924 village plan, but a lack of homes required many permanent and still more seasonal employees to take up "temporary" residence in the trailer village. Other employee services fared better. The park's first high school was completed in 1958, which consisted of a central gymnasium surrounded by administrative offices and nine classrooms for grades 7-12. Two additional buildings to the east accommodated grades K-6.²⁰ Continuing in the spirit of Mission 66, park administrators and residents solicited funds nationwide to build the village's first formal church, the nondenominational Shrine of Ages (completed in 1970). They also helped fund a new hospital, today's clinic building, in 1968.²¹

New and expanded responsibilities assumed since World War II, including law enforcement, protection of natural resources near developed areas, and construction, maintenance, and operation of utilities, confused management's mission to some degree and certainly drained its resources. This mostly unplanned financial strain, along with construction priorities linked to visitor use along the rims and central corridor, accounted in large part for the abandonment of plans for most development outside the corridor, including improvements to remote inner-canyon trails. The trail crew kept after standard maintenance required by frequent landslides, erosion, and heavy wear along corridor paths, but no major reconstruction took place during 1956-75, and no trailside shelters or ranger stations were erected. Disintegrating backcountry trails were instead improved (and occasionally realigned) almost entirely through visitor use once backpacking became a popular pastime in the 1970s.

Original Mission 66 plans to improve backcountry access by building new roads and upgrading old ones were abandoned, probably as a result of higher than anticipated costs for village projects, but also due to systemwide criticism for overdevelopment that escalated in the early 1960s. In any event, administrators, no longer as interested in attracting visitors as in accommodating more, larger, and faster vehicles, had enough to do planning the reconstruction of principal circulation routes. In fact, consideration was given to one-way highways that would funnel traffic from the south and east entrances through the village and out again via an exit road to U.S. 66 emanating from the road to Topocoba Hilltop. Actual road improvements, however, addressed refurbishment and minor realignment of existing highways.²²

The South Entrance Road was no sooner finished than contracts had to be let to replace faulty surfacing and reconfigure its confusing intersection with East Rim Drive. Aspects of this contract, completed in 1956-57, included roadside landscaping, traffic islands at the Yavapai Spur and East Rim intersections, and masonry curbing along with

construction of the visitor center parking lot and placement of flagstone near the Visitor Center entrance. Traffic congestion and the need for additional parking by the late 1960s required realignment of the entrance road to its present path a few dozen yards south of the visitor center, completed in 1970-71. This project included all of today's landscaped traffic islands in the business zone, the walkway connecting the visitor center to today's bank and general store, and the masonry wall south of the business center parking lot.²³

East Rim Drive (today's Desert View Drive) had been built in the late 1920s along unfavorable alignments due to topography as well as Martin Buggeln's obstructive inholding. With a speed limit of thirty-five miles per hour, East Rim Drive served smaller, slower prewar vehicles and less-hurried visitors well enough, but its narrow surface, thirty-degree curves, and 8 percent grades plagued the postwar generation of visitors. Minimal improvements were effected in 1942, but significant upgrades to curves, grades, surface widths, and alignments, as well as new scenic pullouts, spur roads to scenic points, and parking lots, did not occur until Mission 66. In a series of three projects, BPR engineers reconstructed nearly the entire roadway with pullouts and spur roads during 1956-63. The new highway, widened to twenty-two feet and easing the most severe grades and curves, was engineered to speeds of sixty miles per hour, though the limit was raised only to forty-five. In conjunction with these projects, NPS workmen built and placed twenty-one redwood traffic signs. In line with trends toward self-interpretation, they also installed nine exhibit panels designed by park naturalists, financed by Grand Canyon Natural History Association, and built by Bill Chapman of Gardiner, Montana, within five exhibit kiosks of native stone, timber, and glass. The original 1934 masonry-and-log east entrance station was a casualty of the road projects, replaced by box-shaped structures consonant only with postwar architectural economy.²⁴

West Rim Drive (today known as Hermit Road), well built and less heavily traveled than other South Rim roads, was not reconstructed at this time but received better maintenance after the early 1950s. The North Entrance Road, although it required significant improvements, received none during Mission 66 because north side funding was considered of lesser priority. By the time money became available in the late 1960s, disagreements among engineers and landscape architects concerning environmental impacts postponed actual work until 1982-84, when the entire road was rebuilt with new culverts and underdrains, subgrade improvements, and surfacing. Cape Royal Road and its spur to Point Imperial were reconstructed during 1959-63 but, like all north side roads, was built atop original alignments to avoid environmental damage. Contractors improved the

subgrade and drainage features while widening the wearing surface and expanding parking areas and scenic pullouts. Nearly a dozen new or improved parking areas were added along the main road and spur. Upon completion, the same team that had produced the interpretive structures along East Rim Drive created seven interpretive panels that were installed in three new exhibit structures at Vista Encantada, Painted Desert, and Walhalla Overlooks.²⁵

Despite realignment of the South Entrance Road, reconfiguration of its East Rim Drive intersection, and decentralization of administrative services to the new business zone, the number of motorists entering the village continued to increase. Administrators could do little to ease traffic and parking congestion other than erect unsightly barricades because they were limited by the placement of buildings, topography, zoning, and the Santa Fe Railroad's right-of-way. In 1968-71 day laborers built the one-way, ten-foot-wide "Motor Lodge By-Pass Road" through the industrial zone, which allowed quicker passage through the village. In 1969 Superintendent Stricklin designated the north half of Village Loop a one-way street from the El Tovar driveway as far as the bypass road, which opened up parallel parking and eliminated two-way confusion in front of rim hotels and restaurants. With cessation of all rail traffic by 1972, Stricklin convinced the Santa Fe Railroad to allow construction of a large, gravel-surfaced parking lot atop the tracks west of the depot. These measures served to mitigate congestion, but only temporarily, as the number of vehicles circling the village mounted in ensuing years.²⁶

While the National Park Service rebuilt roads to facilitate traffic flow and accommodate faster, more varied types of vehicles, it tackled the water problem that had imperiled structural expansion since the pre-park era. The Indian Garden solution had helped through the late 1930s and still served well, but even before the war, post-depression demands required occasional water deliveries via rail that resumed in the late 1940s and continued sporadically into the late 1960s.²⁷ With decentralization to the Mather Business Zone and Desert View, visitation approaching two million, and the imminent demise of rail service, it became increasingly evident that a system originally built to sustain steam locomotives, a tightly enclosed village, and less than a half-million visitors, and which strained the capacity of the springs at Indian Garden, would no longer suffice. Tanks placed at the business zone raised storage capacity to thirteen million gallons by 1968, but continued shortages required that additional water be found and distributed to multiple rim locations.²⁸

Concerns over additional water had actually arisen with western reservoir projects of the 1930s, when NPS attorneys began to submit applications under state laws to protect the water rights of individual park units, including Grand

Canyon National Park and Monument.²⁹ Before 1941 the Santa Fe Railroad, park managers, and engineers began to formulate plans and cost estimates for alternative systems, all of which involved piping water from some inner-canyon source to Indian Garden, thence up the old pipeline. In 1941 one alternative entailed diverting Bright Angel Creek a quarter mile north of Phantom Ranch, piping it by gravity across the Colorado River to the mouth of Pipe Creek, and there building a pump house sufficient to deliver the water to Indian Garden. Another involved tapping the east fork of Haunted Creek Spring (at an elevation of 4350 feet) and piping the water by gravity to Indian Garden. Before the war, the latter alternative was preferred for its lower cost (in 1941, \$365,000) and operational economy. After the war preference was given to a system that would power a hydroelectric plant at Phantom Ranch as well as deliver water to Indian Garden. None of these ideas were implemented because administrators considered water to be a railroad responsibility, and railroad managers reasoned that it was

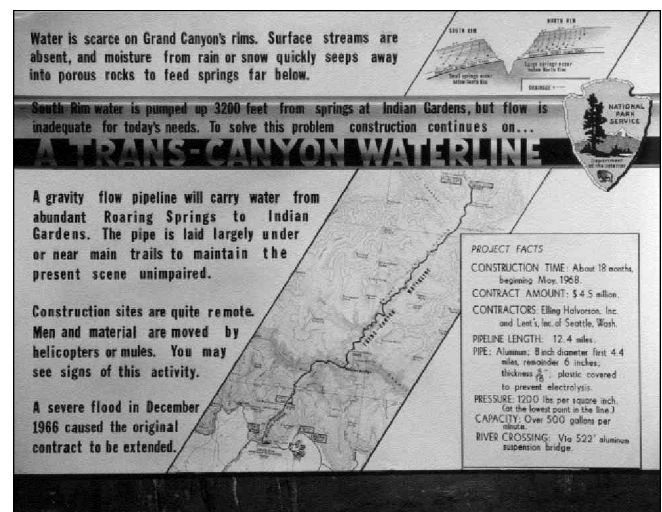


Figure 38. Interpretive sign at Grand Canyon Village in the late 1960s. GCR A 4778.

cheaper to haul supplemental water from Flagstaff at \$3.00 per thousand gallons.³⁰

In 1965, with the donation of the North Rim water system by the Union Pacific Railroad and responsibility for production in NPS hands, the park settled on a plan to transport water from Roaring Springs.³¹ In that year contractors began to build seven footbridges across Bright Angel Creek and the "silver bridge" across the Colorado River to carry a 12.5-mile gravity pipeline from the Roaring Springs pump house to Indian Garden. One of the worst thunderstorms in park history flooded Bright Angel Creek and destroyed most of the system as it neared completion in December 1966, requiring a massive cleanup effort before work could be restarted and the waterline re-engineered to better withstand floods.³² As completed in

1970, the transcanon pipeline could deliver 190 million gallons annually to the South Rim. Usage would increase steadily, however, to 136 million gallons in 1973 and 183 million gallons in 1985, requiring equipment upgrades and a new pipeline from Indian Garden to transport still more water.³³

KEEPING UP WITH VISITOR DEMANDS

As the park assumed greater infrastructural responsibilities, concessioners were able to focus on more lucrative tourist services. Administrators perceived a need to increase and decentralize these services, especially lodging and meals, in order to ease congestion. To better effect their intentions, they developed a more integrated planning process consisting of specific concession commitments within the first years of new contracts, flexible (though more time-consuming) architectural review, and coordination of service road and utility construction with concessioner developments. The new process made sense but proved too cumbersome and time-consuming to keep up with pressures from increased visitation. Development was therefore guided more by malleable intentions than fixed plans. These included removing commercial facilities from the canyon's very edge and continuing to provide a range of rooms, cabins, and meals serving lower- to upper-middle income consumers. Park managers, prodded by Congress and critics of concession policy, also hoped to receive more income from franchise fees, although adequate, modern, reasonably priced services remained of higher priority.

Ideas for the North Rim that reflected initial enthusiasm for expanded services and decentralization were immediately deflated by the concessioner's unwillingness to invest in more buildings as well as arguments within the National Park Service itself concerning overdevelopment. In order to fulfill their end of the NPS-concessioner bargain and Mission 66 objectives, administrators planned to replace the existing campground with a new one of 250 camp and picnic sites, 150 of these to be developed by 1966. They wanted to build a visitor center with administrative offices, a new protection building and jail, housing for seven permanent and twenty seasonal employees, and a children's playground at Bright Angel Point. They also intended to rehabilitate all utilities, to build a new entrance station and adjacent ranger housing, and to add a facility similar to Yavapai Observation Station at Cape Royal. Administrators expected the Utah Parks Company to participate in Mission 66 by building more cabins, increasing overnight capacity on the North Rim from 700 in 1956 to 1,500 by 1966. They also expected the concessioner to build or renovate restaurants, a cafeteria, lunch counters, or soda fountains to increase meal capacity to 5,000 per day, and to operate a planned 100-pad NPS trailer camp.³⁴

In the middle years of its twenty-year contract, the Utah Parks Company was reluctant to invest in such facilities, given that occupancy of recently renovated cabins had averaged only 70 percent since 1950, that demand exceeded supply only a few days of each season, and that they had yet to achieve profitability. The company also expressed concern that construction of a new highway to Page and Kanab in association with Glen Canyon Dam would bypass the Kaibab Plateau and detract from business. They generally doubted NPS visitation forecasts.³⁵ As it turned out, the concessioner continued to maintain and renovate existing facilities during Mission 66 but built nothing new. The National Park Service, too, did little at the North Rim, focusing instead on South Rim developments.³⁶

In 1965, with nearly 130,000 visitors arriving annually at Bright Angel Point, administrators again conjured radical changes. These included conversion of the Grand Canyon Lodge into an NPS visitor center with administrative offices, elimination of all lodge cabins, construction of two-story motel units for 400 guests at the Grand Canyon Inn and campground area, and development of a new accommodation zone at Marble Flats (Harvey Meadow) that would contain a 500-site campground, 500-seat amphitheater, and trailer village. In the following year, with the concessioner's contract nearing its end, the park abandoned these plans and sought a new agreement that would require a \$3.5 million investment for new and rehabilitated facilities at Bright Angel Point to accommodate 1,500 overnight guests.³⁷

By 1968 administrators had cut back on this ambitious program, to \$2.6 million, but the exact price did not matter, since the Utah Parks Company refused to invest in new facilities. The Union Pacific Railroad by the 1960s had grown impatient with consistent losses and, like the Santa Fe Railroad, tired of its role in the national parks. Service as well as facilities had deteriorated due to lack of investment in labor, training, and supervision, eliciting a growing number of visitor complaints. By the time a fact sheet had been developed for a new contract in 1968, the railroad was well into negotiations with a financial holding company, General Host Corporation, to purchase the Utah Parks Company.³⁸ The NPS welcomed the sale if it would effect the hefty improvement program it desired within the first five years, and General Host agreed to the investment if allowed to increase rates and make other changes to pay for them. The three parties involved—the Utah Parks Company, General Host Corporation, and the NPS—agreed to a fifteen-year contract, dependent on consummation of the Union Pacific Railroad sale. That sale fell through in early 1969, however, requiring administrators to extend the Utah Parks Company's contract on a year-to-year-basis and to start anew determining North Rim needs.³⁹

In 1969 complaints from expanding tourism interests in southern Utah concerning concession monopolies caused the National Park Service to consider removal of all commercial facilities from Zion, Bryce, and Grand Canyon's North Rim, and to reconsider the concessioner's exclusive transportation right.⁴⁰ Such a dramatic move was thought unlikely at the North Rim, since accommodations remained sparse between Kanab, Fredonia, and Bright Angel Point, and potable water was much more abundant at the latter location than anywhere else on the Arizona Strip. The possibility ended thoughts of expansion, however, and, with the donation of all Utah Parks Company's facilities to the government in 1972, certainly influenced the new concession prospectus that solicited a far leaner renovation program.⁴¹ Six bids were submitted in 1972 based on scaled-down investments and the Union Pacific Railroad's certain departure. The NPS awarded the contract to TWA Services, Inc., a subsidiary of Trans World Airlines, Inc., based primarily on the hotel-restaurant experience of another subsidiary, Hilton International. The ten-year contract executed in March 1973 called for a renovation program of only \$130,000 and payment of a \$2,000 annual grounds fee plus 2 percent of gross receipts not to exceed 50 percent of net profits. It also terminated the concession's preferential right to transportation services and allowed for the gradual elimination of overnight facilities at NPS discretion.⁴²

On the South Rim, final disposition of the Kolb concession reflected both administrators' intent to clear the rim of nonessential businesses and structures and the nation's growing interest in protecting its historic resources. Emery Kolb, aware of the park service's position, still hoped to retain his rimside studio or pass it along to his family upon his death. Emery Kolb's wife, Blanche, and brother, Ellsworth, died in 1960. Knowing that the park would not allow him to sell the concession or pass it on to his descendants, Emery sold his studio, adjacent garage, and village residence to the National Park Service in 1962 for \$65,000.⁴³ He retained a life interest in the properties and continued to operate his concession with short-term contract extensions for the next fourteen years, earning more in the late 1960s and 1970s than he ever had by delivering lectures and selling film, photographs, and native handicrafts until his death in December 1976. Kolb Studio owes its survival to Emery's tenacity and longevity. Administrators intended to remove the structure from the rim upon his death, but the National Historic Preservation Act of 1966 and subsequent inclusion of the property within the Grand Canyon Village Historic District thwarted their plans. The building remained little used until the early 1990s when Grand Canyon Association undertook restoration efforts at a cost of more than \$1 million by 1999.⁴⁴

The Verkamps' business and studio also survived due to the persistence of the family and the Historic Preservation Act. Through the mid-1960s, administrators periodically prodded the family to raze the building and relocate the concession to the Mather Business Zone. By the time a new ten-year contract was executed in January 1969, they had acknowledged the structure's historic value and no longer called for its demolition. Instead, the new agreement required the family to invest \$35,000 in a lounge and restrooms, modern fixtures and furnishings, and a new warehouse, all of which they completed by the following year. Required to pay a franchise fee of 4-1/2 percent of gross sales, the Verkamps nevertheless continued to prosper, with receipts climbing from \$190,000 in 1961 to \$800,000 by 1976. The concession's business structure changed from a partnership to a corporation in 1970, but the principals remained the wife and children of pioneer operator John Verkamp.⁴⁵

The National Park Service had more success relocating the Babbitt concession. In 1966 the company built a new store at Desert View. In the same year, they applied for a new contract, in preparation for investments in another store to be built within the new business zone along with additional employee apartments, a warehouse, and upgraded equipment and inventories. As in the past, the Babbitts offered a hard bargain, insisting on a thirty-year contract, reduced franchise fees, and compensation for their 1926 building, which administrators wanted removed. NPS negotiators countered with an offer of a twenty-year contract, fees in the amount of 2.5 percent of gross sales, and, consistent with policy, no compensation for the old building, since it would be replaced by the existing concessioner on the basis of a new contract. They also expected the company to raze the building and restore the site at its own expense. The Babbitts again enlisted the aid of their aging friend, Senator Carl Hayden, and the contract signed more than two years later reflected compromise. The twenty-year agreement, effective 1 January 1968 through 31 December 1987, called for an investment of \$715,000 and payment of 2 percent of gross sales, excluding native handicrafts. After relocating to its new store in the business zone in 1969, the company donated the old building to the park in return for contract concessions and to avoid salvage costs and site restoration. The park then loaned it to the Fred Harvey Company, who remodeled the interior and used it as an employee recreation center and home of the community library, until an electrical fire in 1994 accomplished what administrators could not.⁴⁶

Attention to the South Rim's three minor concessioners was understandably eclipsed by the desire to provide meals, shelter, and transportation to a burgeoning number of visitors. In 1957 Superintendent McLaughlin outlined facility

requirements for Fred Harvey president Leslie Scott to keep in step with the NPS program already in progress. He requested rooms, cabins, and dining facilities that could serve 2,500 overnight guests and 7,500 meals daily at the village and new business zone, 400 guests and 1,500 meals at Desert View, and 100 guests and 300 meals at Phantom Ranch. He expected that these additions, along with the National Park Service's new campground and trailer park at the business center and 100-, 25-, and 20-site campgrounds at Desert View, Phantom Ranch, and Indian Garden, respectively, would meet the demands of 1966. The Fred Harvey Company's inexperience at developing facilities, along with limited cash, a \$2 million debt to the railroad, the need to renovate existing facilities, and doubts over NPS tourist projections, prevented the company from meeting McLaughlin's suggestions by the target year. They did undertake an aggressive building and renovation program, however, completing the ninety-six-room (384 pillows) Yavapai Lodge in 1958 and its sixty-four-room (256 pillows) second phase in 1962, the \$150,000 camper services building in 1961, the Desert View service station in 1963, and an addition to the Bright Angel Lodge dining room in 1964. The company also remodeled rooms, cabins, and dining facilities at the El Tovar, Bright Angel Lodge, and Motor Lodge on an annual basis, and built residences and dormitories for its employees, who numbered 660 in the summer of 1966. With commitments to invest only \$1 million during the life of its 1954 contract, the Fred Harvey Company actually spent more than \$2.7 million in capital improvements during 1954-66 alone.⁴⁷

Despite significant concessioner and NPS investments made by 1966, lodging and dining services fell short of Mission 66 plans. For its part, the National Park Service

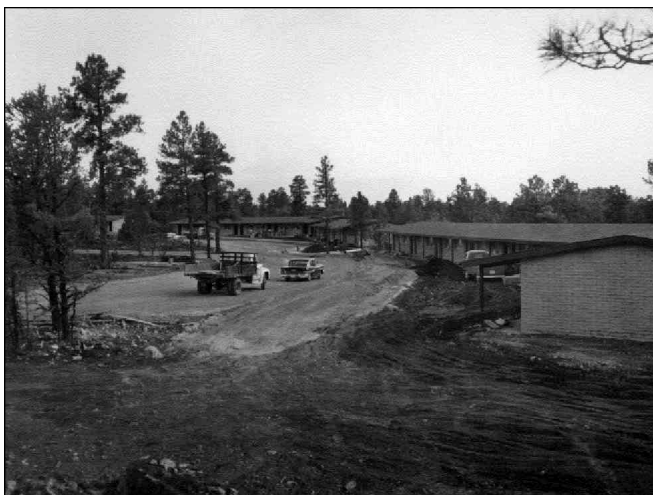


Figure 39. The first units of Yavapai Lodge under construction, April 1958. GRCA 3355.

did add nearly 200 overnight units with the trailer village and eased pressure at the Motor Lodge by relocating camp-sites to the 238-site Mather Campground.⁴⁸ The Fred Harvey Company did not measure up to expectations, however, failing to add anything at Desert View and Phantom Ranch while achieving only 305 rooms at the El Tovar and Yavapai Lodge and a few more than 200 cabins at the Motor Lodge and Bright Angel, for a total pillow count of 1,650.⁴⁹ Dining facilities lagged as well, with the addition at Bright Angel Lodge raising the number of village dining seats to only 825. At the same time, visitation doubled, from 890,000 in 1955 to 1,800,000 in 1966, and efforts to better distribute the seasonal load failed. Facilities remained more than adequate during most of the year, but since demand continued to exceed capacity during the summer months, complaints of those who were turned away or waited in line for meals never diminished.⁵⁰

Under this kind of visitation pressure, administrators abandoned hopes of removing commercial facilities from the rim. They retreated instead to a policy of limited construction within the old accommodation zone (bracketed by Kolb Studio and Verkamps Curios), adding new hotels and dining facilities to replace old Fred Harvey Company dormitories and a few nonessential structures. This policy shift was also influenced by Fred Harvey president Leslie Scott, who persuaded NPS managers that more people in the future would arrive by bus from the gateway towns and new Grand Canyon Airport. Without automobiles, taxis, or shuttle service, these visitors, like those who had long ago come by train, would prefer rim accommodations rather than a long walk from the Yavapai Lodge to the canyon's edge. Scott also argued that additions to the Yavapai and Motor Lodges would still be necessary for motorists, but there could be no construction until completion of the new water system.⁵¹

Recognizing escalating peak demands as well as administrators' desire to satisfy them, the Fred Harvey Company offered in 1967 to undertake a \$1.6-million-dollar program to further modernize and expand facilities in return for a new contract. The company had lost its reluctance to build since the 1954 agreement, earning annual net profits of 6.3 to 9.5 percent, and 30 to 38 percent returns on investment, on gross receipts of \$4.1 to \$5.2 million by 1961-64. During the same four years, they paid only \$36,000 to \$43,300 per year in franchise fees, computed at .75 percent of gross, and had nearly retired their debt to the Santa Fe Railroad. The company had done so well, in fact, that the NPS renegotiated the franchise fee to 1.5 percent of gross in 1965.⁵² Administrators jumped at Scott's offer, but insisted on a still greater financial commitment. Thereafter, NPS and Fred Harvey Company officials hammered out a \$3 million, five-year program to include a new Yavapai Lodge

services building and a third phase of additional rooms within the Mather Business Zone; replacement of cabins at the Bright Angel and Motor Lodges with multiple units; a new hotel west of the El Tovar; and a 100-unit campground at Grandview, to be followed by another \$2 million, five-year program. The contract, executed in March 1969 for the period 1 January 1969 through 31 December 1998, required two five-year building programs and payment of 2 percent of gross receipts, excluding native handicrafts. Other terms retained from prior contracts included the company's possessory interest in its assets, a monopoly on transportation services with the NPS reserving the right to reconsider, preferential right to provide its services and to subsequent contract renewals, and the subordination of franchise fees to "objectives of protecting and preserving the area and providing adequate and appropriate services for visitors at reasonable rates."⁵³

The Fred Harvey Company's ability to expand contractual programs to meet NPS developmental requirements was facilitated by its July 1968 merger with AmFac, Inc., a Hawaii-based company that was formed in the mid-nineteenth century to grow sugar cane but had since diversified into wholesale merchandising, department stores, general finance, real estate, and resort properties.⁵⁴ Award of the contract touched off a controversy involving another corporate conglomerate, Host International, who had managed to put together a bid during the thirty-day public-notice period. They proposed a \$15 million construction program that would include a twenty-million gallon underground water-storage facility with pipelines (to be donated to the government), a new 300-room hotel, restaurants, trailer parks, campgrounds, retail stores, and service stations. The conflict underscored the intimate collaboration between the National Park Service and its principal concessioner. Host International claimed that the relationship was too close for true competitive bidding, given frequent NPS-Fred Harvey Company meetings to settle on requirements before going to bid, the brief period of public notice, and preferential rights. In the end, the park managed to deflect criticisms and affirm the new contract, but the experience, reflecting a new era of corporate competition for lucrative national park tourist markets, would contribute in following decades to more democratic methods of assessing developmental needs and awarding concession contracts.⁵⁵

Since neither the National Park Service nor the Fred Harvey Company had expected competitive bids, they continued building and renovation projects while contract negotiations ran their course. They agreed to focus on visitor services at the Motor Lodge, along the rim, and within the Mather Business Zone while postponing plans for Desert View, Grandview, Phantom Ranch, and sites west of

Rowe Well. They disagreed over architectural design, exact building sites, and construction priorities, and the concessioner often found itself in a "hurry-up-and-wait" position as administrators struggled with master plan revisions and funding for each new building's utility requirements. By 1968 the concessioner had overcome most obstacles, and they began their most aggressive building program in park history. At the Motor Lodge, which would be renamed Maswik Lodge in the early 1980s, the concessioner replaced nearly 100 cabins dating to the late 1920s with two-story, multi-unit accommodations. After pondering the demolition of Colter Hall for several years, the concessioner opted instead to relocate the Fred Harvey dormitory known as the Brown Building and tear down the Colter Hall annex, making room for the Thunderbird and Kachina Lodges, built in 1968 and 1971 respectively. Park service contractors finally finished laying utilities and a parking lot at the business zone in 1969, paving the way for the Yavapai Lodge central services building and a third phase of motel units, both completed in 1972, as well as the Babbitt Store, post office, and bank. In all, the concessioner spent nearly \$10 million in new and remodeled visitor facilities, employee dormitories, and other support structures during 1967-76, belatedly exceeding Mission 66 goals with 665 rooms sleeping 2,500, 114 cabins housing another 346, and more than 900 dining room and cafeteria seats.⁵⁶ All the while, visitation increased to 2.7 million by 1975, dashing administrators' hopes that the new facilities would meet demands.

Congestion in summer months concerned NPS managers, who had another type of experience in mind for the traveling public, but pleased concessioners who depended on capacity demand to offset winter doldrums. General inflation and a desire to increase profits had caused prices to jump since the early 1950s, despite administrators' persistent arguments with Fred Harvey Company (and later AmFac) managers to accommodate lower- to upper-middle class clientele. By 1977 older cabins at the low-end Motor Lodge had increased to \$13 to 15 per night, with new "highrise" multi-unit rooms priced at \$24, despite economies in their construction. Rooms and cabins at the mid-range Bright Angel and Yavapai Lodges rented for \$19-30, while prices at the high-end Thunderbird, Kachina, and El Tovar ranged from \$30 for a single to \$65 for suites. Visitors could still enjoy most of the scenic trips offered since the 1920s, but fares had climbed to \$24 for a mule ride to Plateau Point, \$90 for a two-day trip to Phantom Ranch, and \$5-15 for a bus ride to Hermits Rest, Desert View, or Cameron. Added facilities, higher prices, and management efficiencies nearly tripled AmFac revenues from \$6 million in 1966 to \$15.8 million in 1976, with after-tax profits rising consistently during the same period from \$540,000 to \$1.5 million. Franchise fees at 2 percent of gross also rose substantially, from \$90,000 to \$277,000.⁵⁷

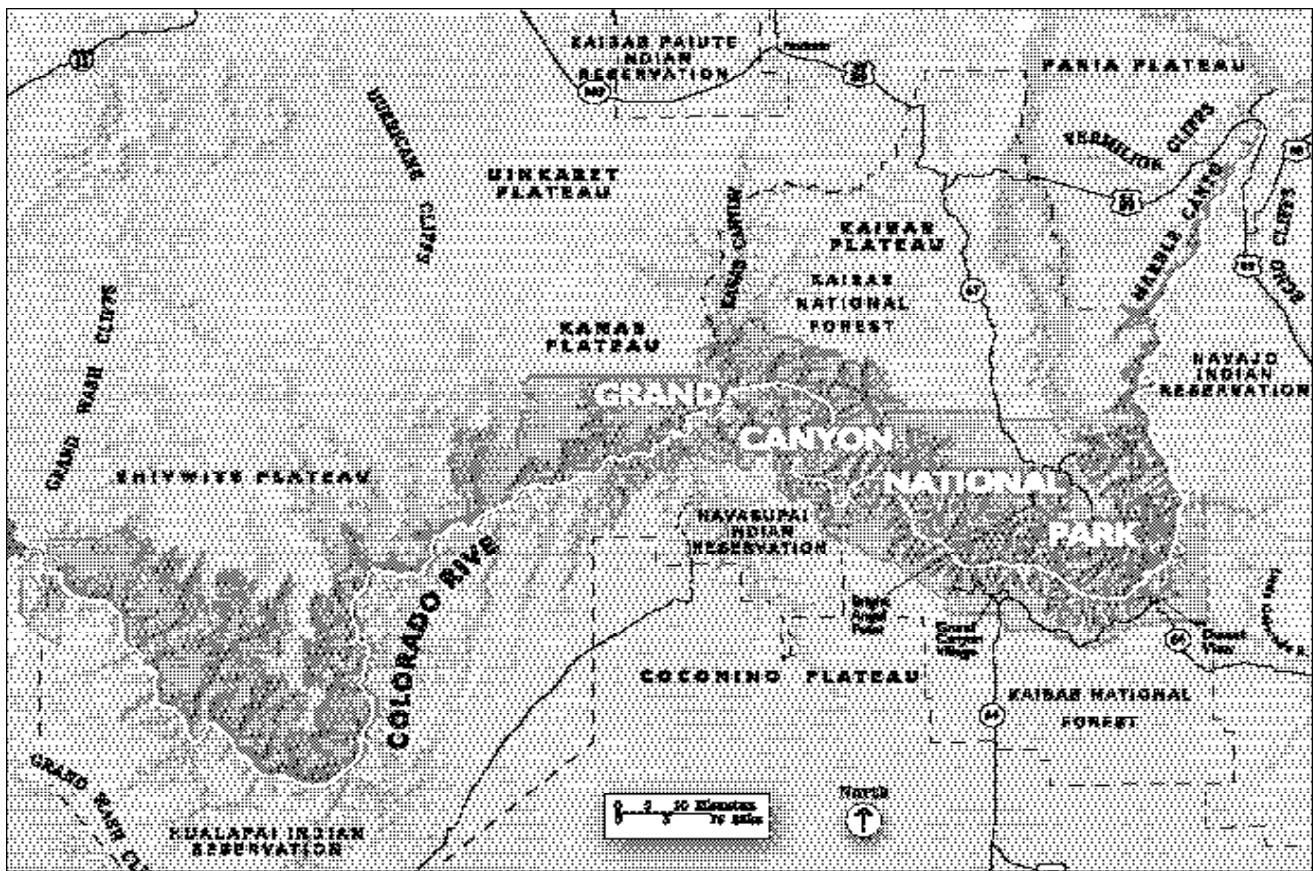


Figure 40. Map of park boundaries, post-1975. Since 1975 Grand Canyon National Park boundaries have provided a modicum of protection to the entire length (277 miles) of Grand and Marble Canyons. However, they do not ensure against the adverse effects of regional development, in-park developments, burgeoning visitation, varied forms of pollution, noise, neighboring land manager's practices, and potential development by bordering tribes and private land owners.

This map shows the neighboring tribes and agencies, the area set aside for special (traditional) use and in-park areas designated for NPS development. It cannot adequately convey today's problems with private tourism developments, water shortages, aircraft overflights, air pollution, automotive congestion, escalating backcountry use and a river that no longer flows freely.

NPS/ENVIRONMENTALIST RIFT

While local administrators focused on crowds and consumer demand at Grand Canyon Village and wavered over decentralization and North Rim expansion, the National Park Service officially remained silent concerning protection of the canyon as a whole, a circumstance that, combined with the building mania of Mission 66, opened a still-unhealed rift between the agency and long-time environmental supporters. When proposals to dam the river got back on track in the mid-1960s, park officials proved as impotent in shaping the outcome as they had in the 1950s. Superintendent McLaughlin picked up where Harold Bryant and Lon Garrison had left off in condemning a high dam at Bridge Canyon that would flood the river through Grand Canyon National Monument and a portion of the park itself. NPS director Conrad Wirth again spoke out against any action that would affect the river within park bounds, and lost his job for the effort. But nothing had really changed from the prior decade. Interior Secretary Stewart Udall, like his predecessor Oscar Chapman, sided with the Bureau of Reclamation and developers when he ordered NPS personnel to remain quiet or toe the official line.⁵⁸

Udall's position and NPS quiescence in effect surrendered responsibility for protecting the park (and Grand Canyon as a whole) to a coalition of preservationist organizations responsible for the modern environmental movement. The Sierra Club and its executive director, David Brower, smarting from the compromise that resulted in Glen Canyon Dam, led this coalition against one of the grander water-augmentation schemes ever conjured in the West, one that again included hydroelectric dams at Bridge and Marble Canyons. The controversy reached its climax during 1963-68, pitting a mounting number of outdoor organizations, newspapers, magazines, politicians, and inflamed citizens against a predictable array of state governments, western developers, their congressional allies, and the Bureau of Reclamation. The Colorado River Basin Project Bill that emerged in 1968 again reflected compromise, with preservationists achieving their principal goal of preventing dams within Grand Canyon, but at the price of coal-fired generating stations that would power regional towns and cities as well as Arizona's metropolitan water lifeline, the Central Arizona Project. Those who had entered the fray to save the river viewed the outcome as a

positive step forward, however, and gained confidence to effect passage of important environmental legislation in ensuing decades.⁵⁹

The momentum gained in the struggle to defeat the dams led to efforts to protect the canyon in its entirety. Independent of a marginalized, still-silent National Park Service, the Sierra Club in 1963 passed a resolution to include Marble Canyon and the lower Grand Canyon within the park and drafted legislation to that effect that was introduced by House Representative John Saylor in 1966. The bill failed, but it may have inspired Stewart Udall to propose a 70,000-acre addition in the following year that would include Marble Canyon and Kanab Creek. Udall's proposition also failed, but he persuaded President Lyndon Johnson to create Marble Canyon National Monument by proclamation in January 1969. Monument status removed Marble Canyon's potential dam sites from Federal Power Commission authority and effectively blocked lingering water project schemes of individual states. In the following five years environmental groups joined the National Park Service, adjacent land management agencies, and Indian tribes to determine exact boundaries for a park that would enclose the entire canyon. Their efforts were rewarded by the Grand Canyon National Park Enlargement Act (Public Law 93-620) of 4 January 1975 that absorbed Grand Canyon and Marble Canyon National Monuments and, with additional adjacent lands, nearly doubled the park's size to more than 1.2 million acres.⁶⁰

The enlargement act created today's park, which extends from the Paria River at Lees Ferry to the Grand Wash Cliffs near river mile 277, including important tributaries and new additions to the North Rim. As a compromise it returned 83,800 acres of park land to the Havasupai Tribe in the Manakacha, Topocoba, and Tenderfoot Plateau areas and ensured their traditional use of another 95,300 acres. Expansion also introduced or changed the nature of debates between administrators and the Havasupai, Hualapai, and Navajo Tribes. Since 1975 the NPS has been concerned over scenic easements along the rims and that tribal develop-

ment not conflict with backcountry objectives. The tribes have developed an interest in canyon-related tourism facilities, and they now argue reservation boundaries in terms of traditional land use that overlaps politically drawn park boundaries.⁶¹

On a broader plane, the National Park Service's enforced neutrality in the twenty-year struggle to prevent dams and their late entry into efforts to protect the entire canyon helped bifurcate the course of park management. On the national path, unfettered and empowered environmental groups assumed the task of fighting for preservation against developmental interests (including the National Park Service, when so perceived), using litigation, political lobbying, and public opinion to achieve their ends. On the regional path, administrators persisted as they always had with immediate demands of recreational tourism, trying to limit developments and other intrusions to some extent but remaining only one federal bureau among many interests engaged in public land management as well as western development.

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Following the traditional path during 1956-75, canyon administrators and their concession partners worked in tandem to respond to democratic demands for more and better roads, trails, hotels, cabins, restaurants, campgrounds, and interpretive facilities. Along the way, they abandoned rustic architecture for the Mission 66 Style, adding to the inconsonance between the natural environment and human constructions that NPS founders had worked hard to avoid. They also wrote and rewrote master plans to suit demand rather than an aesthetic or ecological ideal and once again considered extreme decentralization of customer services before settling on modest expansion, due primarily to economic restraints. More administrative and concession structures would be built in ensuing years to accommodate greater numbers of visitors, but the 1960s and 1970s probably marked the last time that an in-park construction program like Mission 66 would be undertaken.

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Chapter Six

An End to Consensus

1976 - 1999

Since the days of Mission 66, the National Park Service has been subject to increasing criticism for its management of parks as tourist meccas rather than as natural sanctuaries. This disapproval had long been expressed but had been overridden by the onslaught of western development. Disapproval over park management attracted Grand Canyon advocates during the dams controversies. These advocates gained a political voice and aimed it where it could accomplish the most—at Congress, the executive branch, and the courts, as well as the National Park Service—in an attempt to shift public policy and administrative priorities away from accommodating unlimited numbers of visitors. The tenacity of NPS-concessioner relationships and the ascendance of regional tourism as a major economic force, however, has proved the strength of the economic rationale for creating and sustaining the parks. Concern for the integrity of park ecosystems may cause significant policy shifts in the twenty-first century, but in the presence of unrestrained population growth, development, pollution, and park visitation, it has so far served only to complicate park administration.

NPS historian Richard Sellars argues that the National Park Service through the years has practiced “facade” management, with its principal goals aimed at scenic appearances regardless of biological consequences.¹ Sellars’s history of events is persuasive but suggests that the park service adopted such management practice as a conscious policy, that it had the authority to run the parks much differently, and that it has done almost nothing since the 1930s to effectually protect the environment. It is difficult to argue with the conclusion that the parks are not as healthy as they appear, and that money and attention have always followed a developmental path, but the responsibility for this is better attributed to our culture as a whole. In the second half of the twentieth century, popular awareness of the natural world progressed beyond notions of parks as refuges for conspicuous game animals and as international playgrounds, toward a realization of the necessity to sustain ecosystems—for humans’ sake, if not the rest of nature’s. Yet attention is still focused on demands of the traveling public. Perhaps the most appropriate censure that can be

directed at administrators from today’s perspective is that they have given most of us exactly what we wanted and have not taken an aggressive leadership role to protect us from ourselves. At the same time, that reproach should be tempered by an acknowledgment of what administrators have accomplished in the way of protection.²

The onset of World War II, constricted operational budgets, loss of New Deal money and personnel, and the swell of postwar visitation, along with nearly everyone’s preoccupation with visitor accommodations, reduced the promising ecological research begun in the parks in the 1920s to an operational undercurrent until the building frenzy of Mission 66 provided a catalyst for subsequent controversy. Lack of research and research-based management were among complaints, but most critics in the 1960s held fast to concerns for rustic landscapes amid the sprawl of new construction, while remaining anthropocentric in defense of open lands for human use and enjoyment. These critics were joined by ecologists from among the park service’s own ranks, conservation groups, and institutional sci-

entists who in turn were supported by scathing reports by the National Academy of Sciences and naturalist A. Starker Leopold completed in 1963.³

Systemwide, perhaps the most significant result of both scenic- and ecology-based criticisms since the 1960s has been a slight but noticeable shift in the historic imbalance of visitor use over resource protection, reminiscent of the limited gains made by earlier conservation initiatives over nineteenth-century exploitation of the public domain.⁴ The rise of the modern environmental movement just thirty-five years ago prodded Congress to respond with the Wilderness, Endangered Species, Federal Air Pollution, Water Pollution Control, and National Environmental Policy Acts. These environmental initiatives imposed real (if piecemeal, underfunded, and often frustrated) mandates for private industry and federal land managers. The National Park Service's overall response to these initiatives has been described as "sluggish," a fair assessment from the preservationist viewpoint. But park managers have complied with sociological, cultural, and environmental studies as funds have been appropriated, even though these studies have not yet resulted in an ecology-based NPS management culture.⁵

Administrators' approach to natural systems at Grand Canyon National Park began with the protection of scenic resources through set political boundaries and the exclusion of traditional extractive economies. Although aesthetic motivations have predominated and are still given higher priority in terms of base funding and personnel, managers throughout their eighty-year tenure have always addressed if not resolved manifest natural imbalances. Opposition to grazing, which clearly degraded native flora and usurped the range of native fauna, began in 1919 when the entire canyon except Bright Angel Point and Grand Canyon Village was considered open range, subject only to permits and a cow's ability to access the abyss.⁶ Cattlemen's opposition to restrictions included broken fences, open gates, overstocking, grazing beyond permit periods, and political appeals, and proved stiff from that year well into the 1950s. But park superintendents remained committed to grazing's demise within park boundaries, achieved at last in the mid-1980s. They proved their determination by terminating rights at the death of permit holders, reducing allotments in response to overgrazing and drought, assigning rangers to annual roundups, and allotting personnel to build and maintain drift fences.⁷

The elimination of grazing represents one of the most enduring, beneficial programs canyon administrators have ever undertaken toward environmental protection. Well-intentioned efforts to manage wildlife proved far more complicated and demonstrated a great deal of ignorance concerning ecology. At first, in the interests of protecting

animals valued by tourists and hunters, park rangers joined federal game wardens to enforce forest service policy, implemented in 1906, to exterminate four-legged predators.⁸ Primary targets were once-abundant mountain lions, bobcats, and coyotes but also included domestic dogs, cats, and any other animal that fed upon deer, antelope, mountain sheep, elk, and other crowd-pleasing creatures. Consistent with evolving systemwide policy, Superintendent Tillotson modified this program in 1928, writing that predators would be killed "as needed so that serious danger to the more important game animals will be kept to a minimum." In 1931 he stopped the practice of killing them as a matter of course.⁹ Meanwhile, recognizing "many years of ruthless hunting" during the pre-park era, administrators immediately enforced the NPS policy prohibiting hunting and firearms within park boundaries. Rangers regularly patrolled park borders during autumn hunts on adjacent lands. They counted the number of deer bagged each season during the 1920s through the 1950s, arrested and prosecuted poachers, and in 1949 opened a "temporary camp and deer checking station" near the intersection of East Rim Drive and the Grandview spur road in order to check hunters passing through the park.¹⁰

Killing predators and prohibiting the hunting of game animals in Grand Canyon Game Preserve had, by 1920, produced too much of a good thing: an irruption of Rocky Mountain mule deer. The surplus incited a decades-long program of balancing their number with available browse while trying to improve range conditions. The U.S. Forest Service mitigated the problem by introducing controlled hunts on the Kaibab Plateau in 1924. In the same year, park rangers began to cooperate with the forest service and the Arizona Game & Fish Commission in their annual deer counts. A few years later, they began to participate in the forest service program to trap and ship fawns from within the Kaibab National Forest to game preserves throughout the West. Sixty of the trapped fawns were ferried by truck and air to the South Rim from 1927 through 1931, a number considered optimal for visitor enjoyment and range conditions. Tillotson wrote in 1932 that the "friendly little creatures" were great tourist favorites, but reconsidered their value when numbers climbed to 550 in 1934. An end to artificial feeding in November 1934 had little effect on overpopulation, and in 1939 Superintendent Bryant began to study the village "deer problem." In the early 1940s rangers again initiated a trap-and-ship program to "relieve congestion," removing thirty to one hundred semi-tame deer per year from the village to Desert View. By the early 1950s Arizona Game & Fish had taken over the program to transport surpluses to southern Arizona.¹¹

Mule deer were the park's most noticeable, and therefore most highly prized, animals, but rangers also moni-

tored less conspicuous native animals like porcupines and beaver, trying trap-and-release methods in the 1930s to relocate the latter away from threatened cottonwoods along Bright Angel Creek. Working with the U.S. Biological Survey and private funding, they also introduced twelve pronghorn antelope to the Tonto Platform near Hermit Camp in 1925.¹² Rangers had high hopes that these tourist attractions would thrive through artificial feeding and restoration of the platform's native flora. In 1931, when only nineteen were counted, rangers began to doubt the habitat's suitability. The entire herd of twenty-four were enticed to Indian Garden by 1933 following the closure of Hermit Camp, but when artificial feeding ended in 1935, they began to scatter along the Tonto Platform as far east as Pipe Creek. In 1944 only one remained, at Indian Garden,¹³ and rangers turned instead to the propagation of wild turkeys

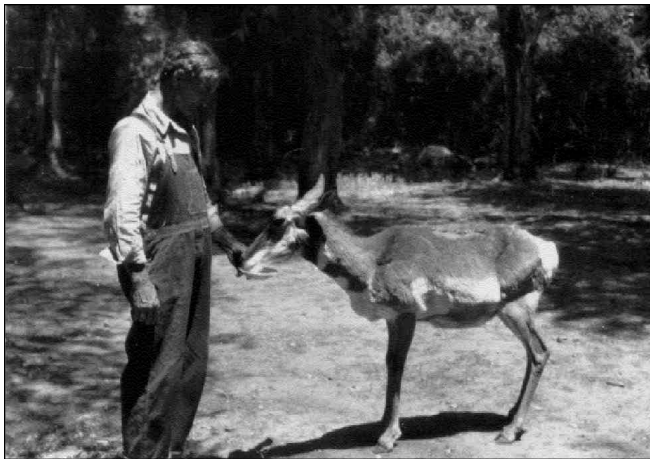


Figure 41. At Indian Garden, trail caretaker Newt Schaeffer feeds one of the few surviving antelope introduced to the Tonto Platform in the 1920s. Artificial feeding of "game" and other crowd-pleasing animals was park service policy prior to World War II. GRC A 17673; photo by Edwin McKee

that had migrated to the Grandview area by the same year. During 1948-50, they released a number of gobblers into the wild flock and thereafter noted an encouraging increase in the village area.¹⁴

Administrators combined these programs to manipulate native animals with erratic efforts to address exotic species, favoring their introduction when they promised to enhance the visitor experience or their removal if they caused evident biological damage, before settling on a consistent policy of exclusion (or control) by the 1960s.¹⁵ Feral burros that had thrived on the Tonto Platform after abandonment by prospectors and early tourist operators were held in greater disdain than cattle because they denuded the range and thereby threatened native fauna like the desert bighorn. They also wore a bewildering array of paths that confused hikers, accelerated trail erosion, and enticed Fred Harvey

Company mules to leave the Bright Angel and South Kaibab Trails. Rangers shot more than 1,500 burros during patrols along the Tonto Trail between 1924 and 1933, when Tillotson, believing they were under control, modified policy to one of "partial extermination." By 1949 another 1,600 had been shot, and hunts persisted into the 1970s when public sympathy led to a successful if expensive program of trapping, removal, and adoption.¹⁶

Eliminating one exotic species did not prevent administrators from undertaking an aggressive program to introduce nonnative trout to the canyon's perennial creeks, solely to promote sport fishing. Between 1919 and 1964, rangers obtained more than a million eggs and fry of loach leaven, rainbow, black spotted, and eastern brook trout from hatcheries at Page Springs, Arizona, and Springdale and Richfield, Utah, laboriously packing them in aerated cans down to Roaring Springs, Bright Angel, Wall, Ribbon Falls, Clear, Havasu, Shinumo, and Tapeats Creeks, and Thunder River. In 1931 Tillotson wrote that all "favorable trout streams of the Park are now well-stocked." Policy thereafter remained one of annually checking and re-stocking tributaries following major floods that flushed trout to their deaths in the murky Colorado River. Rangers also periodically checked food supplies and on at least one occasion planted freshwater shrimp as a food supplement. In winter 1931-32 they built a field hatchery at Roaring Spring that was used to stock Bright Angel Creek and nearby drainages, and began to receive training in "fish culture." In 1935 Tillotson bragged that the canyon contained some of the best fly-fishing streams in Arizona, but that they would require "continued re-stocking if we are to meet the fishermen's demands." Stocking within the park ended in 1964 but began above Lees Ferry soon after. The cold, clear water released from Glen Canyon Dam is now an avenue rather than a barrier for exotic trout that make their way downstream to spawn within canyon tributaries.¹⁷

Early attention to forest health exceeded even the considerable enthusiasm displayed for wildlife management. There were three clear goals: protecting the forest from disease, insects, and fire; cutting as few trees as possible for developmental purposes; and maintaining scenic areas beside roads, trails, and developed areas.¹⁸ To achieve these aims, the National Park Service sought the assistance of the American Forestry Association, U.S. Forest Service, and Bureaus of Entomology and Plant Industry to augment efforts of its own forestry division. The latter two federal agencies studied forest pathology and directed rangers to attack infestations with cut, peel, and burn programs in the 1920s and 1930s. These methods gave way to more effective though indiscriminately deadly, chemical treatments in the 1940s, which were combined with biological measures by the 1970s.¹⁹

Grand Canyon administrators began their long association with the Bureau of Entomology during the 1924-26 campaign against the Black Hills beetle within North Rim stands of ponderosa pine. Thereafter, entomologists made frequent inspections of north- and south-side forests, and park rangers, with CCC assistance in the 1930s, undertook periodic maintenance programs to control endemic insects and disease. Aside from the Black Hills beetle, superintendents reported campaigns against tent caterpillars among North Rim aspens in 1933, the southwestern pine bark beetle within ponderosas in 1936, black canker among North Rim aspens in 1942, ponderosa twig blight in 1945, and epidemic scale and mistletoe infestations along the South Rim in 1948 and 1949, respectively. Before the 1940s, controls consisted of cutting, peeling, and burning the bark of as few as seventy to as many as thousands of infected trees, with peeled logs saved for fuel, barrier logs, and small construction projects. Failure with experimental "spraying" against scale led to a study of the disease's "life history" in 1948 along with plans for additional chemical treatments. USDA pathologists researched black canker during 1941-44. Park rangers consulted with NPS regional and assistant chief foresters before undertaking a lengthy program of mistletoe control during 1949-52 that consisted of pruning, felling, peeling, poisoning, and chipping infested trees along East Rim Drive and within the village. DDT made its appearance in 1953 when rangers sprayed a fifty-foot strip of aspens for tent caterpillars along Point Imperial Road, reporting the treatment to be nearly 100 percent effective.²⁰

While efforts to control forest insects and disease were focused almost exclusively along roads and within developed areas, an unrelenting war on fire encompassed the entire park and adjacent national forests. Park administrators agreed with USFS supervisors to report and suppress fires regardless of jurisdiction. Beginning in 1919 and during each summer thereafter, park rangers—later replaced by CCC recruits then "fire control aids"—staffed park lookout towers inherited from the forest service and reported smoke by single-strand wire to the superintendent, who dispatched rangers to the vicinity.²¹ Throughout the 1920s-1950s, efforts became more intense, sophisticated, and costly. Methods and tools included fire training for nearly all park residents, formal fire control plans by 1929, a vegetative type map and "fire atlas" completed in 1935, better telephone alert procedures, experiments with field radios in 1937, the use of patrol planes by 1949, a central forest fire dispatching system in 1951, and ground-to-air communications by 1952. Superintendent Bryant was satisfied that annual fires burned an average of less than one acre per thousand in the early 1950s, unaware that total suppression had radically altered forest ecology and created conditions for catastrophic high-intensity fires. This policy changed in 1978 when

the park began to implement prescribed burns, but today it is recognized that it will take decades to reverse the ecological damage of fire suppression policies.²²

In addition to direct environmental efforts outlined above, the park's few rangers tried to advance the general knowledge of flora and fauna and to improve habitat. Beginning in 1919, they consistently accompanied or assisted scientific investigations undertaken by outside agencies, a practice that continues today through the park's Science Center. Chief Naturalists Glen Sturdevant, Edwin McKee, and Louis Schellbach, botanist Rose Collom, and members of Grand Canyon Natural History Association compiled checklists of geologic features, flora, birds, reptiles, amphib-

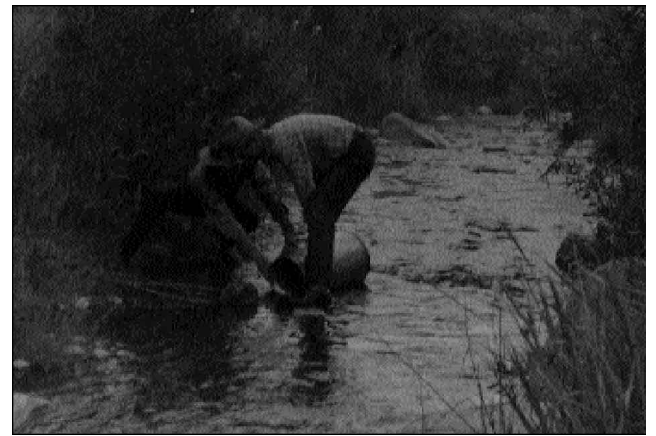


Figure 42. Rangers planting trout fry in Clear Creek in 1940 to attract anglers from Phantom Ranch. GRCA 1302.

ians, and mammals, thereby establishing rudimentary base lists and uncovering rare and endangered species worthy of attention. Rangers assisted by CCC crews also embarked on modest soil, erosion, and revegetation projects and, in the 1930s, tried to begin sustainable studies by fencing half a dozen sample plots to monitor the effects of cattle and wildlife on native flora.²³

With the ecological knowledge gained in the last half-century, it is easier to judge that these early programs to "assist" nature did as much harm as good, yet administrators of the park's first fifty years clearly sought and occasionally achieved something better than simple facade management.²⁴ Unfortunately, these efforts did not lead to sustainable research in the 1960s. Administrators were overwhelmed by popular demands for tourist facilities that resulted in the developmental mania of Mission 66, when the park service in effect yielded whatever preservation leadership role it had held to more militant environmental groups. These groups, not the park service, influenced passage of the National Environmental Policy Act (NEPA) in 1969, requiring land managers to include environmental assessments or impact statements within their planning

process. In the opinion of many, Grand Canyon administrators have since remained ecologically passive along with the rest of the park service, improving their rhetoric but limiting their action to legislative compliance while continuing to focus on visitor accommodation. Grand Canyon's 1976 Master Plan tends to support this criticism. Its prose and goals range beyond hackneyed citations of the NPS enabling act to calls for research-based management, yet it candidly admits that the park service alone will decide "how unnatural a particular tract will be allowed to become." The plan itself was mostly ignored for the twenty years it remained in force. The 1995 General Management Plan, which includes environmental objectives of the 1976 document that were never met, is again written in environmentally sensitive terms, yet emphasizes expensive structural solutions to allow still more people to enter the park.²⁵

MODERN MANAGEMENT ISSUES

Western immigration and development have always clashed with traditional park service goals to protect scenic assets and peoples' ability to enjoy them. Recent aspirations to preserve park ecology, whether or not espoused by park administrators, have merely complicated management practice. Special interests may argue which way policy should lean, but whatever path managers choose they will be hampered, and perhaps thwarted, by modern pressures that our capitalist culture and overpopulation have created. Nearly all park concerns today stem from regional development and pollution or from visitors whose numbers have doubled in the last quarter century to five million per year. Some problems are largely confined within park boundaries and easier to manage (if not resolve) to everyone's satisfaction. Others originate near and far outside the park, involve competing land and air management agencies and other cultures, are difficult to manage, and are seemingly impossible to resolve. Economics, politics, democratic use, and technology remain common elements to these issues, with complexity usually proportional to the amount of money to be made or lost by the private sector.

Although few issues today are simplistic, backcountry use (other than along the Colorado River) is one of the more straightforward. Prior to the end of World War II, few individuals hiked the canyon, almost no one venturing outside the central corridor. Numbers began to swell when young men, conditioned to long walks with heavy packs, began to descend for day hikes and overnight stays. In 1971 rangers estimated that only 25,000 people day hiked or camped below the rims, and it was policy to encourage more of the same outside the corridor. In the following year, administrators for the first time advertised for commercial trail guide services, soliciting one company to operate from each rim. Usage had increased so dramatically by

1974 that the park established a backcountry office, reservation system, and its first Backcountry Management Plan in that year. Inner-canyon user nights reached 75,000 in 1976, leading to a new plan in 1983 that parceled the backcountry into more than sixty zones, with limits set on the number of overnight parties allowed in each. The plan was again revised in 1988 with input from the public and state and federal land management agencies, and continues under review today according to the overall goals of the park's general management plan.²⁶

Since the 1970s backpackers have fanned out to remote backcountry trails and engaged in cross-country treks. Approximately 82,000 user nights were logged in 1985. By 1991 the number had risen to 87,384, with an estimated 800,000 more day hiking the inner canyon. Most of these hikers remained within the corridor, but many had discovered easily accessible threshold paths like the Hermit and Grandview Trails. By 1997 the number of user-nights had increased to 102,000, then dropped to 94,000 in 1998 when the park began to charge fees for overnight use and adjusted reservation procedures.²⁷ In the latter year 8,520 backpacking parties spent 50,825 user nights within the Corrido Subdistrict, while 3,165 groups logged 43,081 nights in the Wilderness Subdistrict. Backcountry personnel, with input from the Science Center and others, continue to study the sociological and biological effects of inner-canyon use to help set limits. Damage to the environment and overcrowding have been mitigated through education and regulations particularly with regard to open fires, camping too near water sources and cultural sites, trampling sensitive cryptogamic soils, littering, and waste disposal.²⁸

There are problems, of course. On any given day in spring through autumn several thousand day hikers and backpackers warily plod along central corridor paths spotted with the wastes of frequent mule parties.²⁹ Those who hike the Hermit, Tonto, and Grandview Trails encounter fewer people and no mules but are required to stay in primitive camps where they are certain to meet other hikers. Others who invest the time to access more remote trails or engage in trail-less treks encounter still fewer people, but "crowding" is relative, and it is unlikely they will find a solitary experience unless hiking in winter or in the park's western and eastern extremes. Even then, they may walk within audible range of overflight corridors. Despite restrictions, the fragile arid environment is also somewhat worse for wear, since an unknown number of hikers do not bother with permits, ignore regulations, and remain ignorant of low-impact concepts. In this regard, the park employs too few backcountry rangers who could check abuses and educate backpackers.³⁰

The backcountry reservation system works rather well for a number of reasons, not least of which is relatively low

demand for the grueling backpacking experience that keeps waiting lists short and discourages commercial involvement.³¹ The same cannot be said for running the Colorado River through Grand Canyon, the livelier and more complex use-related backcountry issue. Running the river used to be an unpredictable, dangerous, uncomfortable, but rewarding adventure. It attracted fewer than one hundred participants prior to 1950, and fewer than one hundred per year through the 1950s, under the guidance of pioneer outfitters who launched only one or several trips apiece in any given year. Administrators' concerns under these conditions were strictly for safety; otherwise, they welcomed and shared vicariously each group's adventure. Usage rose dramatically with the completion of Glen Canyon Dam, which created consistent flows of cold clear water, a predictable rafting season, and large-scale commercial opportunities. In 1965 only 547 people ran the river, spending a total of 5,000 user nights along the canyon's 400 or so campable beaches; in 1972, 16,428 river runners spent more than 100,000 user nights along the same beaches during the May through October season. Conspicuous ecological damage and crowding in that year prompted the park service to set limits for the first time, allocating 89,000 (92 percent) user days to twenty-one commercial outfitters and 7,600 user days to private applicants.³²

Partitioning the river in this manner ignited the first of several controversies. By 1976 the number of private applicants exceeded private and commercial allocations combined, causing the Wilderness Public Rights Fund to file suit against the Department of the Interior, the National Park Service, and Grand Canyon National Park for violating the NPS enabling act, which states that "no natural curiosities, wonders, or objects...shall be leased, rented, or granted to anyone on such terms as to interfere with free access." Commercial operators replied that they served individuals who could not make the trip on their own, thereby helping to achieve park policy to accommodate "a broad spectrum of individuals." Administrators—perhaps influenced by sociological research in 1976 that suggested that a launch and trip scheduling system could raise capacity to 27,000 users and 300,000 user days—responded in the late 1980s by increasing the number of private allocations to achieve a eighty to twenty ratio. That ratio remains in effect today, but the conflict has hardly subsided since the private waiting list is now twelve to eighteen years long while some commercial allocations go unfilled each year.³³

Another nettlesome issue entails commercial operators' use of outboard motors to power an assortment of high-capacity rafts, cutting trip durations in half and thereby increasing profits and the number who may run the river. Although studies in the mid-1970s indicated that motor noise posed health and safety hazards to guides and passen-

gers through temporary hearing loss, opposition then and now comes mainly from oar-trip passengers and operators who resent the noise intrusion. Others, including some park personnel, would like to earn wilderness designation for the river corridor and cite the fundamental inconsistency of motors with provisions of the Wilderness Act. The park's interim river management plan in 1972 did not address this issue, but sociological studies in 1973-76 coincident with the Colorado River Research Program resulted in the park's first well-researched river plan, which passed the environmental impact process in 1979 with provisions to eliminate motors. Senator Orrin Hatch of Utah, representing commercial interests, succeeded in attaching a rider to the 1980 appropriations bill that would cut off NPS funding if the plan went into effect, causing the park service to back down. A new Colorado River Management Plan, scheduled for completion in 2001, may not specifically target motors but will "seek to reduce, to the extent possible, sources of noise that detract from the Canyon's natural quiet."³⁴

A future compromise over the use of motors may combine limited use of four-stroke outboards, muffling technology, or electric engines, but noise abatement does not fully address the question of whether the river environment is, or should be, a wilderness. It cannot be denied that the dam, with its moderated releases of cold, silt-free water, has transformed riverine life as well as recreational users' experience in so many ways that the river corridor is now a man-made structure. Many consider this a positive change. The altered waterway encourages the growth of food and shelter for non-native trout that in turn feed wintering bald eagles and elated anglers. The absence of severe floods that once scoured riverside vegetation an average thirty feet higher than today allows perennial thickets of native willow and exotic tamarisk to flourish, which in turn provide habitat for insects and therefore birds, including endangered species like the peregrine falcon and southwestern willow flycatcher. Beaver, deer, and other mammals also benefit, as do river runners, many of whom if given a vote would select the river's present condition over the former flow of liquid mud. Those who think along these lines of natural enhancement would agree with biologist Rene Dubos that the river is proof that changes wrought by humans often awaken nature's latent potential.³⁵

Most would have to admit that the Colorado River through Grand Canyon is no longer a wilderness by any interpretation, but there are at least some who would like it to regain that condition by removing the dam and returning the river to its natural flow. Until recent years such a hope was harbored by few other than "deep ecologists" and fans of Edward Abbey's *Monkeywrench Gang* who agreed with Aldo Leopold that the first law of environmental tinkering is to save all the parts. Lately, however, the cause ha-

been taken up by the Sierra Club and Glen Canyon Institute, the latter created in 1997 with the desire to decommission the dam and allow natural processes to restore Glen and Grand Canyons' ecosystems. The institute is just getting started and may in time garner the support of citizens, conservation groups, and politicians who won the fight against Marble and Bridge Canyon Dams. It is more likely that the dam will attain its ultimate destiny as a waterfall, however, before the opposition posed by urban oases' power and water demands, gateway communities' economic dependence, and concessioners' interests can be overcome.³⁶

The National Park Service has not joined the movement to remove Glen Canyon Dam, but supports ecological research and manages the river in ways consistent with wilderness principles, to the extent possible given pressure to accommodate river users. Research underway since the 1980s has focused on the frequency, duration, and fluctuation of dam flows and their effects on the river corridor. The 1992 Grand Canyon Protection Act, 1995 Glen Canyon Dam Environmental Impact Statement, and consequent Record of Decision by Secretary of the Interior Bruce Babbitt led to the creation of the Grand Canyon Adaptive Management Program in 1996. This program's Monitoring and Research Center now studies aquatic food bases, native and exotic fish populations, riparian vegetation, threatened and endangered species, bird habitat, and water quality and temperatures. The center is perhaps best known for its 1996 Beach/Habitat-Building Flow (artificial flood), the results of which are still being analyzed and debated. The Glen Canyon Institute considers these efforts (costing tens of millions of dollars) to be "Band-Aid" approaches to a seriously wounded environment. Research, however, may supply information that will help mitigate cultural and environmental damage.³⁷

Most visitors to Grand Canyon limit their stay to a few hours of panoramic viewing from the rim, gazing at rock shapes, slopes, sunrise, sunset, shadows, and shifting forms. Such visions have been obscured since mid-century by the emissions of internal-combustion vehicles plying regional and inner-park roads, but more so by the effects of immigration, development, and backcountry use throughout the Southwest. Specific sources include the creeping cloud of "mustard gas," as Edward Abbey labeled it, shrouding southern California; southern Arizona's and northern Mexico's mineral smelters and urban centers; coal-fired, electric generating stations; and fires within regional forests. Ever more regional residents contribute to the haze by adding to vehicle emissions, tearing up the desert's natural pavement with new construction and off-road adventures, and burning fossil fuels in stoves and fireplaces. In the nineteenth century, visibility from a lofty South Rim perch

reached into central Utah, Nevada, and northwestern New Mexico; now there are days when pollution cloaks even prominent features along the North Rim.³⁸

Canyon administrators have been involved in the nation's tepid struggle to limit air pollution since 1957, when several national parks were selected to participate in the Public Health Service's National Air Sampling Network. In that year, a device was installed at the fire tower near Hopi Point to measure benzol-soluble and total particulate matter.³⁹ President Lyndon Johnson's executive order of May 1966 charged federal agencies to comply with the Clean Air Act. Amendments to the act in 1977 designated the park a Federal Class 1 area, and in 1990 required formation of the Grand Canyon Visibility Transport Commission. Prodded by legislation, the NPS established its Air Quality Division in 1994 to monitor the atmosphere, review proposed major emitting sources like power plants, compile data on sensitive resources, and disseminate results to effected parks. Research conducted during 1987-91 led the Environmental Protection Agency to demand smokestack scrubbers at the Navajo Generating Station by 1999 to reduce sulfur emissions by 90 percent. An EPA-sponsored study of the coal-fired Mohave generating station is currently underway. The park's 1995 management plan and Air Quality Management Program set an aggressive agenda of monitoring visibility, acid deposition, and effects on cultural resources and biota, and directed administrators to reduce in-park emissions. Nearly all these measures depend on uncertain funding and cooperation from outside agencies, however, and significant improvements are not likely to come about any time soon.⁴⁰

Air pollution at Grand Canyon is a problem everyone recognizes. Few directly profit from its presence, therefore national effort backed by legislation exists to reduce it. The same cannot be said for the visual and audible pollution of aircraft overflights that began in the late 1920s with one local commercial operator, a few hundred flights, and several thousand passengers—numbers that were not exceeded until the 1950s. In 1971 studies within the central corridor already revealed continuous noise at any point along its trails, yet by 1980 aircraft operations at Grand Canyon Airport jumped another 300 percent, making it the third busiest airport in Arizona. In 1985 forty air-tour companies operating out of five states comprised a multi-million dollar industry, transporting 250,000 customers per year and accounting for nearly all 100,000 operations at Grand Canyon Airport. Despite a long history of accidents—thirteen with a total of thirty-two fatalities within or near the park during 1981-85 alone—no rules existed other than the long-enforced prohibition against private and commercial landings and takeoffs within park boundaries. Voluntary guidelines to curb some of the more blatant safety hazards and limit flights to sound-reducing elevations failed as

pilots continued to fly anywhere, often cruising within fifty feet of the river and using thermal updrafts to climb out of the canyon (risky acts for loaded aircraft on a hot summer day).⁴¹

NPS and university studies of noise levels and surveys of backcountry users during 1971-86, combined with public meetings in 1985, elevated overflights to first place among the park's natural resource issues and prompted an Environmental Assessment that was completed in 1986. Congress passed the National Parks Overflight Act in 1987, requiring the Department of the Interior to forward recommendations to the Federal Aviation Administration that would "substantially" restore the canyon's natural quiet and provide for public health and safety. The act also prohibited flights below the canyon rim and called for the designation of flight-free zones. Recommendations later in the year suggested establishment of three air zones: Below Rim Level, prohibiting all but administrative flights and those intended to serve the village of Supai and the Hualapai Tribe's rafting business; four flight-free zones (designated the Desert View, Bright Angel, Shinumo, and Toroweap-



Figure 43.A Sikorsky S-61 carrying a truck down to Phantom Ranch to facilitate construction of the trans-canyon pipeline May 1968. GRCA 5208.

noise for backcountry users and establish overflight corridors, measuring two to nine miles in width for improved safety, although some consideration was given to cultural resources and wildlife.⁴²

The secretary of the interior's recommendations also called for a study group composed of representatives of the FAA, NPS, air-tour operators, aircraft owners, land owners, public land managers, environmental groups, American Indian tribes, and others, to monitor overflights and debate regulation changes. Since 1987 park representatives, envi-

ronmental groups, and the tribes have opposed the proliferation of flights, citing the need to fight "tooth and nail" with the FAA, which controls U.S. airspace and is charged with promoting, not limiting, commercial air travel. Flight zones, ceilings, and a few other restrictions have worked to a modest extent, but the legislative mandate to substantially restore natural quiet has not been achieved. Air-tour operators and their allies, among others concerned for tourism revenues, have argued the industry's importance to the regional economy and effectively resisted efforts to restrict the number of flights. Today, more than 80,000 flights per year—10,000 per month during summer—carry 750,000 passengers on thirty to sixty minute tours, making Grand Canyon the most overflown national park in the world. These numbers are expected to double by the year 2010.⁴³

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Issues that affect the backcountry experience and natural environment have in no way diminished attention that must be paid to administrative problems along the rim. Today the National Park Service employs most of its 325 employees and spends most of its \$14 million base funding (as well as special appropriations) trying to govern Grand Canyon Village: a 3.2-square-mile, transient resort town of 5,000 to 30,000 people.⁴⁴ Uncertain special funding and only a few personnel address the preservation of fragile ecosystems, but nearly all resources address the immediate demands of traffic control and parking, law enforcement and crowd control, interpretation, safety, housing, utilities, facility maintenance, and visitor accommodation.

Access to and circulation within the park has changed little since completion of approach, entrance, and scenic roads and trails in the 1930s. Administrators of the past sixty years have recurrently considered four-lane highways, park bypasses, and primary roads into rim backcountry, but have not effected real decentralization. Today's visitors travel essentially the same paths as their grandparents did. Most visit Grand Canyon Village or facilities surrounding the North Rim's Grand Canyon Lodge; an equal number drive one or more of the park's three scenic drives. Few venture off pavement to visit remote sites that offer no services. A number of pedestrian and bicycle paths have been built near and within developed areas since the 1970s to provide alternative ways for employees to get to work and visitors to view the canyon, but nearly all trails remain the same and are used as they were in the 1930s.⁴⁵ The inevitable result of unchanging rim and inner-canyon access, in the face of visitation that has increased 2,300 percent since 1935, is congestion and its attendant challenges.

Although administrators have not reduced or significantly redistributed private vehicles along the rim, they did launch one of the first mass transit systems to operate with

in the National Park System and facilitated the resumption of rail passenger service from Williams. The park's shuttle system began in April 1973 as a voluntary, summer operation along West Rim and Village Loop Drives, with a feeder line to the Mather Business Zone. The initial fleet of twelve "mini-bus" units with seventeen attaching trailers proved immediately popular. With alterations to routes and schedules, fleet additions, and partial conversion to cleaner propane and electric power, the system today serves more than two million riders per year. Usage is mandatory to the South Kaibab trailhead and Yaki Point (a recent route addition), and along Hermit Road in summer months, but is voluntary throughout the village. Overnight guests take better advantage of the system than day users, however, and since the visitation trend since World War II has been toward day use, an increasing number of motorists still compete for only 1,500 parking spaces and crowd the village and business zone. Grand Canyon Railway service, resumed in 1989 to recreate the pioneer experience as well as to ease traffic congestion, has produced good (though limited) results. In 1995, 130,000 entered the park in this manner, more than in any year during the historic period, although consumer demand so far requires only one train per day.⁴⁶

The National Park Service retains its strategy of shepherding campers to the park's three developed campgrounds at Grand Canyon Village, Desert View, and Bright Angel Point (totaling less than 500 sites), and to Trailer Village within the Mather Business Zone. These deliberate limits to in-park camping date to World War II when littering, vandalism, and related problems caused administrators to abandon their policy of designating widespread, undeveloped campsites. The policy makes it unlikely that an available site will be found in the summer season without a reservation. This causes frustration among those who ignore signs at entrance stations that announce site availability, but reflects the current intent to redistribute overnight accommodations. Since the 1970s excess demand for developed campgrounds has been easily satisfied in the surrounding national forests and private RV parks at Tusayan, Valle, Red Lake, and Jacob Lake.⁴⁷

Also since the 1970s, when research activities were accorded their own organization (the Resource Management division, now known as the Science Center), the park's interpretive focus has returned to visitor education. Campfire talks, guided hikes, and contacts at Yavapai Observation Station, Tusayan Museum, North and South Rim visitor centers, and Desert View persist. The park has increased the number and updated the texts of close to two-hundred wayside exhibits beside roads, trails, and historic structures.⁴⁸ The percentage of visitors reached through traditional forms has plummeted, however. Grand Canyon Association, which reopened Kolb Studio in 1993

as an interpretive site, organized Grand Canyon Field Institute in 1992, and has long provided most of the park's educational publications, makes up for some of the shortfall in direct contacts. Today's administrators would also like to make up for the loss by returning to outreach programs of the park service's earlier years, offering Grand Canyon National Park as a case study for interpretation of the natural sciences and U.S. history. Steps in this direction have been taken via Web pages on the Internet, the Grand Canyon Field Institute's Travelin' Trunk program for elementary schools, and urban information centers.⁴⁹

Developing campgrounds and educational opportunities has always presented challenges, but in the past quarter century these efforts have been eclipsed by the urgency of providing protective services that have grown more complicated, time-consuming, and expensive. Protection has always been a task of the ranger force, composed of men and, increasingly since the early 1970s, women who fulfilled responsibilities varying at a moment's notice from fee collection to forestry. Although primary duties have not changed much since the late 1940s, personal safety, com-

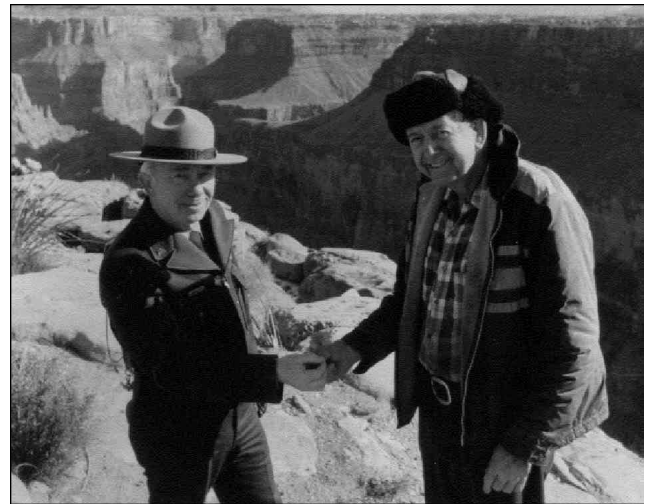


Figure 44. Superintendent Merle Stitt (left) and Tuweep Ranger John Riffy, January 1980. GRCA 5718.

combined with increased visitation and environmental concerns, has resulted in the growth of the park's most complex management unit: the Division of Visitor and Resource Protection. This division today consists of more than one hundred personnel and five branches: Ranger Operations, Law Enforcement, Fire and Aviation, Emergency Services, and Fee Management.⁵⁰

Ranger Operations remains the park's largest operating unit, with seventy-five employees, and retains most of the traditional responsibilities. Titles of other branches reflect former tasks that have in recent years taken on lives, budgets, and personnel of their own. Law enforcement, once a

peripheral duty addressed by all, is no longer simply a matter of enforcing rules and handling misdemeanors. Law enforcement personnel today are well-trained and armed, patrol major and minor roads twenty-four hours per day in police cruisers, and investigate serious crimes typical of resort communities. Rangers are no longer appointed deputy sheriffs but are still responsible for investigating crimes, making arrests (more than 6,500 in 1995 alone), and detaining offenders until delivery to the U.S. Magistrate in Flagstaff. Activities assigned to the Fire and Aviation Branch have also entered a new era. In 1997 NPS aircraft operations cost nearly \$500,000, an amount exceeding total park budgets prior to the late 1950s. In the same year, branch personnel began a massive project to clear brush from around the park's 2,000 or so structures, conducted fifteen prescribed burns totaling 2,100 acres, and suppressed thirty-nine wildfires. Emergency services have become more frenzied as administrators try to reduce serious injuries and deaths. In 1995 alone, NPS personnel conducted 380 search and rescue operations and handled 1,305 medical emergencies involving twenty-three deaths. In 1996 emergency medical technicians evacuated 224 sick and injured backcountry users by helicopter, and in 1997 treated 397 heat-debilitated visitors while answering an additional 1,371 emergency calls.⁵¹



Figure 45. Grand Canyon National Park interpretive staff, 1978. GRCA 11024; photo by Bob Buerfield

Housing remains a costly, chronic problem since regional development has not created a private housing market within easy commuting distance.

AmFac continues to shelter most of its young, single employees in cost- and space-efficient dormitories at Grand Canyon Village and Bright Angel Point. Increased visitation during summer “shoulder-season” months, however, has caused AmFac to turn from seasonal college students to permanent or more time-flexible employees such as retired couples whose housing demands differ greatly.⁵²

The National Park Service has not faced as dramatic a transition because it has employed a greater number of married men and women with families ever since World War II, but still has trouble supplying, upgrading, and maintaining adequate housing. The number of NPS employees has grown at a faster pace since the mid-1980s than at any other period in park history, and although an additional fifty-nine in-park housing units were completed in 1996 and 1998, shortages and substandard conditions persist.⁵³

Since assuming greater responsibilities for utilities at the South Rim (in 1954) and at the North Rim (in 1972), the NPS has directed more employees and funds to extending, maintaining, and replacing the infrastructure required of more visitors and residents. The park has taken advantage of public utilities like telephone, electricity, and propane fuel as they have been installed in the canyon vicinity, but the park must continue to supply other essential services required of growing communities including sewage disposal, wastewater treatment, and, most critically, the production, storage, and distribution of potable water. At the North Rim, the park has met the water requirements for more than 400,000 visitors and 290 concessioner and NPS employees through upgrades to the 1928 water system. Although peak demand during the five-month visitational season has reached 100,000 gallons per day, two two-million-gallon storage tanks are able to ensure a thirty-eight-day supply in the event of system failures.⁵⁴

Water production and distribution at the South Rim remain an irksome problem. The transcanyon pipeline was built to meet projected demands of 1985, when park managers expected that the system's capacity of 190 million gallons per year would be entirely consumed. That amount, in fact, was exceeded in 1980. More costly, crisis-driven upgrades to the pipeline, pumps, and distribution system, begun in the mid-1980s, have increased production but have barely met demand, despite extended hours of pump operations, storage capacity of thirteen million gallons, greater attention to leaks, and occasional conservation measures.⁵⁵

South Rim water problems are compounded by the needs of the park's burgeoning border town. Tusayan traces its origin to the homestead of U.S. Forest Service ranger George Reed, who sold his property to a Grand Canyon Railway worker, Bob Thurston, as construction of the South Approach Road got underway in 1928.⁵⁶ Thurston soon began development of a commercial gateway community that crept southward beside the new approach highway from an automobile camp (predecessor of today's Moqui Lodge). Only a few facilities existed by the late 1960s, among them Moqui Lodge, Red Feather Lodge, Ten-X Campground, Pop's Gas Station, the Tusayan Bar, and Canyon Food Mart. Still, the tiny community's 150 resi-

dents were already in need of more water, to supplement meager supplies obtained from Bellemont, Williams, and a handful of shallow wells. They requested water from the new transcanyon pipeline, but NPS options were limited by Public Law 91-383, passed in 1970, which prohibited water sales outside park boundaries when "reasonable" alternatives existed. Nevertheless, park administrators began to allow residents to haul water in 1971, when regional drought severed their normal supplies.⁵⁷

Tusayan water demands increased as community growth accelerated in the 1970s and 1980s, years when the park was also troubled by shortages. Administrators also expressed misgivings about hauling water on park roads and over Tusayan's unincorporated status, lack of development planning, and apparent lack of concern for conservation as town usage rose from 12.2 million gallons in 1973 to 16.7 million in 1977. The community enlisted the aid of county and state officials to convince the National Park Service that plans to reduce services at Grand Canyon Village underscored the importance of facilities outside park boundaries.⁵⁸ More commercial and political pressure resulted in Public Law 95-586, passed in 1978, that eased restrictions on sharing water, and a Memorandum of Agreement in 1980 whereby the park would allow hauling as long as its own tanks remained full. Under this agreement, the park sold 5.9 million gallons in 1980, or 3 percent of the South Rim's supply and 18 percent of Tusayan's annual use of 32.6 million gallons. The amount increased steadily to 13 million gallons in 1985, which was 7 percent of South Rim supply and 31 percent of the town's total consumption of 41.5 million gallons. Tourist facilities since that year have doubled, and the uncertainty and limitations of hauling surplus park water have led to wells that tap the Redwall Formation at depths of 3,000 or more feet. These wells have eased the trepidation of Tusayan's 550 businessmen and residents, but may pose one of the park's more serious ecological threats since the same aquifers feed many inner-canyon springs, the lifeblood of Grand Canyon backcountry, and no one is certain of their capacity.⁵⁹

ALTERED RELATIONSHIPS AND POLICIES

Congestion along the rims and the multitude of problems that accompany it, combined with the development of tourist facilities adjacent to park boundaries, caused the National Park Service to abandon its direct marketing campaigns after the 1950s. Although the NPS still supplies reams and reels of informational material and remains sensitive to accommodation and access (all important if unintentional sales elements), its zeal to ensure low-cost services has fallen away. NPS staff still review rate requests of in-park commercial users and negotiate prices to conform with gateway communities, but the enthusiasm of pre-1970s

directors and superintendents to use pricing as an inducement to visitation is gone.⁶⁰ This is primarily the result of congressional intent since the mid-1960s, and especially since the 1980s, to have a larger share of operational costs offset by higher concession, entrance, and user fees, similar to impact fees western municipalities now impose for new development.⁶¹ At Grand Canyon, this has led to entrance fees escalating from only two dollars in 1974 to twenty dollars in 1997, the latter amount levied with the Recreation Fee Demonstration Program that allows parks to keep 80 percent of such revenues. It has also resulted in "vexatious" user fees that Horace Albright had hoped to avoid, pegged to prices one expects to pay for services at amusement park and other private recreational facilities.⁶²

Allowing the price of admission and recreational services to "float" with the regional marketplace has increased revenues for ambitious park plans and has leveled the playing field for the private sector, which, since the 1920s, had complained that the park presented unfair competition by building to meet demand and charging almost nothing. Coincident with the park's shift toward higher prices and fewer facilities, services have mushroomed within the old gateway towns of Flagstaff and Williams and beside regional approach roads. Businesses within these towns, with help from county and state governments, supply what ever direct marketing effort is still required of Stephen Mather's "visitatorial magnet." Visitors who are more willing than ever to drive long distances to spend a few hours at a greater number of parks have also spurred the growth of new gateway towns like St. George, Page, Prescott, and Kingman, contributing to a glut in regional tourist accommodations. Tusayan alone supplies as many services today as Grand Canyon Village.⁶³

Growth of the regional tourism industry along with ecological concerns, rim congestion, and NPS policy shifts have, not surprisingly, altered relationships between administrators and concessioners. The days are long gone when Stephen Mather and Elizabeth McKee determined operations at Bright Angel Point with a cordial exchange of letters and Daggett Harvey wandered into Miner Tillotson's office while visiting the park with his family to outline the park's developmental future. More recent memories of Fred Harvey Company managers working closely with NPS administrators to agree on mutual needs and craft multi-year contracts have also vanished, along with the Santa Fe and Union Pacific Railroads, Fred Harvey and Utah Parks Companies, and the personal touch and idiosyncracies of Emery Kolb, the Verkamp Family, and the Babbitts. Today, a new generation of park and concession managers who are unaware of former partnerships react instead to the pressure of environmental concerns. Both are well aware that most services are no longer needed, given historic NPS guide-

lines to provide them only when nearby communities could not. But despite changing perspectives of the societal role of national parks, the diminished necessity for in-park services, and an entirely new cast of characters, concessions have multiplied and annual revenues now exceed \$100 million.

Concession contracts since the late 1960s have been guided by the general concession law of 1965, not far different from prior policy, that accords preference of renewal to incumbent operators and protects their possessory interest. Since that time, the park has established capital improvement accounts wherein operators set aside funds in lieu of all or a portion of franchise fees to ensure facility improvements that do not accrue possessory interest. This policy failed forty years earlier due to concessioner opposition and questionable legality, but was implemented at Grand Canyon in 1994 with amendments to existing contracts and subsequent new agreements. No contracts have been ex-

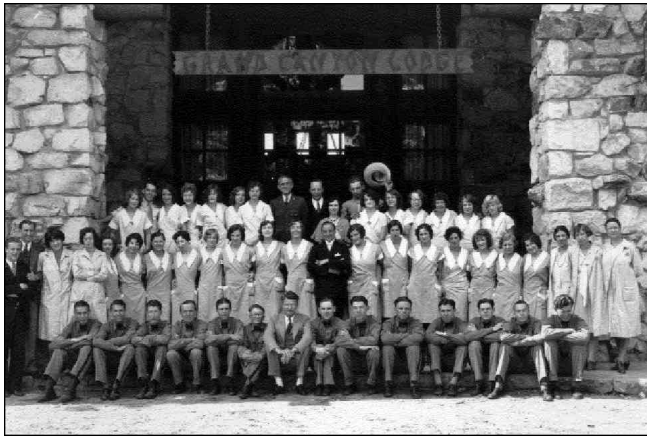


Figure 46. Utah Parks Company employees pose before the original Grand Canyon Lodge entrance, North Rim, 1930. Mine Tillotson and Utah Parks' manager W.R. Rogers and his wife are in the rear center. GRCA 509; photo by Georg C. Giant.

ended since passage of a new general concession law in late 1998. The National Park Service is holding up contract renewals and new bids until policy guidelines are in place, but the legislation once again eliminates capital accounts, guarantees possessory interest (renamed Leasehold Surrender Interest), and ends preferential renewal for large concessioners in the spirit of competitive bidding. The new law also allows the park to keep 80 percent of franchise fees collected from its concessioners and reduces contract durations to a maximum of twenty years.⁶⁴

Today, the pioneer venture of John Verkamp is perhaps the least changed of Grand Canyon's concessioners, although the family has retired from direct involvement in favor of hired managers and employees. Their most recent ten-year contract, which expired in December 1997 and was

extended for three years, varies little from prior agreements other than to increase franchise fees to 7 percent of gross and to require that another 4 percent be set aside for capital improvements. Babbitt Brothers's twenty-year contract ended in December 1987, but was renewed annually until a new agreement was executed in 1998. The current contract requires \$1.5 million in new developments and contributions to a capital improvement account, but is unique because it extinguishes the company's \$6.5 million possessory interest by 2017 in lieu of franchise fees. Babbitt Brothers's sold its canyon stores in 1999, ending nearly a century of community involvement at the South Rim.⁶⁵

Most of the park's present concessioners are rafting companies, which numbered twenty-one in 1973 but have since diminished to sixteen through voluntary closures and buyouts. The park relationship with commercial rafters began with short-term special use permits in the early 1970s, which were cancelled in 1984 with completion of the Colorado River Management Plan in favor of ten-year contracts. Today's companies operate under uniform seven-year contracts, effective 1 January 1996, that require payment of franchise fees on a sliding scale of gross receipts and set rates for essential services within park boundaries according to the Consumer Price Index. Rafting companies also pay into capital improvement accounts, which, since they have no facilities within the park, are used to mitigate river-runners' environmental impacts.⁶⁶

At the North Rim in 1996-97, AmFac purchased TW Recreational Services, making it the largest concessioner in the National Park System and sole purveyor of lodging, food, beverage, and park-based transportation services at Grand Canyon National Park. AmFac assumed TW's twenty-year contract, executed in January 1984, one that is free of franchise fees but requires annual contributions of 5 to 6.9 percent of gross to a capital improvement account. The government still owns utilities and tourist infrastructure acquired from the Utah Parks Company, but the concessioner has since added employee dormitories, dining facilities, and minor structures that are to be amortized over a thirty-two-year period. Little has changed in the way of visitor services surrounding Grand Canyon Lodge, and the tourist season remains mid-May to mid-October, but revenues have risen to about \$7 million annually with increased visitation and higher prices.⁶⁷

Grand Canyon National Park Lodges, the official name AmFac chose to replace "Fred Harvey" in the early 1970s, remains the park's largest concessioner, with most of its \$70 million annual sales deriving, as they always have, from lodging, food and beverage, and retail sales. The company built the last of its major facilities in 1982-83, when twelve four- and sixteen-room motel units and the present service building were added to Maswik Lodge. These additions,

and subsequent renovation to existing buildings, account for the South Rim's 907 visitor rooms with 3,500 pillows, and approximately 1,200 seats within Grand Canyon Village and Desert View dining facilities. Such numbers are his-

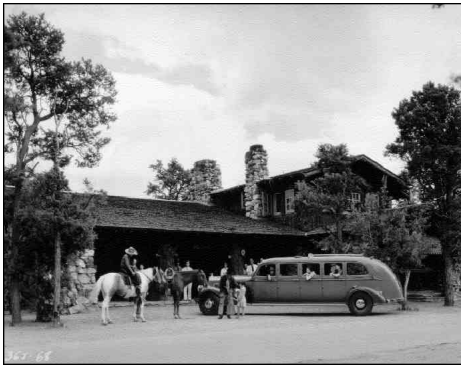


Figure 47. The Motor Lodge central services building, east side ca. 1935. Completed in 1927, with as many as 150 adjacent cabins by the 1950s, the motor lodge met the demands of economy-conscious visitors arriving in private automobiles. It was replaced in the same location by Maswik Lodge in 1983. GRCA 9954.

toric highs, yet demand still exceeds supply in the summer season, while room and cabin occupancy falls to 45 to 50 percent during winter months. The concessioner added to employee housing by renovating Maswik cabins for that purpose in the mid-1970s, building about thirty single-family homes, duplexes, triplexes, and apartments in 1982, and supplying many more units and trailers since, which, in combination with historic residences and dormitories, accom-

modate 950 permanent and 300 seasonal employees.⁶⁸

The Fred Harvey Company contract, amended since 1969 to raise franchise fees to 2.7 percent of gross and to end the exclusive transportation right, expired on 31 December 1998. Consummating a new agreement has been difficult. NPS policies have grown rigid, the result of a more democratic bidding process as well as diverging interests of the agency and the concessioner. Park administrators intend to relieve village congestion, in line with the trend toward fewer in-park accommodations systemwide, and have suggested cuts in visitor services that are slight but nonetheless unpalatable to concession managers. For their own part, concession decision-makers are far removed from a personal relationship with the park and adhere more than ever to the bottom line since AmFac became a wholly owned subsidiary of the Northbrook Corporation, itself a subsidiary of JMB Realty, the largest real estate holding company in the United States. The process is further complicated by new legislation, enacted a few months prior to the contract's expiration, that requires both

sides to start over once policies have been revised. This is the first NPS contract to be negotiated under the new law, and litigation is likely if the new prospectus eliminates preferential renewal, a right the concessioner believes is guaranteed on this occasion by the 1969 contract.⁶⁹

Meanwhile, both parties are conducting appraisals of concessioner assets in the event another corporation wins the next contract and must, by law, purchase AmFac's leasehold interest. Exact valuations are difficult because neither is entirely sure who owns what among several thousand structures. The price will be higher than at first glance since historic properties built by the Santa Fe Railroad will be evaluated at replacement cost rather than depreciated value. The concessioner's preliminary estimate is about \$150 million, a figure the NPS considers high. However, the amount is less important as an AmFac windfall than as an obstacle to potential bidders, new contract terms, and park plans.⁷⁰ Administrators would like to be rid of many structures, consistent with their vision for a less-cluttered park, but will be asking another bottom-line-oriented recreational corporation to pay for assets that may be torn down, depending on the vagaries of NPS planning. Any such company, if one can be found, will expect compensation through higher rates, a longer-duration contract than current law allows, or reduced franchise fees.



Figure 48. Aerial view of Grand Canyon Village facing southwest, 1989. GRCA 16478; photo by Greg Probst.

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Chapter Seven

Upshots and Prognosis

What human beings feel about Grand Canyon has as much to do with how it has been managed as with the desire to preserve or exploit the scenic landscape for its economic potential. We surmise that American Indian peoples considered it a mysterious place, but it was also home, offering resources for subsistence and trade. The explorer Garcia Lopez de Cárdenas may have sensed the mystery when he visited the South Rim in 1540 but thought of the canyon primarily as a travel obstacle and wasteland, of no use to the Spanish empire and therefore left as a refuge to native inhabitants. Footloose trappers probably shared some of these emotions while extracting a few pelts before moving along to more accessible terrain. Purposeful federal explorers searching for travel routes, resources for eastern markets, and settlement possibilities mostly agreed with Cárdenas's judgement, but they arrived with a national agenda and therefore persevered around the obstacle, their surveys resulting in a wagon road (and later a railroad) linking the Atlantic and Pacific Oceans.

Early residents and travelers certainly did not have uniform experiences, but each culture's pioneers must have felt a rainbow of emotions invoked by discovery, the adventure of not knowing exactly where one is standing in relation to the known world or what awaits around the next corner. After the Atlantic & Pacific Railroad arrived, real adventure began to give way to the brow-knitting business of incorporating the canyon into the international economy, and experience varied widely between those who came for profit and those who came for their own personal discoveries. Pioneer entrepreneurs looked for both as they built the first roads, trails, camps, and hotels, and while they proved in the long run to be scouts for world capitalism, they thought of themselves as individualists working hard for their own benefit in a spectacular place. They were well aware of their location but experienced some of the original awe and mystery, fear and discovery that others felt because the canyon itself remained remote, unknown, and unvisited. Pioneer anecdotes, letters, and journals reveal these emotions as well as a genuine love for the chasm's splendor, distant views,

untamed river, grand geologic formations, intimate inner-canyon springs, and wildlife.

The first tourist operators relished the canyon even more perhaps, sharing their passion with the relaxed few who came by wagon and stage for their own adventures, stayed for a week or more in spartan accommodations, then wrote soaring prose of episodes we can only imagine a century later. The canyon experience at that time contrasted sharply with everyday lives in turn-of-the-century eastern and midwestern cities, where automobiles and trolleys, electricity and telephones were fast civilizing former frontiers. Visitors to the canyon wore stuffy suits and exquisite dresses but stayed in tents and cabins, enjoyed the outrageous stories of Bill Bass and John Hance, read poetry alone beside uncluttered rims accentuated by pristine canyon views and silence. They rode mules along scary inner-canyon paths to camp in the open anywhere they chose. Not a single law or regulation intruded on their experience, and they left reluctantly, knowing that they might never again be able to afford the time and cost to return.

After the turn of the century, self-sustaining entrepreneurs who had proven the canyon a viable commodity within their narrow spheres of influence gave way to railroad managers who sensed profit in monopoly and centralization. Many employees of the Santa Fe Railroad and Fred Harvey Company grew to love the canyon as much as their predecessors. Their customers, who arrived by rail and stayed at the luxurious El Tovar Hotel or the more frugal Bright Angel Lodge, still marveled at awe-inspiring vistas. But the experience had changed. The point at which discovery yields to creature comfort is indefinite, but traveling to a well-advertised destination in a Pullman sleeper and enjoying civilized amenities like leak-proof roofs and inter-

century. The railroad brought the Fred Harvey Company, the Harvey Girls, European chefs, and low-wage laborers to cater to upscale clientele, but they required nearly all of their employees to live in shanties and derailed boxcars, at best in tent cabins. Neither the Santa Fe Railroad nor the Fred Harvey Company supplied any community services or durable organization: no grocery stores, general merchandise stores, homes, churches, community centers, zoning, or law enforcement. These conditions were all manifestations of attracting a lot of people to one place at one time, combined with disdain for investments that did not return profits and the inability of an other-directed, underfunded U.S. Forest Service to do anything about it.



Figure 49. Superintendent Rob Arnberger, Grand Canyon Association President Robert Koons, and Interior Secretary Bruce Babbitt at the dedication of Roosevelt Point, North Rim, July 1996. Private partners like Grand Canyon Association figure prominently in strategies to implement the 1995 General Management Plan. GCR 13887; NPS photo by Mike Quinn.

national cuisine lies somewhere beyond that point. The Santa Fe Railroad offered a wider range of guided trips, some into the canyon by the same mules and hazardous trails earlier visitors had used, others along still-primitive rim roads in horse-drawn buggies. Since nearly

everyone arrived by rail, managers could predict numbers and ensure that accommodations met with everyone's approval. They also replaced the dilapidated accommodations of pioneer operators with visually pleasing architecture and brought a modicum of order to the South Rim.

Railroad managers provided more comfortable accommodations and services for the greater numbers of tourists they attracted, but also bared the seamier side of unregulated capitalism in the sprawling "resort" village they had spawned. One wonders if silence and unsullied canyon views entirely overcame the sight and stench of pit toilets, garbage dumps, open-air incinerators, free-ranging livestock, and mule barns that persisted from the nineteenth

The National Park Service reached Grand Canyon at an auspicious time in its own and the nation's history. The United States had won a war on others' battlefields and was poised to get down to business becoming the world's economic power. Industry was rich in innovations, among them the assembly line, mass advertising, and bulk production of affordable automobiles for an expanding middle class. The National Park Service hummed with the electricity of its youth. Its leaders embraced positivist ideals and fiercely advocated conservation while remaining astute businessmen. They had concurrent visions of the national parks as cultural icons, natural sanctuaries, and scenic commodities, but found far more willing allies for

the latter among legislators, businessmen, and influential citizens. NPS administrators had just embarked on their program of selling the parks to national and international consumers, who had begun to discover Grand Canyon with the railroads' help. At the same time administrators sold the need for improved access, accommodations, and other amenities to a willing federal government.

It is difficult to imagine how a progressive federal agency infused with the idealism, energy, and the clear goals of a startup enterprise in these political and economic atmospheres, yet lacking a clear ecological ethic, could have acted differently or done better at Grand Canyon National Park. After a few years of belt-tightening and experimentation, hand-picked managers with strong agency backing and near-unanimous popular support accomplished a great deal. They cleaned up the pioneer environment while building attractive administrative facilities, re-engineering roads and trails, organizing campgrounds, inventing educational programs, and eliminating private inholdings. They also overcame their economic partners' initial arrogance, ensured some measure of architectural conformity and zoning, and cajoled them into making massive investments in commu-

nity as well as tourist-related infrastructure. The park service accomplished this not by displacing the railroads who had superseded pioneer operators, but by fashioning a strong public-private alliance to pursue a grander scheme of exporting scenery to the entire world.

These civilizing efforts closed the gap on the experiential contrast between cities and parks, but were necessary to an arguable degree if pleasurable vacations were to be retained in the automotive era. A generation earlier, the railroad had effected a noticeable change in the manner in which tourists reached and experienced the park by affording a quicker, more comfortable ride from Williams and by catering to a known number of arrivals. Private vehicles effected a far more profound, longer-lasting revolution by placing decisions in the hands of individuals. The “sagebrushers” who came before World War II recaptured some of the adventure, certainly the freedom, of early explorers. They arrived by whatever road they chose, at any time, stayed beside the road or the rim, in camps if provided, or in lodges if the mood and pocketbook allowed. They could eat in restaurants or buy packaged food, partake in guided tours and interpretive talks or not, stay a month or move to another park after a few hours at the rim. Although it was soon evident that they would come in greater numbers than ever before and in the traditional summer season, exact volume, dates, and times of arrival became wholly unpredictable and uncontrolled.

Visitor demographics changed radically by the mid-1920s, but the park was able to adapt within fifteen years by rebuilding all manner of roads and providing more cost-effective, full-service campgrounds, motor lodges, cabins, and other auto-related services. Pleasure must have been mixed with annoyance during this period of adjustment. Motorists drove on incredibly dusty gravel roads before oil palliatives then pavement returned vistas to their former splendor in the mid-1930s. The amount of construction undertaken in the 1920s and early 1930s has hardly been exceeded since, and it created traffic problems and a steady din until natural silence also returned in the mid-1930s. Power plant and locomotive smoke would not have gone unnoticed, and a five-fold increase in the number of visitors, most in vehicles of their own, could not have helped. Road signs, rules, and regulations inevitably appeared, and for the first time restricted visitors’ actions for the sake of order. Still, black-topped roads, new utilities, accommodations of rustic architecture, and manicured landscapes courtesy of the CCC converged with diminished visitation during the depression to produce a few “golden years” when the park experience came closest to matching the illusory NPS ideal. Knowledgeable and courteous rangers, active community groups, cooperative efforts between administrators and concessioners, and world war prolonged the ideal

until 1945 when it all ended very abruptly.

From an experiential point of view, the next fifty-five years proved something of a worsening nightmare for nearly all except those interested in making money from an endless stream of scenic consumers. NPS and concession employees still worked and lived with each other in a civil, even affable manner, and enjoyed marginally better living conditions and community amenities than their predecessors, but the public-private partnership and relationship with visitors had otherwise changed. Nonresident but caring concession managers, who had once made it a point to visit the park regularly and participate in community affairs, gave way to absentee boards of directors. NPS managers also changed, adhering to mandated relations with their former partners while withdrawing from intimate contact with the visiting public in favor of more impersonal education and information, rules, regulations, and law enforcement. NPS and private-sector efforts to attract and please unlimited numbers of visitors coincided with the nation’s emergence as the world’s economic power, regional population growth, development, pollution, and technological innovations to reduce natural quiet, visual clarity, and solitary experiences. This was especially noticeable to visitors who crowded Grand Canyon Village, Bright Angel Point, and the scenic drives, points, and pullouts, but also became evident to backcountry users who could no longer entirely escape overflights, motorized rafts, air pollution, or others who fled the same intrusions as themselves.

Unfortunately, those who visit the park today cannot feel long-ago experiences and are likely to compare only contemporary differences between their city homes and the park environs—differences which are, in some places, no longer all that startling. The worst scenario is realized in the busiest weeks of the summer season by day users who spend their few hours at the park visiting Grand Canyon Village. Most still arrive from the southern gateway towns and are not well informed of where they are going and what to expect. They leave Interstate 40 at Flagstaff or Williams and follow columns of vehicles leading inexorably to the park’s south entrance. Along the way they pass a few hotels, restaurants, private campgrounds, billboards, budding residential developments, and “Bedrock City” (Valle) before encountering Tusayan—a quarter-mile gauntlet of commercial services beside an airport vibrant with the thump of helicopters and drone of airplanes. Those who intend to stay the night and have thought ahead likely as not have reservations here. Everyone by the next day queues up at the entrance station before continuing to the first canyon overlook at Mather Point, where an open parking space may be found only if it is early or late in the day.

From this point, most people continue west toward the village, passing the spur to Yavapai Observation Station

then turning right into the visitor center across from the Mather Business Zone where they pause, hoping to find a vacant place to park. Those who are crafty or patient snare one. Those who are wise orient themselves here and allow shuttles to ferry them about the village and along West Rim Drive before returning and driving out the way they came. Nearly all get back into their vehicles, however, and continue to the intersection with Village Loop Drive where confusion and irritation mount. The loop is counter-clockwise, though few are aware of it, and some turn left to its south side, passing the old Fred Harvey industrial zone before reaching a dead end at Maswik Lodge. Motorists who are not staying at the lodge or looking for a backcountry permit at the Maswik Transportation Center retrace their path but may turn right at Center Road and immediately leave the park by this shortcut. Many return to the original intersection, however, and join those who choose to drive straight ahead beyond the railroad depot into the old village proper.



Figure 50. President Bill Clinton and Interior Secretary Bruce Babbitt at Hopi Point to formally announce the designation of Parashant National Monument, January 2000. Presidential proclamations of the Parashant and Grand Staircase-Escalante National Monuments are initiatives toward environmental protection of relatively unpopulated areas in the Grand Canyon region. GRCA 18376; NPS photo by Mike Quinn.

Confusion along the north side of Village Loop stems from the fact that it is one-lane and one-way, with turnoffs into the El Tovar Hotel, Thunderbird, Kachina, and Bright Angel Lodges cloaked by a near-continuous shield of parallel-parked cars. Motorists are distracted by vehicles stopped in the middle of the road, by tame deer browsing the roadside, or by inattentive pedestrians. Those who miss their turn must circumnavigate the village before getting a second chance. Parking is very limited among these rimside facilities, and once motorists make the correct turn they do not find a space unless they're extremely lucky. More often they sit and wait with others, park illegally, or lose patience and re-enter the loop hoping to find one farther down the road.

Most eventually stumble upon and settle for one of two major parking lots, the closest to the rim located west of the railroad depot, the most spacious adjacent to the transportation center.

Once out of their vehicles, visitors are drawn as they have been since 1896 from the shallow depression of Bright Angel Wash up to the rim overlooking the canyon. The paved walkway from Kolb Studio to Verkamps is often congested, but those who take the time can stroll among junipers and ponderosa along canyon-view paths to the west as far as Hopi Point and east to Yavapai Point, capturing some semblance of solitude and quiet that has not yet been lost. There are four hotels, lodge cabins, a steak house, and two curio stores only fifty to a hundred feet back from the rim. Kolb Studio and Lookout Studio hang over the edge. But buildings seem more intrusive on the printed page than they are in reality. Some are historic structures of interesting architecture, others were built of modern materials but with aesthetic concern. It may be that the overall feel of the historic district complements the experience of the canyon itself, but whatever the reason, visitors afoot are in a better frame of mind than they are in their vehicles. And one can still turn northward at any point and gaze in astonishment down talus slopes and cliffs that parallel the Bright Angel Fault to Indian Garden and look across the canyon to Bright Angel Canyon and the North Rim, perhaps in a few moments offsetting the aggravation they endured to get here.

This is just a glimpse of today's worst visitor experience at peak season, the congestion inherent in attracting unlimited numbers of visitors, accommodating them in one place, and satisfying the need for creature comforts that coincides with summer vacations. It plagues, as it always has, only a small fraction of the park environs during a three- to five-month period of each year, and can easily be avoided with a little forethought. Most visitors today are day trippers, making the rounds of southwestern parks and monuments and spending only a few hours at Grand Canyon' edge to feel the rush, take a few photographs, and move on. They would be better served and a whole lot happier if they came in the autumn, winter, or early spring, or if they restricted their travel to entrance roads, East Rim Drive, and Cape Royal Road, which have long availed the best views and were arranged to avoid developed centers at both rims. But the search for overnight accommodations, or the simple fact that most do not know for sure where they are going, draws them into the vortex of Grand Canyon Village.

NPS planners since Daniel Hull and William Peters have directed most of their attention and appropriations to

the village. Their principal concern at first was to invent an orderly town from the early chaos surrounding the railway depot, later redeveloping the Wylie Way Camp at Bright Angel Point and the central corridor then adding facilities at Desert View, in each case trying to create then meet consumer demand with quality, low-cost services. Master planners through the early 1970s occasionally pondered facilities at Bass Camp, Manakacha Point, Grandview, Cape Royal, and elsewhere, but concessioner inclinations, dire economic conditions, world war, and environmental opinion helped stay the course of in-place expansion. NPS administrators and concessioners alone developed the plans of the first fifty years, acceding to nearly everyone's inclinations for more and modern services. At no time did park managers consider limiting visitation or seriously altering the manner in which tourists arrived at or experienced the park.

Management consensus ended by the 1970s with crowds reaching critical mass and with the passage of environmental legislation. Regional population growth, escalating visitation, and consequent problems continued to degrade the park experience. The National Park Service abdicated whatever environmental leadership role it may have held to more aggressive environmental groups and scientists, but did not entirely ignore these interests when it came time to write their next generation master plan. The planning process itself invited the opinions of special interests and the general public, and the blueprint emerging in 1976 reflected, for the first time, some concern for park ecology. But concern was more for the myriad problems that overpopulation, overvisitation, and overdevelopment had brought about. Goals for the first time included spreading development within adjacent public lands, slowing the growth of services within the park, and, most significantly, separating visitors from their vehicles with convenient and mandatory mass transit, pedestrian paths and districts, bicycle paths and rentals, and the resumption of rail service. No thought was given to holding the line on the number of visitors, however. The plan, in fact, called for management zones, zonal carrying capacities, and redistribution to efficiently squeeze more people in.

The 1976 Master Plan and 1977 Village Development Concept Plan were written in hesitant language, expressing a desire to do something different but an uncertainty over the ability to carry it out. By the early 1990s, very little had actually been done to curb past trends other than to build a few foot trails, add to the voluntary shuttle system, construct Maswik Transportation Center, and facilitate the return of Grand Canyon Railway. As visitation topped four million, transportation and visitor numbers remained major concerns when NPS officials began the scoping process for a new plan in 1991. Reflecting a new era of public input to

management planning, administrators held meetings in regional towns, considered the opinions of varied interests, and crafted five alternatives. Number One: Let existing facilities serve, with the likely result of further deterioration of the park experience and natural environment. Number Two: Allow demographic trends to persist then implement



a reservation system when deemed absolutely necessary. Number Three: Resurrect the 1976 intent to implement regional solutions, separate day users from their vehicles, and shift more facilities of all types to Tusayan. Number Four (the most aggressive ecological stance): Require construction of all new facilities and relocation of many existing ones outside the park while prohibiting all day-user vehicles from the South Rim. Number Five: Continue past policies of unlimited access and accommodation and build in-park facilities to meet demand. After lengthy public review and considerable comment, administrators chose the third alternative in 1995.

The crux of the 1995 General Management Plan is a concessioner-owned and -operated light-rail system that will carry day users from Tusayan to a new transportation center near Mather Point. Here, visitors may choose to view the canyon and return to Tusayan or continue on to the business zone and Grand Canyon Village via an enhanced shuttle system, by bicycle, or on foot. As in the 1976 plan, new roads will allow campers direct access to Mather Campground and Trailer Village; hotel guests may drive to Maswik Transportation Center where they will park and proceed by bus, bicycle, or afoot to Maswik Lodge and hotels along the rim. The main goal is to remove private vehicles from the South Rim, from Hermits Rest to Mather Point. Aside from addressing circulation, the plan also calls for a massive rehabilitation and construction program including employee housing in Grand Canyon

Figure 51. Parking at Grand Canyon Village is scattered and inadequate, aggravating traffic congestion and visitors alike. The 1995 GMP aims to eliminate more than half of the current number of motor vehicles by requiring day users to park in Tusayan, seven miles south of the park, and ride a light-rail system to the rim at Mather Point. GRCA 18047; NPS photo by Mike Quinn.

Village, Desert View, Bright Angel Point, and south of the park in Canyon Forest Village—the latter a substantial private development west of Tusayan that was recently approved.

This management plan is the most ambitious administrators have ever invented. It directly addresses—and may resolve, if implemented effectively—the challenge that has long been their first priority: improving most tourists' visits by returning to a less-congested environment in Grand Canyon Village. It will likely create other problems, however. Foremost, it is another in an unbroken line of structural approaches to visitor and employee accommodation, akin to Mission 66 but fifteen to twenty times more costly if fully realized. While most construction is planned within “already disturbed areas,” and the number of such “developed centers” (as they were once called) will not increase, the plan still adheres to the traditional dictum of building

An equally troubling aspect of the plan is its design to cram still more people into the park, as many as 7.5 million per year by 2010. That number is predicated on projected use at various points, calculating the length of time people spend along the rims (a few hours) with the assumption that if visitors arrive, circulate, and leave as planned, 40,000 people per day (22,500 at any one time) might be accommodated, as opposed to the present number of 25,000 per day (17,000 at one time). Visitors, in other words, have been reduced to units within a computer simulation model in which they are expected to circulate in a predictable manner. That may work, but even so, planners expect that the inconvenience imposed by making people leave their vehicles at Tusayan will cause more of them to avoid mass transit and the village. Instead, they will probably congest Desert View Drive on the South Rim and Bright Angel Point on the North Rim, requiring closure of Desert View

Drive's pullouts and spur roads to all but shuttle busses and accelerating the implementation of a North Rim reservation system. Administrators admit that even if this plan is implemented, reservation systems will still be required at both rims by 2010 when and if visitation exceeds 7.5 million. It therefore merely postpones a more difficult cure to the next generation of administrators, tourists, and businessmen.

Such concerns may be academic since no Grand Canyon master plan has ever been implemented in its original form. This one carries a \$300-million price tag, not including \$150 million required for the

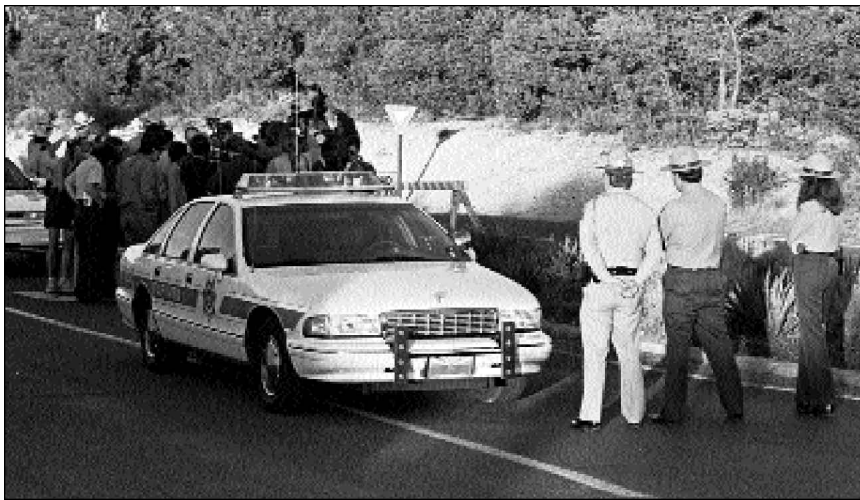


Figure 52. Arizona Governor Fife Symington holds a press conference along the South Entrance Road to protest the park's 1995 closure, with Superintendent Rob Anberger (center, right) looking on. GRCA 15229; NPS photo by David Haskell.

more to satisfy more people. The same structural mindset led the National Park Service to support Canyon Forest Village, or its lesser alternative of expanding the town of Tusayan (rejected in June 1999 by the

U.S. Forest Service in favor of the larger development), in order to redistribute some employee housing, community services, and commercial facilities a few miles south. Spreading the “wealth” of development in this manner will ease if not end the pressure to build within park boundaries, but it is no real solution. There will soon be four major developed areas—Tusayan, Canyon Forest Village, Grand Canyon Village, and the Mather Business Zone—bunched within seven miles of the South Rim. Considering historic urban development patterns, these may well come together in the next century to form a metropolitan “Grand Canyon City.”

private mass transit system. Recognizing that financing might prove the plan's downfall, the park created a three-person implementation team in 1995 that has spent most of its time trying to match funds with GMP projects. Congress allotted funds for nearly the entire \$25 million tab for Mission 66; it is expected to contribute less than 5 percent to implement the current plan. The shortfall will be made up by user and franchise fees, federal highway funds through the Transportation Enhancement Act (TEA-21), state highway appropriations, contributions from private corporations and non-profit organizations like Grand Canyon Association and Grand Canyon National Park Foundation, citizens' donations, grants, and a concessioner willing to invest in the transit system. Implementation is therefore proceeding in a piecemeal fashion, an approach that has not worked well in the past.

Administrators believe that financing will remain the principal obstacle to implementation, but there is reason to speculate that opposition will arise from South Rim conces-



Figure 53. Finishing touches are applied to Canyon View Information Plaza (CVIP), prior to dedication, October 2000. CVIP will become the terminal point of the Tusayan-Mather Point light-rail service upon completion of the rail line ca. 2005. NPS photo by Mike Quinn.

sioners. Everyone who derives profit within the park is concerned about divorcing people from their vehicles and the effect it will have on business, since the convenient automobile also serves as a shopping cart. People afoot will likely buy less, and a plan-induced consumer traffic pattern cannot be predicted. AmFac has the most to lose. The park expects the company to invest more than \$100 million to refurbish, relocate, and build new facilities, but, as in 1930 when the depression scuttled Fred Harvey Company plans and in the 1950s when congressional and NPS policy shifts caused the company to balk, AmFac may resist capital improvements. The plan calls for costly renovations of old dormitories to low-cost visitor rooms, removal of the still-serviceable Kachina and Thunderbird Lodges from the rim, and (at most) an additional 100 rooms at Maswik Lodge, none of which sits well with the concessioner. Acrimonious contract negotiations do not help matters, and it is uncertain what a new corporation, if one can be found, might have in mind, given trends to reduce in-park services and escalating competition outside the park.

Economic and demographic uncertainties, inevitable limitations in the near future, and recent historical trends toward environmental protection beg the question of why the National Park Service did not adopt a cheaper, less structural plan linked to a reservation system, facility downsizing, and reduced visitation. The world's users of recreational facilities have grown accustomed to limitations and have accepted reservation systems for Grand Canyon backpacking and rafting adventures. Motorists would probably prefer such a system to being forced to leave their vehicles in Tusayan. The park service, although it has based its entire existence on the principle of unlimited accommodation, has recently realized the necessity of some restrictions to save the parks. A reservation system, necessary only in summer months for the foreseeable future, would probably balance the seasonal distribution of visitors, a goal long sought by

administrators. Many NPS personnel, at least those in close contact with today's harried visitors, are fed up with crowd control and would enjoy a return to the more intimate, constructive relationship that existed prior to World War II. Conservation and preservation groups would no doubt support such a plan, or consider it a positive step in the right direction.

Part of the explanation for not implementing a reservation system is found in the paling though persistent NPS culture of building to meet the demands of the world's scenic consumers, consistent with democratic ideals of open access and the profit-making potential of in-park concessions. But most of the explanation lies in the increasing importance of international tourists to the Southwest's economic health, reflecting the extent to which the region has been ensnared by the web of world capitalism. Businessmen in Arizona, Utah, and adjacent states simply do not want a ceiling placed on the number of tourists who may visit the region's primary scenic attraction because it will reduce dollars dropped in gateway towns along the way. Congressmen respond to both commercial and noncommercial special interests, but popular backing for fixed limits, though growing, has not yet translated into the necessary political support.

Sadly, even if such a plan is someday implemented, it would only help sustain an island of natural sanity for a while longer while placing greater pressure on adjacent public lands. Limits to visitation will not overcome external threats to Grand Canyon National Park occasioned by regional population growth, development, and pollution. Real answers do not lie in congressional decisions, the efficacy of one federal bureau, or environmental compromises. They lie somewhere beyond the present world system wherein corporations are concerned only for capital accumulation, human wants rather than needs are considered paramount, and nature is cherished only for its economic value.

Appendix 1 Annual Visitation to Grand Canyon National Park

1919	44,173	1946	486,834	1973	2,064,300
1920	71,601	1947	622,363	1974	2,028,194
1921	69,485	1948	618,033	1975	2,754,791
1922	85,474	1949	600,448	1976	3,026,235
1923	108,500	1950	665,281	1977	2,848,419
1924	113,106	1951	682,152	1978	2,984,138
1925	136,527	1952	736,159	1979	2,275,712
1926	133,880	1953	836,878	1980	2,618,713
1927	162,542	1954	814,130	1981	2,674,117
1928	164,665	1955	891,930	1982	2,499,799
1929	188,204	1956	1,033,404	1983	2,448,545
1930	166,711	1957	1,101,819	1984	2,360,767
1931	165,871	1958	1,036,529	1985	2,983,436
1932	117,700	1959	1,168,807	1986	3,347,872
1933	108,823	1960	1,186,916	1987	3,513,084
1934	146,850	1961	1,252,183	1988	3,858,708
1935	214,407	1962	1,446,453	1989	3,968,605
1936	272,253	1963	1,538,666	1990	3,752,901
1937	304,794	1964	1,575,737	1991	3,905,989
1938	334,039	1965	1,689,233	1992	4,547,027
1939	405,585	1966	1,806,033	1993	4,928,509
1940	369,234	1967	1,804,876	1994	4,702,989
1941	436,566	1968	1,926,270	1995	4,908,073
1942	132,584	1969	2,192,574	1996	4,730,682
1943	72,100	1970	2,258,195	1997	4,851,931
1944	64,568	1971	2,402,058	1998	4,578,089
1945	169,960	1972	2,707,516	1999	4,930,151

Numbers are approximations, based primarily on the counts of NPS entrance checkers. Several factors skew the counts, including the ability to enter the park without passing an entrance station, the limited hours stations are staffed (ranging from eight to sixteen hours per day over the years), and use of a passenger multiplier applied to each entering vehicle rather than specific headcounts.

The record defies precise analysis and projections, but some trends are evident. The 1920s reflect steady increases likely due to a strong economy, proliferation of the automobile among the middle class, and strong national advertising. The depression caused steep declines, but only for 1932-33, after which visitation increased at a faster pace than the prior decade. World War II's travel restrictions, rationing, and reorientation of personal priorities caused the steepest decline in history, despite a steady flow of military personnel. Trends of the last fifty-five years reflect the nation's postwar prosperity. The Korean and Vietnam wars had no effect on visitation, but the jump in gasoline prices after 1973 help account for a two-year downturn. Stagnant numbers during 1976-86 are difficult to explain, though gasoline prices and general inflation probably played a part. The steady upward trend since 1986 causes today's administrators to predict as many as 7.5 million visitors by 2010. Forecasts, however, have proven conservative throughout park history.

Appendix 2 Grand Canyon National Park Superintendents, 1919-2000

William Harrison Peters (acting)	August 1919 - September 1920
Dewitt L. Raeburn	October 1920 - December 1921
John Roberts White (acting)	December 1921 - February 1922
Walter Wilson Crosby	February 1922 - January 1924
George C. Bolton (acting)	January 1923 - June 1923
John Ross Eakin	January 1924 - April 1927
Miner Raymond Tillotson	April 1927 - December 1938
James V. Lloyd (acting)	December 1938 - February 1939
Harold Child Bryant (acting)	February 1939 - January 1940
James V. Lloyd (acting)	January 1940 - August 1940
Frank Alvah Kittredge	August 1940 - July 1941
Harold Child Bryant	August 1941 - March 1954
Preston P. Patraw	May 1954 - July 1955
John Sherman McLaughlin	August 1955 - March 1964
Howard B. Stricklin	March 1964 - February 1969
Robert R. Lovegren	April 1969 - July 1972
Merle E. Stitt	August 1972 - January 1980
Bruce W. Shaw (acting)	January 1980 - May 1980
Richard W. Marks	May 1980 - December 1988
John C. Reed (acting)	December 1988 - January 1989
John H. Davis	January 1989 - August 1991
Robert Chandler	October 1991 - October 1993
Boyd Evison (acting)	January 1994 - July 1994
Robert L. Arnberger	July 1994 - October 2000

End Notes

Organizational Acronyms Used in Notes

A&P	Atlantic & Pacific Railroad
APS	Arizona Public Service
ASHPO	Arizona State Historic Preservation Office
ASU	Arizona State University
AT&SF	Atcheson Topeka and Santa Fe Railroad
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
BPR	Bureau of Public Roads
CAA	Civil Aeronautics Administration
CCC	Civilian Conservation Corps
CWA	Civil Works Administration
DSC	Denver Service Center
DSC-TIC	Denver Service Center-Technical Information Center
ECW	Emergency Conservation Work
FDR	Franklin Delano Roosevelt
FY	Fiscal Year
GCA	Grand Canyon Association
GCNHA	Grand Canyon National History Association
GCNM	Grand Canyon National Monument
GCNP	Grand Canyon National Park
GCNPRL	Grand Canyon National Park Research Library
GCNPMC	Grand Canyon National Park Museum Collection
GCRG	Grand Canyon River Guides
GLO	General Land Office
GMP	General Management Plan
GPO	Government Printing Office
GRCA	Grand Canyon
GTS	Guide Training Seminar
HAER	Historic American Engineering Record
LOC	Library of Congress
NAU	Northern Arizona University
NPS	National Park Service
NRA	National Recreation Area
PWA	Public Works Administration
RFP	Request for Proposals
TWA	Trans World Airlines
UASC	University of Arizona Special Collections
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
WPA	Works Progress Administration

CHAPTER ONE

Becoming a National Park, 1882-1919

- For histories of western explorations and wagon roads, see Richard A. Bartlett, *Great Surveys of the American West* (Norman: University of Oklahoma Press, 1962); William H. Goetzmann, *Exploration and Empire: The Explorer and Scientist in the Winning of the American West* (Austin: Texas State Historical Association, 1993); and W. Turrentine Jackson, *Wagon Roads West: A Study of Federal Road Surveys and Construction in the Trans-Mississippi West, 1846-1869* (Lincoln: University of Nebraska Press, 1964). See also Joseph C. Ives, *Report Upon the Colorado River of the West, Explored in 1857 and 1858* (Washington: GPO, 1861), and Wallace Stegner's *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (Boston: Houghton Mifflin Company, 1953) for more detailed accounts of explorations near Grand Canyon.
- USDA, USFS, and USDI, BLM, "Man, Models, and Management: An Overview of the Archaeology of the Arizona Strip and the Management of Its Cultural Resources," by Dames & Moore, Inc., Contract No. 53-8371-6-0054, report, 1989, GCNPR, 186-204; Will C. Barnes, *Arizona Place Names* (1935; reprint, Tucson: University of Arizona Press, 1988), 107, 211, 374-75; Platt Cline, *They Came to the Mountain: The Story of Flagstaff's Beginnings* (Flagstaff: Northland Publishing, 1976), 49-106; James R. Fuchs, *A History of Williams, Arizona, 1876-1951* (Tucson: University of Arizona Press, 1953); Dan W. Messersmith, *The History of Mohave County 1892* (Kingman: Mohave County Historical Society, 1991), 103-04, 129, 167-83; Patrick John Putt, "South Kaibab National Forest: A Historical Overview," research paper, 30 June 1991, NAU Cline Library, 20-21.
- Michael F. Anderson, *Living At The Edge: Explorers, Exploiters and Settlers of the Grand Canyon Region* (Grand Canyon Association, 1998), 34-37, 54-56; George H. Billingsley, Earle E. Spamer, and Dove Menkes, *Quest for the Pillar of Gold: The Mines and Miners of the Grand Canyon* (Grand Canyon Association, 1997), 45-46, 73-78.
- Roy M. Robbins, *Our Landed Heritage: The Public Domain 1776-1970*, 2d ed. (Lincoln: University of Nebraska Press, 1976), 8, 18-19, 26, 89-91, 206-207, 218-19, 236-37; Benjamin Horace Hibbard, *A History of the Public Land Policies* (MacMillan Company, 1924), 35-38, 67-69, 75-104, 158, 167-70, 270, 275, 347-50, 375, 385-90, 426-34.
- Hibbard, *Public Land Policies*, 17-18; Robbins, *Our Landed Heritage*, 220-22; USDA, USFS, *Timeless Heritage: A History of the Forest Service in the Southwest*, by Robert D. Baker, Robert S. Maxwell, Victor H. Treat et al., agency monograph, August 1988, 33.
- Hibbard, *Public Land Policies*, 236-241. Congress disposed of more than ten million acres through wagon road grants (1823-69), canal grants (1824-66), and river improvement grants (1828-46).
- Hibbard, *Public Land Policies*, 41-63; Robbins, 223-25. Grant lands were also used as collateral to sell stock, essential to building railways that cost \$10,000-\$40,000 per mile. Although the granting practice ended in 1871, railroads continued to collect the lands as they completed railways through the end of the century.
- Keith L. Bryant, Jr., *History of the Atcheson Topeka and Santa Fe Railway* (Lincoln: University of Nebraska Press, 1974), 84-90, 156, 168, 170; ASHPO, "Transcontinental Railroad in Arizona: 1878-1940," by Janus Associates, historical context study, December 1989, 16-23; USDA, USFS, *Timeless Heritage*, 18. The line across New Mexico and Arizona was considered a branch line by the AT&SF until the late 1890s. It bought out the St. Louis & San Francisco in 1890, went through bankruptcy in the mid-1890s, and in 1896 emerged as the Atcheson, Topeka & Santa Fe Railway, which acquired all interest in the Atlantic & Pacific and renamed it the Santa Fe Pacific Railroad in 1897.
- Michael F. Anderson, "Images of Hispanic Americans in the Apache County, Arizona Frontier Press: 1886-1887," research paper, May 1991, unpublished. This paper uses many unpublished regional sources on the immediate pre-railroad and post-railroad periods east of Flagstaff, as well as all of the fifty-seven issues of the *Apache County Critic* newspaper of the mid-1880s with editorials depicting social, economic, and political issues of the late 1870s and 1880s. The paper argues that the level of one's participation in capitalist economies strongly influenced or dictated one's social and political standing, and that many earlier Hispanics and some Jews, who became wealthy through stock-raising and merchandizing, were politically and socially integrated within the European American communities. Messersmith's *History of Mohave County* and Fuchs' *History of Williams* provide data concerning the same period in communities west of Flagstaff. Bryant's history of the Santa Fe Railroad and Janus Associate's history of Arizona railroading further summarize regional changes following the A&P's arrival.
- A.P.K. Safford, Charles H. Binley, and John G. Campbell, *Resources of Arizona Territory* (San Francisco: Francis & Valentine, 1871), Arizona Collection, Hayden Library, ASU, Tempe, 10. Thomas E. Sheridan, *Arizona: A History* (Tucson: University of Arizona Press, 1995), 104, notes similar efficiencies gained in southern Arizona with arrival of the Southern Pacific Railroad.
- Messersmith, *History of Mohave County*, 104-106; Sheridan, *Arizona*, 147, 149-50, 167-68; Frank J. Tuck, comp., *History of Mining in Arizona* (Arizona Department of Mineral Resources, 1955), 2.
- Roman Malach, *Early Ranching in Mohave County* (Kingman: Mohave County Board of Supervisors, 1978); Robert Clark Euler, "A Half Century of Economic Development in Northern Arizona" (Master's Thesis, NAU, 1947), 29-30, 58, 76-77, 83; Messersmith, *History of Mohave County*, 134-35; Sheridan, *Arizona*, 129-143; Putt, "South Kaibab National Forest," 22.
- Cline, *They Came to the Mountain*, 106, 114-15, 131, 134, 203-08; Saginaw & Manistee, "Our Family Tree," in *The Lumberjack* (Dec 1923): 3-8, NAU Cline Library, Special Collections. The eroding berms of the temporary lumber railways have recently been placed on the National Register of Historic Places.
- See Michael F. Anderson, "When Roads Were Ruts and the Stagecoach Ruled," *Cañon Journal* (Fall/Winter 1995): 25-33, for a summary of South and North Rim stage roads.
- South-side canyon pioneers are more fully presented in Anderson, *Living At The Edge*, chapter three.
- See Richard Mangum and Sherry Mangum, *Grand Canyon-Flagstaff Stagecoach Line: A History and Exploration Guide* (Flagstaff: Hexagon Press, 1999), for an account of the stage line and tourism in the Hance Ranch area.
- See Debra Sutphen, "Grandview, Hermit, and South Kaibab Trails: Linking the Past, Present and Future at the Grand Canyon, 1890-1990" (master's thesis, Northern Arizona University, 1991), for a history of Grandview operations. See Sutphen and Anderson's National Register of Historic Places nomination of the Grandview Trail, 1992, GCNPR, for a history of the trail.
- See Al Richmond, *Cowboys, Miners, Presidents & Kings: The Story of the Grand Canyon Railway*, 2d ed. (Flagstaff: Northland Printing, 1989), 4-22, for a history of the rail spur. See also *(Flagstaff) Coconino Sun*, 18 January 1887, 12 March 1887, 23 April 1887, 10 November 1888, 20 July 1889, 22 October 1891, 3 December 1891,

- and 16 June 1892 for a few accounts of early efforts to attract a railroad. See USDI,NPS, "History of Legislation Relating to the National Park System Through the 82nd Congress," comp. Edmund B. Rogers, 1958, GCNPRL, Part I, 1-4, for congressional bills granting the right-of-way.
19. Bill Suran to Michael F. Anderson, letter, 30 January 1995, author's possession.
 20. Buckley O'Neill, president of the Santa Fe & Grand Canyon Railroad, hired men to repair the trail in 1898, apparently believing that Berry et al. had abandoned it by that year and planning to use it for tourism purposes himself. The conflict may have led to a meeting between the two men resulting in the agreement. Trail improvements and Indian Garden Camp were completed before the railway's arrival, and the rimside hotel may have been open by that time, but the author has found hotel records and other historic references dating only to early 1903. The trail was legally in Berry's name, but he turned over the rights to Cameron after the franchise was renewed in January 1901.
 21. R.H. Cameron, "A Word to the Tourist," advertisement, [1904], *Reference File—Cameron, Ralph H.*, GCNPRL.
 22. The author analyzed and totaled Cameron's hotel records, found in the Cameron Papers, Box 5, University of Arizona Special Collections, Tucson, Arizona, to judge that Cameron did quite well prior to 1910. See also miscellaneous correspondence in the Cameron Papers, Box 5, File *Grand Canyon Legal Papers* 1903, 1906-07, 1909-1912, UASC; and *Coconino Sun* 1 June 1904.
 23. Anderson, *Living at the Edge*, 90-91. See Putt, "South Kaibab National Forest," 39-40, 59-76, and contemporary editorials of the *Coconino Sun* and *Williams News* to understand the county's negative feelings about federal control and its effects on the property tax base. Editorials began to change in the 1910s when motor traffic to the national monument began to bring tourist dollars through the emerging gateway towns along the National Old Trails Highway.
 24. Vincent P. DeSantis, *The Shaping of Modern America: 1877-1920*, 2d ed. (Arlington Heights, Ill.: Forum Press, 1989), 148-49; George Brown Tindall and David E. Shi, *America: A Narrative History*, 4th ed., vol. II (New York: W.W. Norton Company, 1996), 1004-1011; Alan Brinkley, *The Unfinished Nation: A Concise History of the American People*, vol. II (New York: McGraw-Hill, 1993), 556-561.
 25. The following paragraphs are based primarily on "The Evolution of the Conservation Movement: 1850-1920," ed. Juretta Jordan Heckscher, a collection of books, pamphlets, statutes, proclamations, manuscripts, and other materials revealing a conservation chronology and illustrating the varied origins and milestones of conservationist and preservationist thought, Spring 1996, LOC.
 26. Some of these periodicals, including *Harper's New Monthly*, the *Boston Evening Transcript*, *Forest and Stream*, and *Scribner's Monthly* were publishing such articles during the 1870s. They would become still more prolific and widely read in ensuing decades, helping form public opinion over conservation and preservation issues.
 27. See USDA, USFS, *Timeless Heritage* 25, 34, 39-40. During 1892-1907, twenty-nine forest reserves and national forests were proclaimed in the Southwest. During 1893-1909, forest reserves in Arizona increased from 1.85 million to 15.26 million acres.
 28. See Alfred Runte, *National Parks: The American Experience* 2d ed. (Lincoln: University of Nebraska Press, 1987), for the concept of monumentalism, or "cultural nationalism," and the prerequisite that lands be determined "worthless" in traditional economic senses before being set aside as national parks.
 29. See Hal Rothman, *Preserving Different Pasts: The American National Monuments* (Urbana: University of Illinois Press, 1989), for the history behind the Antiquities Act and America's national monuments.
 30. USDI, NPS, "History of Legislation," Part 1, 1.
 31. Game Preserve status in 1906 actually precluded private entry but was not used to invalidate mining claims.
 32. "By the President of the United States of America. A Proclamation," *Statutes at Large* 35, Part 2, 2175-76 (1908), established the national monument as an object of scientific interest in that Grand Canyon was the largest eroded canyon in the nation. Roosevelt was stretching the intent of the Antiquities Act when he set aside 1,279 square miles in this way. Grand Canyon Forest Reserve became Grand Canyon National Forest in 1907 when all "forest reserves" were renamed "national forests." See also Putt, "South Kaibab National Forest," 23-25, 45, 47, and USDA, USFS, *Timeless Heritage*, 41. In 1908, the Grand Canyon National Forest became the Kaibab National Forest north of the river and part of the Coconino National Forest south of the river. The western portion of the Coconino National Forest, south of Grand Canyon, became Tusayan National Forest in 1910. In 1934, Tusayan National Forest became the Tusayan District of the Kaibab National Forest, its current political designation.
 33. Darrell Hevenor Smith, *The Forest Service: Its History, Activities and Organization* (Washington, D.C.: Brookings Institution, 1930), 157.
 34. Rothman, *Preserving Different Pasts*, 74-75.
 35. Smith, *The Forest Service*, 32, 34-35, 63, 169-70, 205; Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976), 103-04, 116-17; Teri A. Cleeland, "To Hull and Back," in *People and Places of the Old Kaibab*, USFS Cultural Resources Management Report No. 10, September 1990, USFS Supervisor's Office, Williams, AZ; Putt, "South Kaibab National Forest," 50, 59-69.
 36. Putt, "South Kaibab National Forest," 49-50, identifies more than a dozen administrative sites withdrawn from entry within Grand Canyon Forest Reserve and Tusayan National Forest, south of the Colorado River. Those within later monument and park boundaries included sites at Hull Tank (the first), Grand Canyon Village, Rowe Well, and within Long Jim Canyon. Sites slightly south along the railway at lower elevations as at Anita, Apex, and Willaha served as winter stations when tourism and grazing at the South Rim were light. With its limited funding, the forest service was glad to occupy cabins and use water tanks and springs that had been developed by earlier entrepreneurs. This applied at the North Rim as well, where facilities used by the USFS at Quaking Asp, Harvey Meadow, and at the head of the Rust trail had been built by Mitzie Vaughn, Jim Owens, and David Rust/Dee Woolley, respectively.
 37. The 1897 law establishing principles of multiple use in the forest reserves led to the permit system beginning in the same year. The author found several of these permits issued at Grand Canyon dating to 1901, but on forms printed in 1899. See USDI, GLO, "Permit for Free Use of Timber," 28 January 1901, GRCA #14864 and "Application for Grazing Privilege," preprinted date of 1899, GRCA #14840, both in Berry Papers, GCNPRL, as examples. See also Putt, "South Kaibab National Forest," 59-76, for typical ranger duties and early animosities with local ranchers, miners, lumbermen, and tourism operators.
 38. Smith, *The Forest Service*, 54, 155. By federal law of 1899, the secretary of the interior was permitted to lease parts of forest reserves for recreational purposes such as hotels, sanitariums, and essential services. A 1915 amendment allowed leases up to five acres for thirty years for summer homes, hotels, stores, or any other "public convenience." Forest rangers in the monument years operated with this and similar legislation that allowed leases and free permits to concessioners.
 39. Pete Berry to Ralph Cameron, letter, 9 January 1914, Cameron Papers, Box 4, File 7, UASC.
 40. Putt, "South Kaibab National Forest," 45, 74; USDA, USFS, *Timeless Heritage*, 39-40, 44-49. The USDI, GLO Southwestern District, which included forest reserves surrounding Grand Canyon, was established in 1897. Its superintendents, based at Albuquerque, were John D. Benedict, 1897-99; William H. Buntain, 1899-1900; and Isaac B. Hanna, 1900-1905, all political appointees without forestry training. Gifford Pinchot created more efficient, decentralized, and empowered forest districts with "district foresters" in charge, appointed superintendents for each national forest, and staffed these and standard ranger positions with forestry-trained or highly motivated personnel, many of whom held masters degrees from Yale and Cornell Universities. Arthur C. Ringland, who had worked with Pinchot as a student since 1900, held a masters from Yale and was known for his ability to stand up to private interests. He served as district forester of District (later, Region) Three, which included all of Arizona and New Mexico forests, during 1908-16. Paul G. Redington followed in this position and was replaced by another experienced and competent forester, Frank C.W. Pooler, who served 1920 through 1945. Swift's and Johnson's report on Cameron's claims went quickly through Ringland at Albuquerque with his concurrence and on to Pinchot, who convinced Secretary of the Interior Richard Ballenger to turn down Cameron's application to patent these fraudulent claims.
 41. USDA, USFS, "Special Use Permit to Santa Fe Land Improvement Company," 3 May 1909, Cameron Papers, Box 4, File 5, UASC. The permit also invited the Santa Fe to further contest control of the Bright Angel Trail, but the concessioner had had quite enough of Ralph Cameron.
 42. Cameron to Pinchot, letter, 7 August 1909, Cameron Papers, Box 4, File 5, UASC; Assistant Forester Overton Price to Cameron, letter, 20 December 1909; Forester Henry S. Graves to Albuquerque District Forester, letter, 7 April 1910; Bill Bass to Sid [Ferrall], letter, 28 April 1910; Cameron to James Wilson, letter, 1 July 1910, and Ferrall to Cameron, letter, 6 June 1911; Ferrall to Cameron, letters (2), 6 June 1911; Ferrall to Cameron, telegram, 6 June 1911; Cameron to Ferrall, telegram, 12 June 1911; and Cameron to Judge Edward M. Doe, letter, 27 March 1912, Cameron Papers, Box 4, File 7, UASC. See also Sutphen, "Grandview, Hermit, and South Kaibab Trails," 92-93.
 43. Margaret M. Verkamp, *History of Grand Canyon National Park*, ed. Ronald W. Werhan (Flagstaff: Grand Canyon Pioneers Society, 1993), 25; Cameron's hotel closed in 1909 or 1910. USDA, USFS, "A Townsite Plan For Grand Canyon National Monument," by Forest Supervisor W.R. Mattoon, 23 June 1909, GCNPRL, notes only two village hotels, which had to be the El Tovar and Bright Angel. Advertisements after 1909 also fail to mention the hotel.
 44. USDI, NPS, "History of Legislation," 4-6; Sutphen, "Grandview, Hermit, and South Kaibab Trails," 80; *Coconino Sun* 24 May 1912, 13 December 1912, 26 December 1913. See also Horace M. Albright, *The Birth of the National Park Service: The Founding Years, 1913-33*, as told to Robert Cahn (Salt Lake City: Howe Brothers, 1985), 172-86; Arthur Warner, "Canyons and Camerons: A United States Senator Defies the Government," *The Nation* 28 October 1925: 481-83; Douglas H. Strong, "The Man Who Owned Grand Canyon," *American West* (September 1969): 33-40; *Los Angeles Times* 27 June 1926; and Anderson, *Living at the Edge*, for details of Cameron's involvement in Grand Canyon into the mid-1920s. Cameron filed fifty-five new claims within the park in 1919 and, as U.S. senator during 1921-27, showed his animosity for the park service. He had a staunch ally in U.S. Attorney General Harry Daugherty (soon to resign for his

- part in the Teapot Dome scandal) who appointed a U.S. attorney for northern Arizona sympathetic to Cameron's canyon interests, helping to explain retention of his canyon mining claims. During the reelection year of 1926 he was severely criticized in the media and in Congress for his attempts at private gain in the national park and for filing fraudulent mining claims at the site of the planned Hoover Dam. Horace Albright related that everyone within the U.S. Forest Service, U.S. Biological Service, and National Park Service rooted for Carl Hayden to beat him in the 1926 election and parted when Hayden trounced him. Cameron was defeated by Henry Ashurst in 1928 and again by Hayden in 1932. At the time of Cameron's death in 1953 at age 89 he was promoting a tourist ranch in Yuma and still condemning federal control of western lands.
45. George Wharton James, *The Grand Canyon of Arizona: How To See It* (Boston: Little, Brown, 1910), 15, 21-23, 49-50. See Lesley Poling-Kempes, *The Hawey Girls: Women Who Opened the West* (Paragon House, 1989) for a summary history of the Fred Harvey Company and its role as the Santa Fe Railroad's concession partner.
 46. Anderson, *Living at the Edge*, 97-99; USDA, USFS, "A Working Plan"; USDA, USFS, "A Townsite Plan for Grand Canyon National Monument," by W.R. Mattoon, 18 July 1910, GCNPR; USDA, USFS, *A Plan for the Development of the Village of Grand Canyon, Ariz.*, by Frank A. Waugh (Washington, D.C.: GPO, 1918).
 47. A hands-off USFS posture is adjudged from a number of sources, including USDA, USFS, "Map of the Grand Canyon, Kaibab National Forest, Grand Canyon National Monument, Grand Canyon National Game Preserve, with Directions to Campers and Tourists," a 16-page informational brochure, (ca. 1913-17), in *Reference File—U.S. Forest Service*, GCNPR; Putt, "South Kaibab National Forest," 59-76; and observations of Robert McKee, son of pioneer tourism operators Thomas and Elizabeth McKee, in the Krueger Papers, in possession of Martha Krueger of Bailey, Colorado. With corporations looking for profits and the USFS concerned with multiple use and low budgets, there was no comprehensive approach to monument development. Also, the forest service did not have entrance stations to the monument nor did they maintain a considerable presence at the village, remaining at scattered stations best suited to fighting fires and otherwise managing adjacent national forests.
 48. Albright, *The Birth of the National Park Service*, 6-8, 23, 34-39. The NPS enabling act is printed in USDI, *Annual Report of the Superintendent of National Parks to the Secretary of the Interior for the Fiscal Year Ended June 30, 1916* (Washington, D.C.: GPO, 1916), 81-82, hereafter noted as *Report of the Superintendent* 1916.
 49. Albright, *The Birth of the National Park Service*, 23, 37, 83; *Report of the Superintendent* 1916, 5, 9-10; USDI, *Report of the Director of the National Park Service to the Secretary of the Interior for the Fiscal Year Ended June 30, 1917* (Washington, D.C.: GPO, 1917), 4-6, 94, all such reports hereafter noted as *Report of the Director* with the fiscal year date following; *Report of the Director* 1918, 32-33, 237-38.
 50. Albright, *The Birth of the National Park Service*, 83; *Report of the Director* 1917, 94; 1918, 32-33, 95, 237; 1919, 36, 94-95, 276, 295; "An Act to Establish the Grand Canyon National Park in the State of Arizona," *Statutes at Large* 40, 1175 (1919). The park's enabling act is printed in *Report of the Director* 1919, 301-304. Grand Canyon and LaFayette (Acadia) National Parks were designated on the same day, tying for 17th place.

CHAPTER TWO

Foundations 1919-1929

1. Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 28-29, 32-34. See also Alfred Runte, *National Parks: The American Experience* 2d ed. (Lincoln: University of Nebraska Press, 1987), 65-81, 82-97, as one of the first histories to explain the national parks in psychological, utilitarian, and economic terms.
2. *Report of the Superintendent* 1916, 1.
3. *Report of the Superintendent* 1916, 2, 81-82.
4. *Report of the Director* 1917, 1-2, 8-21. Albright actually wrote the letter of 13 May 1918, under Lane's signature, that laid out NPS policy for the next fifty years. It lists goals and objectives that emphasize use and identifies preservation in terms of protecting scenery more than flora and fauna.
5. Analysis of the *Report of the Director* for the years 1917-33, supports these conclusions. Early directors' words, including Arno Cammerer's (1933-40), resemble those of business executives promoting park (product) improvements, tallying numbers of visitors (customers), expanding the visitational base to the middle class, and responding to visitor demands.
6. Mather, by example, imbued NPS personnel with a "protestant work ethic," and like Gifford Pinchot with the USFS, replaced political appointees with more capable men by the mid-1920s.
7. Mather described and justified his promotion of corporate concession monopolies in his *Report of the Director* 1923, 4-5. Facilities had to be upgraded quickly to meet NPS visitational objectives, and only larger companies had the capital to do so and to operate for a full season rather than just peak periods. Long-term con-

tracts protected concessioner interests, since concessioners generally did not own the land under their developments. Monopolies were also preferred to eliminate bickering among small operators, which annoyed both customers and NPS administrators.

8. *Report of the Director* 1920, 14; 1925, 2. Mather persisted with this argument throughout the late 1910s and 1920s.
9. Examples are found in *Report of the Director* 1917, 10-13, and 1920, 60-64, but Mather and Albright in their reports throughout the 1920s and early 1930s never failed to mention the variety and volume of literature, art, and media employed to promote the parks.
10. Mather emphasizes the economic advantages of park tourism in *Report of the Director* 1920, 14, 70-73, but consistently makes this case in earlier and later reports. He first uses the phrase, "See America First," in the 1920 report, but the idea and informal campaign predate the NPS. By 1922 the Page Publishing Company alone had produced fourteen books in its *See America First* series, most written by romanticist writers like George Wharton James and Thomas Murphy and serving as travelogues to the U.S. West. See George Wharton James, *Utah: Land of Blossoming Alleys* (Boston: The Page Company, 1922), publishers' pages, 163-193, for a list of such books and James' promotion of the southern Utah parks. The U.S. Railroad Administration created the Bureau of Service in June 1918 as a clearing house for those interested in promoting U.S. tourist travel and particularly to coordinate rail travel to the national parks and distribute promotional material. See *Report of the Director* 1918, 11-12. Mather's and Albright's efforts to create a federal tourist agency paid off with creation of the U.S. Tourist Bureau within the NPS in 1936, formalized in 1940 with an "Act to Encourage Travel in the United States." See also Jean Henderer, "The Future is Now," *NPS Newsletter* (October 1, 1970): 1-2.
11. Mather believed, or led Congress to believe, that the parks required only one good physical facelift to bring them out of the horse-and-buggy age into the automotive era, especially in terms of roads, trails, and administrative buildings, after which park revenues would fund costs of administration, operations, protection, and maintenance. Congress made such cost accounting difficult in 1920 when it directed that all receipts be deposited in the general treasury when heretofore they had remained in the parks. Mather and Albright also began to drop this argument of keeping park revenues in the parks by the late 1920s, realizing they had been too optimistic. Still, Mather reported that in 1920 about 35 percent of the cost of park operations had been returned to the treasury through direct revenues; in 1923, Yellowstone produced 90 percent of its administrative, protection, and maintenance costs. See *Report of the Director* 1917, 22, 24; 1920, 49; and 1923, 26-27 for Mather's views on automobile entrance fees and park self-sustainability. Strictly speaking, parks did not have "entrance" fees in the 1920s, but charged automobilists and motorcyclists for using park roads.
12. One of Mather's principal arguments for government subsidies and for keeping prices low was to compete with the European market, which was subsidized by European governments. Yellowstone, with 304 miles of "automotive highways" in 1916, charged an auto license fee of \$10.00; some parks charged as little as fifty cents or nothing at all, depending on the state of their roads. All such fees were reduced in 1926, however, when tourist complaints escalated. See *Report of the Director* 1917, 23-24; and 1926, 20.
13. Congress appropriated \$6,000 in 1923 and for years thereafter to "study, verify, and check the accounts" of concessioners. An independent CPA from San Francisco was hired in that year to do the work. Audits were to ensure that the government received its fair share of fees and that concessioners made a profit, but also to keep prices as competitive as possible. See *Report of the Director* 1923, 44; 1924, 19; 1925, 16. Albright, always a firm believer that parks were for the people, disliked the concept of "use" fees for varied NPS services.
14. *Report of the Director* 1917, 19-20; 1918, 15-16. Mather and others began arguing for such a system in 1915. In 1917 the task was turned over to the National Park Highway Association. Some of its earliest activities included the mapping and signing of roads designated as part of the overall loop. Mather continued to work with all interests to promote better western roads; many of the same people and organizations helped create the NPS and GCNP.
15. *Report of the Director* 1919, 17-20; 1920, 37-41, which includes a map of the park-to-park loop; 1921, 25-27; 1922, 18. The park-to-park highway was formally designated and dedicated on 26 August 1920, with a 4,700-mile tour completed 26 August-9 November, but by the mid-1920s, only about 25 percent had been rebuilt for autos.
16. *Report of the Director* 1921, 23-25; 1922, 20.
17. *Report of the Director* 1921, 23; 1922, 20; 1923, 9; 1924, 11-12; 1925, 17-18; 1930, 35; 1932, 31-33. The number of visitors arriving by automobile had already surpassed those arriving by train and stage by the late 1910s. The National Park Roads and Trails Act of 1924 released its first funds in December 1924. Mather had argued earlier that park roads should be built to less exacting standards than those of the BPR and that \$7.5 million would be sufficient to renovate or build all of them. When Congress allocated that amount in 1924, he immediately changed his mind, made the pact with the BPR to build to their standards, and estimated that another \$51 million would be needed.

18. *Report of the Director* 19, 96-102. NPS directors and Santa Fe advertising brochures of the 1920s and early 1930s consistently referred to the park as a "resort," or "all-season resort."
19. Descriptions of the Fred Harvey Company's services are found in *Report of the Superintendent* 1920-33; very detailed descriptions along with NPS-approved prices are found in annual Santa Fe and NPS advertising booklets including the Santa Fe Railroad's *Off the Beaten Path in New Mexico and Arizona*, *The Grand Canyon Beckons* and *Grand Canyon Outing* copies in *Reference File—Fred Harvey*, GCNPR.L. The Fred Harvey Company assumed management of inner-park trips from the Santa Fe Railroad Transportation Department about 1929.
20. The author did not locate the original contract, but general terms are obtained through correspondence concerning all park concessions, including M.R. Tillotson to the Director, letter, 30 January 1933, and A.E. Demaray to the Superintendent, letter, 24 February 1932, *Reference File—Verkamp (Family & Store)*, GCNPR.L.; and James E. Babbitt to Hon. Henry F. Ashurst, letter, 11 January 1936, File C3823 *Babbitts 1922-1950*, GCNPR.L.
21. The original contract, dated 22 April 1921, is in File C3823 *Babbitts 1922-1950*, GCNPR.L., and calls for 0 percent up to gross sales of \$20,000; 1 percent up to \$40,000; 2 percent up to \$60,000; sliding up to 4 percent on sales of \$80,000 and above.
22. The assignment of rights dated 26 June 1923 is in File C3823 *Babbitts 1922-1950*, GCNPR.L.
23. Copies of Verkamp's permits are found in File C3823 *Verkamps 1928-1948*, GCNPR.L. In a letter from Miner Tillotson to Horace Albright, 25 January 1932, File C3823 *Verkamps 1928-1948*, GCNPR.L., Tillotson indicates that he had never considered Verkamps to be a "public necessity," that its services were duplicated by the Fred Harvey Company's Hopi House, and that if John Verkamp had applied to open the store after creation of the park, "it would not have been approved." Plans for another Harvey-run hotel and casino appeared as early as 1924 with the first NPS village plan.
24. Chief Auditor to Mr. Moskey, memorandum, 8 January 1932, File C3823 *Verkamps 1928-1948*, GCNPR.L.
25. Michael F. Anderson, *Living at the Edge: Explorers, Exploiters and Settlers of the Grand Canyon Region* (Grand Canyon Association, 1998), 145-151.
26. Anderson, *Living at the Edge*, 151-56. For a description of Wylie Way Camps and an account of early Yellowstone concession services, see W.W. Wylie, "W.W. Wylie Document," 104 pages of typed memoirs, 1926, copy in the possession of Mrs. Martha Krueger of Bailey, Colorado (Elizabeth McKee's granddaughter).
27. Anderson, *Living at the Edge*, 156. See also, USDI, "Advertisement," an RFP for North Rim concessions, [1926], and Acting Director to George H. Smith, letter, 28 June 1927, and M.R. Tillotson to The Director, letter, 15 June 1928, and H.B. Basinger to M.R. Tillotson, letter, 27 June 1928, and M.R. Tillotson to The Director, letter, 10 July 1928, and B.A. McGinn to the Director, letter, 5 November 1928, File C3823 *Utah Parks 1927-1946*, GCNPR.L.; and Thomas McKee to M.R. Tillotson, letter, 19 March 1927, *Gen Admin—GKA—Tillotson, Mine R. Sept 1927-38*, GCNPR.L. After some not altogether friendly negotiations, the McKees were paid \$25,000; the Jensens were paid about \$6,000 plus \$160 per month to continue trips along the rim as a subconcessioner. The Fred Harvey Company took over all inner-canyon mule trips at this time and began rim-to-rim saddle trips the following year.
28. *Report of the Superintendent* 1920, 1925, 1927.
29. *Report of the Superintendent* 1920, 1925, 1927, 1928; *Report of the Director* 1922, 25, 148; 1924, 41; 1925, 29; 1926, 33; 1930, 32, 199. Most effluent was used by the Fred Harvey Company for visitor services; the NPS reserved 10 percent for campground toilets and irrigation.
30. *Report of the Superintendent* 1927; *Report of the Director* 1925, 29; 1926, 33; 1930, 200.
31. *Report of the Superintendent* 1922, 1926; *Report of the Director* 1922, 152; 1925, 29; 1926, 146. The old power plant was razed in the same year.
32. Miscellaneous handwritten notes, and Arno Cammerer to Mr. Crosby, letters, 7 and 8 September 1922, and W.W. Crosby to the Director, letter, 1 December 1922, and J.R. Eakin to The Director, letter, 1 November 1924, and Arno Cammerer to Mr. Eakin, letter, 12 November 1924, and M.R. Tillotson to the Director, letter, 17 December 1927, and John O. Theobald, "Post Office Panorama of the Grand Canyon," in *Western Express* (October 1964), *Reference File—Post Office*, GCNPR.L. Postal employees and their families occupied the second story of the old Cameron hotel in 1910 through 1935.
33. *Report of the Superintendent* 1920, 1922, 1923; *Report of the Director* 1922, 25; 1923, 169; Howard B. Stricklin to Mrs. Ruby M. Smith, letter, 29 October 1965, *Reference File—Cemetery*, GCNPR.L. The cemetery's "memorial gateway" of native stone and logs was built by the local American Legion in 1928 as a gift to the park. The small Havasupai cemetery south of Rowe Well predates park creation, but there was never a formal plot set aside for European Americans until the present cemetery was established.
34. *Report of the Superintendent* 1922, 1925, 1928; *Report of the Director* 1922, 147-48; 1923, 172; 1924, 143; 1929, 79, 81; USDI, NPS, "Circular of General Information Regarding Grand Canyon National Park, Arizona," from "Circulars of General Information: The National Parks, 1930," DSC Library, such pamphlets hereafter noted as USDI, NPS, "Circular, [year]."
35. "The Reed Case at Grand Canyon National Park," unsigned typed manuscript, ca. 1925, *Reference File—Protection/History of GCNPR.L.*; W.F. Draper, "Report on Sanitation in Grand Canyon National Park," typed manuscript, October 1923, and W.W. Crosby to L.G. Carr, letter, 17 June 1922, and W.W. Crosby to W.K. Etter, letter, 13 December 1923, and E. Nelson to George C. Bolton, letter, 27 October 1926, and E. T. Scoyen, Memorandum for the Superintendent, 10 November 1926, and George C. Bolton to W.K. Etter, letter, 12 November 1926, File *Misc.—Installation of Original G.C. Sower System, 1922-26*, GCNPR.L. Supai Camp developed into one such informal slum for Havasupai workers. "Mexican" camps, or slums, established by construction contractors and the Santa Fe Railroad, developed at the southern edge of the railroad wye.
36. Campbell paid for his cooperation by losing the 1924 election by the same margin as the failed referendum.
37. *Report of the Superintendent* 1920; *Report of the Director* 1920, 129; 1924, 143.
38. *Report of the Superintendent* 1920, 1921, 1923; *Report of the Director* 1920, 124-25; 1921, 57, 59, 102; 1922, 127.
39. *Report of the Superintendent* 1923, 1924; USDI, NPS, "Grand Canyon Village Historic District," by James W. Woodward, Jr., Janus Associates, Inc., national register nomination, 19 May 1989, 8.8-8.12, GCNPR.L.; USDI, NPS, "Grand Canyon National Park General Plan Community Development," village plan, 24 June 1924, GCNPR.L.
40. *Report of the Superintendent* 1920-24.
41. USDI, NPS, "Historic Listing of National Park Service Officials," 1 May 1991, NPS Library, Harper's Ferry, VA; *Report of the Superintendent* 1921-25; *Report of the Director* 1920, 130; 1922, 49.
42. Rangers of the 1920s included Tex Haught, Clyde West, Frank J. Winess, Cal Peck, Harry Phillips, Jack Frost, Leo Smith, Fred Johnson, Art Brown, Carl Cox, James Brooks, Glen Sturdevant, Bert Lauzon, Carl Lehnert, and Charles E. Fisk. See Michael Harrison, interviews by Susan K. Lamb, 9-11 March 1986, by Jacilee Wray, 24 February 1990, and by Diane Grua, 1 June 1995, transcripts, GCNPMC, hereafter called the Harrison interviews. Harrison was chief clerk at GCNP during 1922-31.
43. *Report of the Superintendent* 1920-24. Clerical resignations included F.M. Otis, Chief Clerk; Dima H. Brown, clerk and stenographer; J.J. Durant, acting clerk; and Estelle Lindsay, clerk and special disbursing agent. Reports indicate that park accounts were in disorder prior to 1923, leaving the scent of embezzlement in the air, and "resignations" among the clerks and perhaps some of the rangers were likely forced. Rangers who resigned, among the first to manage GCNP, were Clyde West, Dale Pritchett, Frank J. Winess, Charles E. Fisk, and Merrill Westfall. Winess returned by 1924. According to the Harrison interviews, some resignations were due to George Bolton, the assistant superintendent who had a difficult time getting along with many rangers and village residents.
44. *Report of the Superintendent* 1924. All other part-time and temporary workers, including as many as for ty laborers, still lived in shacks, tents, or tent cabins.
45. *Report of the Superintendent* 1924, 1925, 1927, 1928; *Report of the Director* 1924, 143; 1925, 28-31, 127-30; Harrison interviews. Harrison notes other community activities at the recreational field including skeet shooting and baseball games in the 1920s and rodeos, which began in 1930.
46. Martha Krueger of Bailey, Colorado, informed the author of the methods for obtaining water. The famous burro Brighty was used in this capacity, carrying ten gallons at a time in company of the McKees's son, Robert. See also "Interviews with 'Blondy' Jensen (Aldus), Elizabeth Mather, and Edwin Rothfuss," handwritten notes, undated; and Thomas H. McKee to Mr. [Lon] Garrison, letter, 6 June 1951, and Brad Waltman, "Greenland Lake Project," typed report, 9 August 1964, *Reference File—North Rim—History*, GCNPR.L.
47. *Report of the Superintendent* 1925-28; *Report of the Director* 1926, 147.
48. *Arizona Good Roads Association Illustrated Road Maps and Tour Book* (Prescott: Arizona Good Roads Association, 1913; reprint, *Arizona Highways* 1987). For the condition of roads on the Arizona Strip and in southwestern Utah through the 1930s, see USDI, NPS, HAER, "Zion National Park Roads and Bridges," by Michael F. Anderson, report, 1993, copy in GCNPR.L. Use of carrier pigeons is noted in H.C. Bryant, Memorandum for the History Files, 20 September 1948, *Reference File—Fred Harvey*, GCNPR.L.
49. *Report of the Superintendent* 1920, 1921. Peters noted the Ash Fork road was nearly impassable in 1920 and that 80 percent of South Rim traffic arrived along the road skirting the tracks from Williams. By 1922 the Maine Road was the approach of choice and remained so until the new approach road was opened in 1929-30.
50. Superintendents recommended that motorists wishing to reach the North Rim from the south take the long way around through California, Nevada, and Utah, approximately 600 miles, rather than the much shorter but often impassable emigrant road.

51. W.W. Wylie's sons, on their way to Bright Angel Point from St. George in 1916, got lost then stranded for a week south of Pipe Springs. They never made it to the North Rim and refused to move to such an isolated area, therefore Wylie's daughter became camp manager.
52. *Report of the Superintendent* 1923, identifies ninety-nine miles of park roads, none of which were built by the NPS.
53. *Report of the Superintendent* 1924.
54. *Report of the Director* 1925, 17-18, 30, 128; 1926, 15-16. For a strategic plan of all GCNP road projects envisioned in 1926, along with construction priorities and cost estimates, see C.G. Morrison, Highway Engineer, to C.H. Sweeter, BPR District Engineer, 17-page report, File *Misc—Construction* 130—*Desert View Road Nov 1923 - Nov 1927*, GCNPR.L.
55. See USDI, NPS, HAER, "East Rim Drive (Grand Canyon Route #1 and #10)," by Michael F. Anderson, HAER No. AZ-44, September 1994, GCNPR.L, for a history of East Rim Drive. The Navahopi Road was built by the Santa Fe Railroad in 1924 from the Grandview Road down the Coconino Plateau south of the park to Cameron to allow tours to the Navajo and Hopi reservations. The railroad maintained it until 1929 at their own expense, and the fact that many visitors used it as a park entrance, along with the poor condition of the early road to Desert View, prompted the Santa Fe Railroad to make its threat.
56. For a detailed history of the South Approach and Entrance Roads, see USDI, NPS, HAER, "South Entrance Road (Grand Canyon Route #2)," by Michael F. Anderson, September 1994, HAER No. AZ-45, GCNPR.L.
57. *Report of the Superintendent* 1926; J.R. Eakin to Horace Albright, letter, 28 December 1926, and C.G. Morrison letter, 14 October 1926, File *Misc Construction* 130—*G. C. Desert View Road Nov 1923 - Nov 1927*, GCNPR.L; Arno Cammerer to E.B. Merritt, letter, 22 April 1927, File *Ap 4 Havasupai .1922-42*, GCNPR.L; Michael F. Anderson, "North and South Bass Trails Historical Research Study, Grand Canyon National Park, Arizona," 1 November 1990, GCNPR.L, 112-13.
58. The old approach (Grand Canyon Highway) is found by leaving today's entrance road at Lindberg Hill and following the ridge west of Thompson Canyon south to Harvey Meadow, the location of the old park boundary, where it passed Uncle Jim Owens's cabin.
59. See USDI, NPS, HAER, "Cape Royal Road (Grand Canyon Route #3)," by Michael F. Anderson, September 1994, HAER No. AZ-40, and "North Entrance Road (Grand Canyon Route #4)," by Michael F. Anderson, September 1994, HAER No. AZ-43, GCNPR.L, for detailed histories of the Cape Royal and North Entrance Roads as well as information on earlier approach roads.
60. J.R. Eakin to the Director, letter, 1 August 1926, and M.R. Tillotson to the Director, letter, 3 December 1929, File *Misc Construction* 130—*B.A. Cape Royal Road, July 1925*, GCNPR.L; C.M. Carrel, "Final Report on Point Sublime Road Development," 3 February 1932, and C.M. Carrel, "Final Construction Report on Rehabilitation of Point Sublime Road," 30 December 1940, File *Misc North Rim Roads—Final Reports* 1932, 1938, 1940, GCNPR.L. The current road past the Widforss trailhead to Point Sublime does not appear on pre-1940 maps. The historic road to Point Sublime left today's entrance road about 3/4 mile south of the entrance station. See the C.G. Morrison letter, 14 October 1926, for early arguments about a developed road to Point Sublime and Tiyo Point.
61. *Report of the Superintendent* 1920. For detailed histories of Grand Canyon's principal trails, see Michael F. Anderson and Debra Sutphen's 1991 and 1992 national register nominations for the Thunder River, North and South Bass, Hermit, Bright Angel, North and South Kaibab, Grandview, Hance and Colorado River Trails, hereafter noted as USDI, NPS, "[trail name]," copies in GCNPR.L.
62. *Report of the Superintendent* 1920-24. In 1923, the superintendent identified only six trails totaling sixty-six miles: the Hermit; the Dripping Springs; the Tonto from Hermit to Indian Garden; the "Kaibab," which was identified as the trail from the Tipoff to the North Rim; the Tonto from Indian Garden to the Tipoff, and the Topocoba Trail, which the park did not maintain.
63. USDI, NPS, "North Kaibab Trail"; M.R. Tillotson, "Trail Construction in the Grand Canyon of the Colorado River with the Use of Air Power Equipment," typed manuscript, [ca. 1926], File *Gen. Admin.—G&A—Tillotson, Miner RSept* 1927-38, GCNPR.L.
64. USDI, NPS, "South Kaibab Trail"; M.R. Tillotson, "The Wonder Trail of the West," typed manuscript, [1925], File *Gen. Admin.—G&A—Tillotson, Miner R Sept* 1927-38, GCNPR.L.
65. USDI, NPS, "North Kaibab Trail" and "South Kaibab Trail"; Tillotson, "The Wonder Trail." The South Kaibab Trail was built during December 1924 - June 1925 under Tillotson's supervision. The suspension bridge was designed by NPS engineer W.P. Webber, while engineers Frank Kittredge and J.H. Lawrence supervised its construction during 9 March - 3 August 1928.
66. The NPS evicted Ralph Cameron's caretakers at Indian Garden in September 1924 and immediately removed trash from the area, installed pit toilets and watering troughs, and rerouted the trail out of the creek to clean up the water. Litigation continued over Cameron's claims, but the NPS was convinced of their ultimate victory in the courts. Therefore, the site from this year forward was considered strategic to inner-canyon visitation. See *Report of the Superintendent* 1925.
67. See USDI, NPS, "Bright Angel Trail" and Teri Cleeland, "The Cross Canyon Corridor Historic District in Grand Canyon National Park: A Model for Historic Preservation" (master's thesis, Northern Arizona University, 1986), for histories of the Bright Angel. Cleeland also provides detailed information on buildings at Indian Garden and Phantom Ranch. See Anderson, *Living at the Edge* 73-74, 98, for a concise trail summary and map.
68. Superintendent Eakin wrote in 1926 that "unless everything possible is done for motor campers we are not serving the class of people for whom the parks are primarily intended, those of moderate means," and that it was "especially gratifying" to build and expand facilities for this new market. See *Report of the Superintendent* 1926.
69. *Report of the Superintendent* 1920-22, 1926.
70. The automobile entrance fee went into effect 1 July 1926.
71. The new campground was located immediately west of Village Loop; much of it is covered today by the parking lot northwest of Maswik Lodge. Some of the original housekeeping cabins are extant just north of the lodge, but many more used to extend along the tracks east and south of the lodge. The old Motor Lodge building itself was located on the exact spot where today's Maswik Lodge stands; two stone pillars fronting today's lodge are from the old building.
72. *Report of the Superintendent* 1926-28; *Report of the Director* 1929, 79-80.

CHAPTER THREE

Ironic Golden Years, 1930-1941

1. Permanent employees in 1929, most of whom were still on the job through the early 1930s, included Tillotson, Assistant Superintendent Preston "Pat" P. Patraw, Park Engineer C.M. Carrell, Chief Ranger James P. Brooks, Assistant Chief Ranger A.L. Brown, Park Naturalist Edwin D. McKee, rangers Carl Lehnert, Hubert R. Lauzon, and R.R. Williamson, General Foreman A.T. "Chick" Sevey, Chief Clerk Michael Harrison with a clerical staff of W.E. Dowling, Gordon P. Cox, P.D. Eldred, and Constance P. Whitney, Warehouseman H.W. Tarleton, Master Mechanic John E. Cook, Master Carpenter T.R. Nance, Packmaster Jack Way, and blacksmiths J.W. Harris and O.L. Davis. See USDI, NPS, "Formal Opening New Administration Building," 6 April 1929, File *Gen Admin—GRCA—Tillotson, Miner RSept* 1927-38, GCNPR.L.
2. *Report of the Superintendent* 1930, 1933; *Report of the Director* 1931, 2; 1932, 1-2. GCNP employees experienced payless furloughs, loss of annual leave, and other cutbacks in the early 1930s, but hardship was offset when all park-level NPS employees were included in the Civil Service in August 1931 when pay scales increased.
3. *Report of the Superintendent* 1930-33; *Report of the Director* 1930, 99; 1931, 51; 1932, 2, 31. See also George Brown Tindall and David E. Shi, *America: A Narrative History*, 4th ed., vol. II (New York: W. W. Norton Company, 1996), 1148-51. GCNP received \$627,000 in road funds for FY 1930. The NPS began receiving emergency employment funds in 1931, \$2.08 million in that year and \$3 million by FY 1933.
4. *Report of the Superintendent* 1933. Tillotson realized that deflation would benefit park infrastructural improvements in other ways. In his annual report, reprinted in the *Report of the Director* 1930, 99, he wrote that there was "keen competition in all bidding and low bids were in all cases equal to or considerably lower than the engineers' estimates. By taking advantage of the contracting situation we have been enabled to secure contracts at excellent prices."
5. See Tindall and Shi, *America: A Narrative History*, 1155-91, and Alan Brinkley, *The Unfinished Nation: A Concise History of the American People* vol. II. (New York: McGraw-Hill, 1993), 680-731, for summaries of the depression and New Deal on a national level. See Harlan D. Unrau and G. Frank Willis, "Administrative History: Expansion of the National Park Service in the 1930s," December 1982, DSC Library, 70-102, for a history of New Deal programs in the National Park System, and Conrad Wirth, "Civilian Conservation Corps Program of the United States Department of the Interior, March 1933 to June 30, 1943," report to Harold L. Ickes, Secretary of the Interior, January 1944, File *E.C.W.(CCC) Documents* Box 10, GCNPMC, for an overview and statistics for the CCC in the parks and monuments. During 1933-37 alone, funds equaling \$2.5 million from the CWA, \$24.3 million from the WPA, \$40.2 million from the PWA, and \$82.3 million from the CCC were spent on park system projects.
6. Unrau and Willis, "Administrative History," 72-74, 100-101. At GCNP, the superintendent, assistant superintendent, and park engineers were most involved. Other NPS engineers, landscape architects, and specialists hired through New Deal programs arrived on-site to manage specific projects.
7. Untitled rosters and brief histories of several CCC companies, *Reference File—Civilian Conservation Corps* n.d., GCNPR.L; "CCC Yearbook, Company 819, Grand Canyon, Arizona," n.d., and Alfred C. Kuehl, Landscape Architect, "Summary Report—ECW Work Projects CC Camp 819—June 1-Oct 15," 1933, File *E.C.W.(CCC) Documents* Box 10, GCNPMC. Entries in the *Report of the Superintendent* 1933-42, along with the above sources, record the presence of Companies 818, 819, 847, and 2833 in various years at six camps: NP-1-A, North Rim, Bright Angel Point; NP-2-A, near Avenue A; NP-4-A, near Avenue C; NP-3-A, Bright Angel Creek (today's campground); NP-6-A, Desert View; and

NP-5-A at an unknown location until 1937 when it closed and its buildings were moved to Winona Siding near Flagstaff. "Fly camps" were also established at the sites of remote building projects, including Grand Canyon National Monument. Administrators could report in late 1933 that "every resident in the Grand Canyon region is working" because of CWA, PWA, and CCC projects in progress. See also Patricia Mott to Division Chief, Resource Management, memorandum, 28 November 1983, *Reference File—Civilian Conservation Corps* GCNPRL, for specific projects and types of work performed at GCNP.

8. *Report of the Director* 1931, 2; 1932, 2, 30-31; *Report of the Superintendent* 1933. Nationally, concessioners' gross receipts dropped 35 percent in 1930, another 35 percent in 1931, and another 50 percent in 1932. Receipts for GCNP concessioners in 1933 were 50 percent of receipts in 1929.
9. *Report of the Director* 1932, 29-30; *Report of the Superintendent* 1933, 1934. The Fred Harvey Company's gross receipts in 1932 were \$454,000; in 1933, \$388,000. Under terms of the new contract they paid no franchise fees for either year. See also USDI, NPS, Contract I-1p-5678, 29 January 1936, and "Data Concerning the Concession Contract of Catherine W. Verkamp et al," data sheets with financial statements 1925-44, 9 July 1945, File *C3823 Verkamps 1928-1948*, GCNPRL; and J.W. Babbitt to M.R. Tillotson, letter, 8 January 1936, and James E. Babbitt to Henry F. Ashurst, letter, 11 January 1936, and Arno Cammerer to Tillotson, letter, 10 February 1936, and J.E. Babbitt to M.R. Tillotson, letter, 22 February 1936, File *C3823 Babbitts 1922-1950*, GCNPRL.
10. *Report of the Superintendent* 1931; *Report of the Director* 1930, 38, 102; Fred Harvey Company to the Secretary of the Interior, letter, 4 March 1930, File *C58 Santa Fe Buildings 1924-1935*, GCNPRL.
11. See M.R. Tillotson, "A Water Supply for the North Rim of the Grand Canyon," in *State Board of Health Bulletin* (July 1929): 35-37. The minimum flow of Roaring Springs in the late 1920s measured 4,850,000 gallons per day. The system initially contained two pumps capable of delivering about seventy gallons per minute, but was designed for expansion and the Utah Parks Company continued improvements including additional storage tanks and emergency diesel motors at the rim during the 1930s. It cost the company \$12.16 per kilowatt hour to produce energy for North Rim facilities. See C.P. Kohler, Union Pacific electrical engineer, "Cost of Producing Electric Power...," itemized list of costs, [1930s], File *C3823 Utah Parks 1927-1946*.
12. *Report of the Superintendent* 1934; George L. Davenport, Jr., "Grand Canyon's Unique Water Pumping Plant," in *Water & Sewage Works* magazine (October 1946): 875-77. See various untitled graphs produced in the late 1930s and early 1940s comparing visitation to water use for the years 1920-50 in *Reference File L425-b—Santa Fe Railroad*, GCNPRL. See also George L. Davenport, Jr., assistant engineer, "Report on Future Water Supply for Grand Canyon," 26 September 1941, and Davenport to M.C. Blanchard, letter, 1 December 1945, *Reference File L425-b—Santa Fe Railroad*, GCNPRL, for concise estimates of water supplies and alternatives considered in the 1930s and 1940s. The initial Indian Garden system delivered 78,000 gallons per day. Allowing for perennial flow of Garden Creek, which the NPS demanded to sustain riparian growth, the upgraded system had a maximum capacity of six million gallons per month. In August 1939, the peak flow of 5.93 million gallons barely met demand.
13. [Santa Fe chief engineer], "Grand Canyon, Arizona — Utility Facilities," report exhibit, 4 August 1953, *Reference File L425-b—Santa Fe Railroad*, GCNPRL. This exhibit, prepared just before the Santa Fe Railroad divested itself of utility responsibilities, lists all capital expenditures on utility systems extant in 1953 that were built during 1905-53 and includes the years constructed. These costs in the 1930s totaled \$967,000 at the village, \$5,880 at Phantom Ranch, and \$11,396 at Yaki Point, Hermits Rest, and Desert View, not including restaurants, shops, accommodations, or other tourist-related facilities.

The men's and women's dormitories—the latter 74-bedroom building called Colter Hall today—replaced an earlier dormitory and studio beside the El Tovar that were demolished at this time. Unaccountably, the new dorms were built within the "accommodation" zone otherwise reserved for visitor facilities, while the company moved its "Mexican" dormitory out of this zone to the building's present location south of the mule barns where it serves today as AmFac's personnel offices.
14. USDI, NPS, "Circular, 1935"; *Report of the Superintendent* 1933, 1936-38; *Report of the Director* 1931, 26. The housekeeping cabin complex through the years has been called the auto camp, auto lodge, Motor Lodge, and today, Maswik Lodge. The Utah Parks Company also kept a doctor under contract at Bright Angel Lodge—Dr. E.H. Calvert of the Union Pacific Railroad in 1930—who treated both guests and employees. See also M.R. Tillotson to the Director, letter, 10 June 1930, File *C3823 Utah Parks 1927-1946*, GCNPRL. The new lodge was built during June 1936 - June 1937 by Eyberg Brothers of Salt Lake City.
15. *Report of the Director* 1932, 27.
16. USDI, NPS, "Circular, 1930," 4; *Report of the Superintendent* 1931; *Report of the Director* 1930, 102-103, 191; 1931, 51. The hospital was built by George C. Walters, Jr., a Flagstaff contractor, and came on-line on 24 January 1931. A dentist from Williams visited twice per week in that year.
17. *Report of the Director* 1930, 102; *Report of the Superintendent* 1930-31, 1939-40; M.R. Tillotson, "General Meeting Called by Superintendent M.R. Tillotson..."

minutes concerning the community building, 10 October 1935, *Gen Admin—GRCA—Tillotson, Miner*, RSept1927-38, GCNPRL. The latter document identifies eleven civic groups at the village in 1935 and how the community center was used. The building cost \$12,500 and was built by ECW workmen.

18. *Report of the Director* 1930, 103, 191; 1931, 136; 1932, 24. The Tusayan museum was named for Mrs. Winifred MacCurdy who donated \$5,000 toward its construction.
19. *Report of the Superintendent* 1931, 1935, 1939. The cable was also used by the CCC to help move men and material during construction of the Colorado River Trail.
20. USDI, NPS, "Circular, 1937," 20; *Report of the Superintendent* 1931.
21. Portions of the transcanon telephone line are extant along the old alignment of the Bright Angel Trail beside the drainage that was once called Salt Creek.
22. CCC activities are identified in the Patricia Mott memorandum. Superintendents' reports also name most of these projects, but typically do not specify the source of funds and types of labor involved. For more detailed descriptions, see the many official project completion reports located in the GCNPMC.
23. See USDI, NPS, HAER, "Village Loop Drive," by Michael F. Anderson, HAER No. AZ-41, September 1994, LOC, for a detailed history.
24. See USDI, NPS, HAER, "West Rim Drive," by Michael F. Anderson, HAER No. AZ-42, September 1994, LOC, for a detailed history of Hermit Rim Road and West Rim Drive.
25. See USDI, NPS, HAER, "Grand Canyon National Park Roads, Grand Canyon National Park," by Michael F. Anderson, HAER No. AZ-35, December 1993, LOC, for a partial history of these roads and related structures. Photographs accompany official CCC and CWA project reports in the GCNPMC.
26. USDI, NPS, "As Constructed Plans for Project A (Por.)—Grading, Base Course & Bit. Treat., South Approach Road to Grand Canyon National Park, Forest Highway Route 2—Grand Canyon-Old Trails," 25 November 1953, DSC-TIC. Minor realignments were effected by the Arizona Road Commission in the 1950s.
27. M.R. Tillotson to the Director, letter, 10 February 1932, *Misc Construction D30—Hermit Rim Road Part I—Jan 1927-Sept. 1934*, GCNPRL. Tillotson himself argued for elimination of park entrance fees but did not want to succumb to the state's pressure. The State of Utah, too, considered the Zion National Park entrance fee to be an unfair toll and initially refused to turn over the Zion-Mt. Carmel Road to the NPS. See also USDI, NPS, History Division, "Visitor Fees in the National Park System: A Legislative and Administrative History," by Barry Mackintosh, typed manuscript, 1983, DSC Library, 11.
28. *Report of the Superintendent* 1933.
29. M.R. Tillotson to the Director, letter, 9 August 1930, File *Misc—Construction D30—Desert View-Cameron Approach Road May 1929 - Dec 1931*, GCNPRL.
30. See USDI, NPS, HAER, "Dead Indian Canyon Bridge," by Michael F. Anderson, HAER No. AZ-46, LOC, for a summary history and maps of the Navahopi, East Approach, and East Entrance Roads and detailed bridge information. See USDI, NPS, HAER, "East Rim Drive," for a detailed history of the 3.5-mile East Entrance Road.
31. Plans for road construction are alluded to in C.G. Morrison's letter to C.H. Sweetser, 14 October 1926, and Tillotson's letter to the Director, 9 August 1930, and J.V. Lloyd, acting superintendent to Horace Albright, letter, 29 August 1931, File *Misc—Construction D30—Desert View-Cameron Approach Road May 1929 - Dec 1931*, GCNPRL. See also M.R. Tillotson to W.W. Lane, Arizona state engineer, letter, 12 February 1929, File *Misc—Bridges—Lees Ferry*, GCNPRL.
32. *Report of the Director* 1931, 52; *Report of the Superintendent* 1937, 1938, 1940.
33. USDI, NPS, HAER, "Zion National Park Roads and Bridges"; *Report of the Superintendent* 1931, 1933, 1936, 1938, 1939, 1940. See Ralph A. Hoffman, bridge engineer, "The Highest Highway Bridge in the World," typed manuscript, [1928], and other documents in File *Misc—Bridges—Lees Ferry*, GCNPRL, for a full account of construction of Navajo Bridge. Studies for the 833-foot-long, 18-foot-wide, deck-arch bridge began in the early 1920s. The project was completed by the Arizona Road Commission and the contractor, Kansas City Structural Steel Company, during June 1927-December 1929. The bridge was opened to traffic in early January 1929 and was dedicated in June 1929. The State of Arizona (\$185,000) and federal government (\$100,000) funded the bridge—originally called the Lees Ferry Bridge then the Grand Canyon Bridge before assuming its current name in 1934—while the Navajo Tribe funded reinforcement of the 1911 bridge at Cameron to facilitate hauling supplies to the work site. Horace Albright wrote that as "a connecting link in the interpark road system" it was of "incalculable value" and would inaugurate a "new era in tourist travel." U.S. Highway 89 runs from Mexico to Canada; the segment from Flagstaff to Kanab was the last to be constructed in 1939-41.
34. J.R. Eakin to Senator Walter Runke, letter, 21 January 1927, File *Misc—Bridges—Lees Ferry*, GCNPRL.
35. See USDI, NPS, "Colorado River Trail," for details of construction. Teri Cleeland's "The Cross Canyon Corridor Historic District" and Louis Lester Purvis's *The Ace in the Hole* (Columbus, Ga.: Brentwood Christian Press, 1989)

- are also major sources. Although simply called the River Trail today, the NPS and CCC agreed to the working name, "Colorado River Trail," until they would name it after the first person to die in its construction. Since no one was killed, the full working name is the appropriate name.
36. Foremen and supervisors included Louis Purvis, Guy Semple, A.T. Sevey, Eugene Mott, Donald Campbell, Charles Fisk, Lloyd Davis, and D. Alton Frost.
 37. Oliver H. Schwartz, comp., "History of CCC Camp NP-3-A, Company 818, Grand Canyon, Arizona," typed manuscript, *Reference File—Civilian Conservation Corps* GCNPR: *Report of the Superintendent* 1935; USDI, NPS, "Circular, 1935." Camp NP-3-A was closed in May 1936 following completion of Clear Creek Trail and became today's Bright Angel Campground.
 38. Schwartz, "History of CCC Camp NP-3-A."
 39. USDI, NPS, "Hermit Trail"; Debra L. Sutphen, "Grandview, Hermit, and South Kaibab Trails: Linking the Past, Present and Future at the Grand Canyon of the Colorado, 1890-1990" (master's thesis, Northern Arizona University, 1991), 96-99; Hillory Tolson to M.R. Tillotson, letter, 22 April 1936, and M.R. Tillotson to J.E. Shirley, letter, 8 May 1936, File *C38 Santa Fe Buildings 1930-1936*, GCNPR. The latter correspondence suggests that the Fred Harvey Company made the decision to abandon the camp, perhaps due to its own desire to centralize services, and still had an option to reopen it as late as 1936. In either case, the NPS "authority" to abandon the camp was issued 15 August 1930, salvage was done in the autumn of 1936, and the fire was ignited on 10 November 1936. Note that the extent of the blaze can still be discerned by different shades of vegetation effected by the fire. In the 1940s rangers erected a barricade across the deteriorating trail about 1-1/2 miles down at the Supai formation.
 40. The bridle path and cabin also aided fire suppression efforts.
 41. USDI, NPS, "Thunder River Trail." The original GCNP boundary barely included Thunder Springs, Thunder River, and Tapeats Creek, but excluded the path of the 1925-26 trail. The Church family of Kanab opened the hunting camp at Big Saddle in 1924 and for decades thereafter helped cattlemen maintain the trail because they grazed saddle stock on the Esplanade. The trail along Tapeats Creek was created through use by river runners after the 1960s. The trail from Monument Point to the Esplanade, used by most backpackers today, is actually the Bill Hall Trail, developed in the 1970s as a shortcut to Thunder River and named for ranger Bill Hall who died in a North Rim automobile accident in the late 1970s.
 42. *Report of the Director* 32, 1, 51-52. The use of the parks as emergency camps for the depression's homeless has not been studied, but it is clear that GCNP employed hundreds of day laborers during 1930-33, before FDR's formal work-relief programs began, using emergency funds of the Hoover administration. Although most single workers likely stayed in contractors' camps, several of which were located at the village, families probably stayed in NPS developed campgrounds.
 43. *Report of the Director* 32, 86. The practice of designating roadside picnic sites began with construction of East Rim Drive. Of 157,000 visitors in 1931, 54,000 were campers; of 121,000 visitors in 1932, 50,000 were campers. In 1931, 76.3 percent of visitors arrived by automobile; in 1932, 81.6 percent. Until 1931, visitors were allowed to camp at-large away from developed roads; in that year, policy changed to restrict campers to designated campgrounds for "sanitary, landscape and forest protection reasons." See USDI, NPS, "Circular, 1930," and *Report of the Superintendent* 1931.
 44. *Report of the Director* 30, 37-38; 1931, 36-37, 144.
 45. *Report of the Director* 19, 30-32; 1920, 51-55. In 1925 Mather summarized his educational intents since 1919: to allow scientists to research the parks and teach their own students, but also to make it easy for the average visitor to "work things out for himself to acquire a practical knowledge of the natural history." See also *Report of the Director* 25, 10-11, and 1929, 12-19, for a summary of educational activities through the 1920s.
 46. *Report of the Director* 22, 148; 1926, 35, 149; 1928, 3-4; 1929, 80, 169; *Report of the Superintendent* 1928. Nature guide services at Bright Angel Point began in 1928. GCNP did not have a formal ranger-naturalist in 1926, but hired Sturdevant in 1927 or 1928. Upon his death in February 1929, Edwin D. McKee was appointed GCNP's lead naturalist, a position he held until 1940.
 47. *Report of the Director* 29, 10-17, 169-72; 1930, 17-26, 103-04, 189-94; 1931, 16-20, 138-39; 1932, 22-24, 95. Auto caravans at GCNP began in 1930 and continued until the onset of World War II.
 48. Edwin D. McKee, "Annual Report of the Executive Secretary, Grand Canyon Natural History Association (Annual Report)," [ca.1933], and Edwin D. McKee, "Annual Report," 26 August 1939, and Louis Schellbach, "Annual Reports," 1942-46, Grand Canyon Association office, GCNP. The librarian and clerk-typist were volunteers; the association funded others through small annual grants for part-time, temporary work. GCNHA annual budgets in 1932-45 ranged from \$3,000-8,000.
 49. Throughout the 1920s and 1930s, the NPS argument for entrance fees remained that the fee was actually a permit to drive park roads. Simple geography precluded pedestrian entry to GCNP, but rail passengers entered without charge. The ban on campground fees would continue until 1965. For a history of user fees during the 1920s-1930s, see Mackintosh, "Visitor Fees," 2-16. GCNP began charging a one dollar entrance fee at the North Rim in 1930.
 50. Mackintosh, "Visitor Fees," 10; *Report of the Director* 32, 8.
 51. *Report of the Superintendent* 1930-36, 1938-42; USDI, NPS, "Circulars, 1930, 1935, 1937." Overnight lodging at the village in 1930 consisted of 93 rooms for 175 guests at the El Tovar; the Bright Angel Hotel's O'Neill Lodge and tent cabins accommodating about 350 guests; Motor Lodge housekeeping cabins, each with two double beds, sleeping as many as 250-300; Hermit Creek cabins accommodating 30; and Phantom Ranch cabins, which slept as many as 50. Combined with overflow tents offered by the concessioner and campgrounds at the village and Desert View, overnight capacity at all developed facilities along the South Rim and inner canyon totaled about 1,500. The concessioner added low-cost overnight accommodations in the 1930s, which, with added NPS campgrounds and campsites, likely brought total overnight capacity to about 2,000 by the onset of World War II.
 52. USDI, NPS, "Circulars, 1930, 1940." In 1940 NavaHopi Tours, an independent stage and touring company similar to the Parry Brothers at the North Rim, signed an agreement with the Fred Harvey Company (the South Rim's official transportation concessioner) to bus visitors from Flagstaff along the South Approach Road. NavaHopi paid Harvey \$200/year for the privilege. See *Report of the Superintendent* 1939, 1940.
 53. USDI, NPS, HAER, "Zion National Park Roads and Bridges," 66, endnote 59. The Union Pacific Railroad found much greater support from Utah's governor Spry and Senator Reed Smoot.
 54. USDI, NPS, HAER, "Zion National Park Roads and Bridges," 29-45.
 55. USDI, NPS, HAER, "Zion National Park Roads and Bridges," 43-45. Copies of the Union Pacific Railroad's annual red books are located in the NPS library at Zion National Park. These brochures were named for their red covers, are of a larger format than Santa Fe Railroad brochures, and feature some excellent landscape photography.
 56. USDI, NPS, HAER, "Zion National Park Roads and Bridges," 45-47; USDI, NPS, "Circulars, 1930, 1940."
 57. *Report of the Superintendent* 1938-42. Improved economic conditions and marketing programs also sparked an increase in rail arrivals after 1935. The increase was 32 percent in 1939 over 1938. Note that in 1940, with about 370,000 visitors, the park was 98.3 percent self-supporting with \$123,300 in receipts (nearly all in entrance fees) and \$125,500 in expenditures.
 58. See USDI, NPS, "Conservation Objectives at Grand Canyon: A History of the Boundaries of Grand Canyon National Park and Grand Canyon National Monument," by John M. Kauffmann, July 1954, typed manuscript, DSC Library, 1-3, for a summary of boundary legislation and insight into the arguments of various factions. See also *Report of the Director* 24, 144.
 59. USDI, NPS, "Conservation Objectives at Grand Canyon," 4-9. Evans suggested extending the boundary a few more miles to the south and including Long Mesa and Little Coyote Canyon to the west. Superintendent Eakin considered some of this to be of no real scenic interest and of more value as pasturage for Havasupai livestock. See also *Report of the Director* 25, 3-4; 1926, 2, 5, 34, 56; and 1927, 7.
 60. USDI, NPS, "Conservation Objectives at Grand Canyon," 6-13; *Report of the Superintendent* 1927. The act added approximately 73 square miles to the North Rim, 2.4 square miles to the South Rim, 8 square miles on the East Rim to Cape Solitude, and 320 acres at the mouth of Havasu Canyon. It eliminated 8.8 square miles at the South Rim, 9 square miles to the west, and 15 square miles above the Little Colorado confluence. Note that the park gained about 15 acres in the Grandview area through a land exchange with William Randolph Hearst in 1926, and in 1928, 49 acres south of Buggeln Hill to accommodate construction of East Rim Drive, both transactions authorized by special acts of Congress. See Louise M. Hinchliffe, comp., "Legislative History, Grand Canyon National Park," August 1976, File *History—GC—Legislation and Boundary Matters* GCNPR.
 61. USDI, NPS, "Conservation Objectives at Grand Canyon," 14-17; *Report of the Director* 1930, 9, 106; 1932, 20.
 62. USDI, NPS, "Conservation Objectives at Grand Canyon," 18; Roger W. Toll to the Director, report, 16 June 1932, File *L429 Monument Lands 1922-1951*, GCNPR. Some portion of this area had been earlier proposed as the Virgin River National Park, but was not high on the NPS list of potential parks.
 63. Stephen Mather set the scenic standards for national parks. See *Report of the Director* 1923, 14-19, for his application of these standards for "superscenery" and promotion of state parks to protect lands of lesser caliber, and *Report of the Director* 1931, 6-7, for Albright's interpretation.
 64. Toll Report, 16 June 1932. BOR objections were first raised in 1932, and according to Tillotson, were a major reason why the area in question was not added to the park. BOR concerns were again raised in 1940 with proposed boundary revisions. See R.F. Walter to Dr. Elwood Mead, letter, 7 June 1932, and H.W. Bashore to the Director, memorandum, 27 May 1940, and Arno Cammerer to the Commissioner, Bureau of Reclamation, memorandum, 5 June 1940, File *L429 Monument Lands 1922-1951*, GCNPR, and M.R. Tillotson letter, 8 October 1952.

65. USDI, NPS, "Conservation Objectives at Grand Canyon," 18-20; F.A. Kittredge, "Data Concerning Grand Canyon National Monument, Arizona," fact sheet, 10 August 1940, *Reference File—Grand Canyon National Monument*, GCNPRL.
66. Details of extended negotiations are found in J.M. Keith to Carl Hayden, letter, 10 November 1939, and Oscar L. Chapman to Carl Hayden, letter, 4 December 1939, and Warren F. Hamilton, "A Report of a Conference with Charles A. McCormick...", 30 January 1940, and Arno Cammerer to the commissioner, Bureau of Reclamation, memorandum, 5 June 1940, and M.R. Tillotson to the Director, letter, 8 October 1952, File *L429 Monument Lands 1922-1951*, GCNPRL. See also USDI, NPS, "Conservation Objectives at Grand Canyon," 20-25, and "Modifying the Grand Canyon National Monument, Arizona, by the President of the United States, a Proclamation," 4 April 1940, File *L429 Monument Lands 1922-1951*, GCNPRL; and *Report of the Superintendent* 1937-38.
67. "Memorandum of Understanding" between the National Park Service and Bureau of Reclamation, 4 November 1941, File *L429 Monument Lands 1922-1951*, GCNPRL. Additional material on political and biological reasoning behind monument boundary changes may be found in several reports and letters found under the cover of "Report Upon Recommended Boundary Reduction of the Grand Canyon National Monument," undated, File 113/MPNAR *Boundary Report 1939-1945*, DSC-TIC. These include the opinions of Franklin D. Roosevelt, Harold Ickes, Arno Cammerer, Harold C. Bryant, geologist Edward T. Schenk of the Boulder Dam National Recreation Area, NPS regional wildlife technician W. B. McDougall, and Ben H. Thompson of the NPS Branch of Lands.
68. *Report of the Superintendent* 1933-36. The contract for the ranger station included a five-room ranger residence/office and combination barn/garage with native rock features, and a galvanized iron catchment area draining into a six-inch cast iron pipe which filled a two-compartment concrete reservoir with pipes to the buildings. Materials were obtained from the Cedar City Lumber and Hardware Company. Total cost: \$11,400.
69. Kittredge, "Data Concerning Grand Canyon National Monument, Arizona," and Walter P. Cottam, "The Grand Canyon National Monument, A Scientist's Mecca," [1956], and John V. Young, "Grand Canyon Area that Few Know," in *The New York Times* 8 May 1966, *Reference File—Grand Canyon National Monument*, GCNPRL; William L. Bowen, "Ranger's Report for Superintendent Kittredge," 24 June 1941, *L429 Monument Lands 1922-1951*, GCNPRL; USDI, NPS, "John H. Riffey in Memorium," news release, 10 July 1980, file *Gen. Admin.—Personnel—John H. Riffey*, GCNPRL. The NPS suggested at-large camping at Toroweap Overlook near a small spring through the early 1940s. Bowen arrived 27 October 1940; Riffey and wife Laura took over in August 1942 when Bowen transferred to the South Rim.
70. *Report of the Director* 1920, 50, 365-66; 1926, 4.
71. *Report of the Director* 1921, 120; 1926, 4.
72. *Report of the Director* 1929, 1-2, 10-11, 34, 37; 1930, 16-17, 40, 45, 72; 1931, 8-10, 118; 1932, 3, 19-20, 36.
73. A general description of private and state lands and rights-of-way is found in Arno Cammerer to Superintendent Peters, letter, 18 September 1919, File *History—GC—Legislation & Boundary Matters*, GCNPRL. With boundary extensions in 1927, state land inholdings increased to 26,595.66 acres.
74. The Santa Fe Railroad restricted passenger service to summer seasons beginning in the 1940s and discontinued it entirely in 1968 due to reduced patronage (only 150 passengers in June 1968) and their loss of the U.S. mail contract. The village freight depot closed in May 1969, but limited freight service continued for a few years thereafter. The Santa Fe Railroad probably would have dismantled the tracks in the early 1980s if not for a worldwide glut in steel rails. It retained its depot parcel and right-of-way until the courts determined in 1982 that they had been abandoned and ownership reverted to the federal government. See *Williams News*, 9 January 1947; *Arizona Republic* 1 November 1956, 5 October 1967, 3 November 1967, 25 July 1968; (*Flagstaff*) *Arizona Daily Sun* 24 May 1968; and "Judgement in the Matter of the *United States of America vs. The Atcheson Topeka and Santa Fe Railway Company AMFAC Hoels and Resorts, Inc.*" 21 June 1982, copy in *Reference File—Railroad*, GCNPRL. Legal implications and attempts to sell railroad lands to the government are found in Howard Stricklin to Regional Director, memorandum, 21 August 1968, and Merle E. Stitt to M.R. McMillan, letter, 24 December 1974, and M.R. McMillan to Merle E. Stitt, letter 13 February 1975, and memorandum to Regional Director, 20 March 1975, and Ralph G. Mihan to Regional Director, memorandum, 27 June 1975 and 14 January 1976, and W. D. Bentley to Howard Chapman, letter, 13 May 1977, *Reference File L50 AT & SF Railway Co 1/1/55-12/31/76*, GCNPRL.
75. *Report of the Director* 1930, 106; 1931, 10; USDI, NPS, "Draft Land Protection Plan, Grand Canyon," June 1988, DSC-TIC.
76. *Report of the Director* 1930, 106.
77. *Report of the Director* 1920, 76-77, 387-91; Anderson, "North and South Bass Trails," 93, 97-101.
78. "History of Mining Work in Havasupai Canyon," handwritten extract from a report of J.E. Busch and H.A. Ferris, GLO, [1921], *Reference File—Mines and Mining*, GCNPRL; E.F. Schoeny, General Warranty Deed, 8 March 1957, and Donald E. Lee to Finance Officer, memorandum, 13 June 1957, and James M. Siler to Region Three Regional Director, letter, 22 July 1957, File *L3023 Schoeny 1957*, GCNPRL. The 95.04 acres consisting of five valid but unpatented mining claims were purchased for \$15,000.
79. Michael F. Anderson, *Living at the Edge: Explorers, Exploiters and Settlers of the Grand Canyon Region* (Grand Canyon Association, 1998), 63-67; USDI, NPS, "Draft Land Protection Plan, Grand Canyon." The NPS continues to exercise patience, hoping that the Hearst Tract will be donated or exchanged for public lands elsewhere and purchased only as a last resort. The 1975 enlargement act added two small inholdings called the Lee (66.67 acres) and Curtis Tracts.
80. Sutphen, "Grandview, Hermit, and South Kaibab Trails," 54-64; *Report of the Director* 1926, 6.
81. Anderson, *Living at the Edge*, 80-82. See also Superintendent to Regional Director, memorandum, 30 January 1953, File *L30 Rowe Well Cabin Camp*, GCNPRL; and Tillotson to Superintendent, telegram, 15 December 1954, *Reference File—Rowe Well*, GCNPRL.
82. M.R. Tillotson to G.L. McLane, letter, 31 December 1931, File *Misc Construction D30—Hermit Rim Road Part I—Jan 1927 - Sept 1934*, GCNPRL.
83. Anderson, *Living at the Edge*, 79-80; Matt Dodge and John W. McKlveen, "Hogan's Orphan Mine," in *True West* (November-December 1978): 6-10, 40-42; Clyde M. Brundy, "Orphan with a Midas Touch," in *The Denver Post Empire Magazine*, 27 November 1977; (*Flagstaff*) *Arizona Daily Sun* 15 January 1962; *Arizona Republic* 16 January 1962; Dan N. Magleby to David D. Baker, "Technical Memorandum #134 - Orphan Lode Uranium Mine, Grand Canyon, Arizona," March 1961, *Reference File—Orphan Mine*, GCNPRL. Jacobs leased the tourism facilities to Rogers and sold them to the Barringtons later. She sold the mineral rights to Western. They were acquired by the Cotter Corporation in September 1967, and by Commonwealth Edison of Chicago by 1976.

CHAPTER FOUR

World War and Its Wake, 1942-1955

- Report of the Director* 1940, 164. There were 15,454,000 visitors to the park system in FY1940; nearly 370,000 to GCNP, down slightly from 405,000 in 1939.
- Report of the Director* 1940, 162, 166, 185-86, 194, 201-204; 1941, 277, 304-06, 309-10. NPS areas by 1941 included only twenty-six "national parks," but the system had grown to include eighty-two national monuments and an assortment of other units. The NPS was also responsible for managing and developing recreational areas like Boulder Dam-Lake Mead and about forty recreational demonstration areas until their final land status was determined.
- Newton B. Drury, "National Park Service War Work: December 7, 1941 to June 30, 1944," and "National Park Service War Work: June 30, 1944 - October 1, 1945," edited by Charles W. Porter III, manuscript, [May 1946], File *NPS Service-wide—Impacts of World War II*, GCNPRL, 1-4.
- Report of the Director* 1942, 163-64; 1943, 205-206; 1944, 216; 1945, 209; Drury, "National Park Service War Work, 1941-1944," 21. Military visitors in the 1944 travel year, October 1943 - September 1944, totaled 2,150,000; 29 percent of all visitation.
- Report of the Director* 1940, 208; 1945, 207.
- Report of the Director* 1945, 207.
- Report of the Superintendent* 1944; Lemuel A. Garrison to the Regional Director, memorandum, 13 June 1947, "World War II file, silver boxes, vault," GCNPMC.
- Garrison memorandum, 13 June 1947. Three of these "visitors" were airmen who parachuted from their disabled airplane and landed on the Tonto Platform near Tuna Creek below Point Sublime in June 1944. They were provisioned from the air until a ranger arrived to lead them to the rim by pioneering a route at Grama Point.
- Garrison memorandum, 13 June 1947; Albert L. Hawes, Commanding, "Camp Regulations," 11 August 1944, and USDI, NPS, "Special Use Permit," 24 December 1942, "World War II" file, GCNPMC; *Report of the Superintendent* 1944. Bryant wrote that Rowe Well opened in 1944-45 as a "nightclub," likely because of the troops. The few other special permits for minor war-related uses of GCNP included the recreational field as a weather research station in early 1943, and transfers of road equipment, a fuel oil tank, cement, and other supplies to military locations like the Navajo Ordnance Depot. The village CCC barracks were also used as a rest camp for men of the Williams Army Air Field from August 1945 to June 1946.
- The worst community event surrounding the war was the measles epidemic of September 1941 at the village and at Supai. With complications from pneumonia, twelve Havasupais died. See *Report of the Superintendent* 1942.
- Report of the Superintendent* 1942-45; Mulford Winsor to Louis Schellbach, letter, 2 January 1942, and Louis Schellbach to Mulford Winsor, letter, 6 January 1942, "World War II" file, GCNPMC. Dry conditions sparked thirteen wildfires in FY1942, including two that burned 148 acres at Indian Garden; thirty-one fires in FY1943, including the largest fire in park history to that date burning more than 300 acres at Swamp Ridge; twenty-two fires in FY1944 that burned 367 acres; and the worst season of all, FY1944, with fourteen fires, two of which at Crescent Ridge and the Dragon burned nearly 500 acres.

12. *Report of the Superintendent* 1942-45. Base appropriations had risen slightly from reduced depression budgets to \$132,580 for FY1941, then dropped through the early 1940s to \$103,000 for FY1945.
13. The major maintenance project of the war was renovation of East Rim Drive from Grapevine to Desert View and reconstruction of the Desert View parking lot, tasks spanning 1941-43. Minor projects included renovations, remodeling, and painting of employee housing, trail improvements, blading secondary roads, and seal coating primary roads.
14. *Report of the Superintendent* 1942-45. Auto caravans and guided field trips were discontinued for the duration, the frequency of ranger talks and lectures diminished, and seasonal naturalist positions went unfilled.
15. *Report of the Superintendent* 1942-45. The Bright Angel Lodge closed in January 1942. Many of the park's scenic buses were commandeered for the war effort. The Fred Harvey Company had great difficulty hiring personnel during the war and turned to Hopi men and women to fill jobs such as busboy and maid.
16. *Report of the Director* 1945, 225-26; 1946, 308, 341-42; 1947, 338-39; 1948, 350; 1952, 351-52; 1954, 335; 1956, 322.
17. Michael P. Malone and Richard W. Etulain, *The American West: A Twentieth Century History* (Lincoln: University of Nebraska Press, 1989), 262, 265.
18. Malone and Etulain, *The American West* 219-20, 222, 226-29, 233-35, 237-38, 240, 254, 262; Sheridan, *Arizona*, 270-71, 280, 288.
19. *Report of the Superintendent* 1946.
20. *Report of the Director* 1946, 307, 347; 1947, 341; 1949, 332; *Report of the Superintendent* 1945-47.
21. *Report of the Superintendent* 1946-53, 7,000 visitors entered on 24 June 1950; 124,785 in June and 130,619 in July 1951; 133,826 in June and 151,917 in July 1952. As of 30 June 1953, 8,345,448 visitors had been recorded since park establishment. See Arizona Highway Department, Division of Economics and Statistics, "Grand Canyon Travel Survey," [1955], DSC-TIC, for detailed visitor demographics of 1954-55. Of the 814,000 visitors in 1954, 65.3 percent arrived during the four-month period May 25 - September 27—21 percent came from California, 7.7 percent from Texas, and 6.4 percent from Arizona. About 80 percent visited the canyon on their way to somewhere else.
22. *Report of the Director* 1946, 308, 310, 335, 337; 1953, 287. Park forces prior to the war had worked a standard for ty-eight-hour week with additional unreported overtime while the cost of materials and laborers was actually deflated. Drury wrote in 1947 that NPS personnel were working six to seven days per week for five days' pay to complete the work required. He also reported that appropriations for the twenty-eight parks were about \$3.3 million in FY1947 and \$3.5 million for FY1948. Budgets for roads and trails amounted to \$2.15 million, which was \$350,000 less than engineers' estimates for maintenance alone. Appropriations and staffing improved somewhat through 1953, and more so during 1954-55.
23. *Report of the Superintendent* 1945, 1946, 1948. The 1940 figure, of course, was bolstered by emergency relief programs. The 1948 figure is truly dismal, given the loss of such programs and immediate postwar inflation. The figure today is roughly \$3.00 per visitor.
24. *Report of the Superintendent* 1946-48. Actually, nine positions including two ranger slots went unfilled for varying lengths of time during FY 1948 so that Bryant could divert funds to increased supply and freight costs and to hire half the normal complement of seasonals. Priority ranger duties in the late 1940s were manning entrance and information stations, leaving little time for patrol. Assistant Superintendent John Davis was transferred to the Region Three office in January 1946 and was replaced by Lemuel "Lon" Garrison on 20 February. Long-time park ranger Perry Brown was promoted to assistant superintendent of Mesa Verde on 11 February 1948. These transfers and nearly a dozen others during 1946-48 could not have helped the personnel situation.
25. *Report of the Superintendent* 1948, 1950-53; USDI, NPS, "Mission 66 for Grand Canyon National Park," prospectus, August 1956, GCNPMC, 49-51, 53-54, hereafter noted as "Mission 66 Prospectus." Fewer rangers meant fewer inner-canyon patrols from 1946 to 1948, when they were discontinued entirely, then resumed in 1950 with a seasonal ranger stationed at Phantom Ranch. The work force in FY1956, immediately before Mission 66, totaled twenty-four permanent personnel in management and protection, including seven administrators, eleven rangers, and two ranger-naturalists; fourteen seasonal personnel, including seven rangers and two ranger-naturalists; twenty permanent personnel in maintenance and rehabilitation (twelve assigned to roads and trails, eight assigned to buildings, utilities, and other facilities); and five wage laborers. Appropriations for the same year totaled \$221,000 for management and protection and \$173,000 for maintenance and rehabilitation of physical facilities.
26. *Report of the Director* 1945, 212-13; 1947, 324; *Report of the Superintendent* 1947-48, 1950-53. During 1 January - 15 June 1951, a low visitational period, items stolen from the Fred Harvey Motor Lodge included 377 towels, 27 bath mats, 22 blankets, 3 fire extinguishers, and 3 waste baskets. Bryant noted an "unbelievable quantity" of such items stolen in 1952, and that this type of theft was growing. The park adopted a printed trash bag like those used at Mt. Rainier National Park and reported some success in these finding their way to park trash cans. The State of Arizona on 13 March 1953 passed its first anti-littering law to combat the regional phenomenon.
27. *Report of the Director* 1946, 329-30. A new emphasis on visitor and employee safety is noted in all directors' reports following 1946.
28. *Report of the Director* 1946, 330; 1948, 359; 1950, 332-33; 1951, 334; 1954, 337, 365; 1956, 333; *Report of the Superintendent* 1947-48, 1950, 1952-53. Bryant wrote in 1952 and 1953 that picnic tables, benches, and overlook railings were being reconstructed, "thus we do what we can to prevent future Tort Claims." The park's first ambulance was placed in service in 1952, and increasing attention was paid to in-park hospital services and contracts with medical providers. Ensuring visitor safety has become an ever more important task of park administrators ever since. Superintendent Bryant worked out a system of river permits as early as 1946, his stated reason being that poorly equipped trips had "caused much expensive and dangerous search work." Systemwide, the NPS by 1956 recorded a one in one million visitor fatality ratio, and used this figure as an informal goal. Most deaths throughout the period were caused by auto accidents and drownings.
29. *Report of the Superintendent* 1946.
30. *Report of the Superintendent* 1946-53; *Monthly Report of the Superintendent* January - December, 1949. Typical maintenance activities included cleaning water tanks and cisterns, sign repairs, painting (including the Kaibab Bridge in June 1952, the structure's first coat of paint since construction), fence repairs, wire and pipe replacements, and overhauling rest rooms—all tasks that would have been accomplished, and more, by the CCC. The Supai recreation hall was built with donated funds and labor; the school improvements were effected by the Housing and Home Finance Agency. Rents for NPS housing went up systemwide in June 1953, graduating to a 67 percent increase within a few years, while utility costs for employee residences increased 91 percent. See *Report of the Director* 1953, 316; 1954, 335. This coincided with NPS entrance fee increases, conversion to public utilities, and decentralization of administrative authority in 1953-54, measures intended to cut costs, increase revenues, and induce greater administrative efficiency.
31. *Report of the Director* 39, 299; 1941, 291-92; 1946, 312-17; 1947, 321-22, 330-32; 1948, 345-48; 1949, 297-300; 1950, 319-22, 333; 1951, 316, 318; 1952, 376; 1953, 289-91; 1954, 335, 337-38; 1956, 300-01, 308. Before the war, existing concessioners promised substantial investment in return for new long-term contracts prior to the expiration of old ones. Sometimes the NPS insisted on the old contract running its course; other times, as during the depression, it led to informal discussions and new agreements. After Krug's and Chapman's policy changes, the process became more consistent and formal. Concessioners bearing investment capital would still broach the subject more often than not, but the NPS, desperate for investment, now had the authority to consider such offers in all cases and make their own offers to concessioners. They and the concessioner would negotiate types of developments desired, contract durations, and other details, create "fact sheets" that were essentially requests for proposals, advertise in the *Federal Register* allowing competitors thirty days to submit bids, then grant the new contract to the existing operator if it had performed satisfactorily in the past. Creation of the NPS Division of Audits in 1950 and increased staffing eased the oversight backlog and, incidentally, paid for itself by computing accurate franchise fees and extracting payment. Audits were again current by 1953.
32. Following the war, concessioner rates began to allow for the higher costs of producing and delivering services and goods at remote park locations.
33. It was unusual for a long-term contract to be signed in 1948 as service-wide confusion on policy continued. The Utah Parks Company's contract is owed to a formidable congressional lobbying campaign on the railroad's part and substantial support from southern Utah business associations coupled with its acknowledged quality service and endemic financial losses. Contrary to new policy, the contract was not even sent out to bid. See especially Newton Drury to Mr. G.F. Ashby, President, Utah Parks Company, letters, 23 January 1947 and 26 March 1947, and Newton Drury to Rulon S. Howells, letter, 24 October 1947, and Newton Drury to the Secretary, letters, 12 December 1947 and 10 February 1948, and Herbert Maw to J.A. Krug, letter, 25 May 1948, and Hillory A. Tolson to Senator Elbert D. Thomas, letter, 15 July 1948, File C3823 *Utah Parks* 1947-1954, GCNPR.L.
34. Harold Ickes to W.M. Jeffers, letter, 23 December 1942, and W.M. Jeffers to Harold Ickes, letter 26 December 1942, and Newton Drury to Regional Director, Region Three, memorandum, 23 April 1943, and Drury to the Secretary, memorandum, 30 October 1945, and Drury to W.M. Jeffers, letter, 30 October 1945, and "Supplemental Schedule of Basic Rates for the Season 1946," and USDI, NPS, Contract No. I-100np-102, 29 October 1948, and G.F. Ashby to Drury, letter, 2 November 1946, File C3823 *Utah Parks* 1927-1946, GCNPR.L; *Report of the Superintendent* 1951; C. Girard Davidson to Senator McFarland, letter, 27 October 1948, File C3823 *Veikamps* 1928-1948, GCNPR.L. The new contract was executed 29 October 1948, effective 1 January 1949 to 31 December 1968, and was modified in December 1948, March 1954, and April 1958. Changes included allowing the Utah Parks Company to write off 97 percent of some of its facilities and services in Kanab and Cedar City to operations at North Rim, Zion, Bryce, and Cedar Breaks; and shortened seasons for the more expensive lodge operations. G.F. Ashby of the Union Pacific wrote Drury in 1946 that the railroad was willing to invest in "substantial improvements," but only under a long-term contract. It had invested \$5 million since 1927. The new contract's franchise fee was set at 25 percent of all net profits in excess of 6 percent investment allowance; 50 percent in excess of 8 percent; and 75 percent in excess of 12 percent, but was payable only after Utah Parks had recovered prior operating losses which totaled \$1,010,686 on 31 December 1948. Operating at the North Rim from 1927 until 1972, the Utah Parks Company never made a cent, nor paid a cent in franchise fees.

35. *Report of the Superintendent* 1945, 1948. The Kaibab Lodge at DeMotte (VT) Park remained open throughout the war and reported capacity business in 1945.
36. *Report of the Superintendent* 1945-53; *Monthly Report of the Superintendent* January - December 1949. See attachments to Contract I-100np-102 for a statement of financial condition in 1948, as well as a detailed list of all Utah Parks Company's buildings and structures in that year with building dates, costs, and anticipated service life. The Utah Parks Company continued to supply nearly all North Rim utilities during these years, for which the NPS paid nothing for some, like water, and cost for others. It also held a monopoly on transportation services, subconcession agreements with Standard Oil for automotive services, and maintained telephone and telegraph lines until 1950 when it arranged with Mountain States Telephone and Telegraph Company to assume responsibility. See Lemuel Garrison to W.P. Rogers, letter, 21 June 1950, and E.P. Williams to H.C. Bryant, letter, 8 June 1950, and Fred E. Warner to John S. McLaughlin, letter, 25 June 1958, File *C3823 Utah Parks Contact 1958-1959*, GCNPR; and T.E. Murray to Robert Lovegren, letter with attachments, 24 July 1970, File *C3823 Utah Parks Co 1964-1971*, GCNPR.
37. Hugh M. Miller to Regional Director, Region Three, memorandum, 25 April 1944, and H.C. Bryant to the Regional Director, Region Three, memorandum, 3 May 1944, and Hillory A. Tolson to Mrs. Catherine W. Verkamp, letter, 29 May 1944, and M.R. Tillotson to the Superintendent, memorandum with financial attachments, 6 July 1945, and "Data Concerning the Concession Contract of Catherine W. Verkamp..." [et al.], Grand Canyon National Park, with financial attachments, date-stamped 9 July 1945, File *C3823 Verkamps 1928-1948*, GCNPR. Verkamps Curios during 1925-44 averaged \$30,483 gross receipts per year with a 27 percent return on investment, yet John Verkamp invested little in renovations.
38. Mrs. J.G. Verkamp to H.C. Bryant, letter, 4 October 1945, and H.C. Bryant to Regional Director, memorandum, 5 November 1945, and M.R. Tillotson to the Director, memorandum, 9 November 1945, and Secretary of the Interior to Senator Taft, letter, 21 May 1948, and Jack Verkamp to Senator Ernest W. McFarland, letter, 11 September 1948, and John R. Murdock to Julius A. Krug, letter, 11 October 1948, and Conrad Wirth to Catherine Verkamp, letter [contract extension], 25 October 1948, and Secretary of the Interior to Senator Hayden, letter, 4 November 1948, and A.E. Demaray to Jack Verkamp, letter, 27 December 1948, File *C3823 Verkamps 1928-1948*, GCNPR; Chief of Public Services to Regional Director, memorandum, 22 November 1949, and Abraham Berner to M.R. Tillotson, letter, 5 December 1949, *Reference File—Verkamp (Family Store)* GCNPR; Herman Hoss to Conrad Wirth, letter, 16 November 1954, and Jack Verkamp to Conrad Wirth, letter, 27 February 1955, and John McLaughlin to Regional Director, Region Three, memorandum, date-stamp 2 April 1959, and USDI, NPS, Contract No. 14-10-0100-563, 6 September 1955, File *C3823 Verkamps 1949-1954*, GCNPR. Verkamps's gross receipts in 1955-57 averaged \$180,000 per year with a 9 percent return on investment. Correspondence indicates that the NPS especially wanted to raze the 1906 Verkamp building and used contract negotiations to coerce the family into tearing it down. Although the family considered the old building suited to its needs, it was willing to build a new one, but did not do so during 1945-55. Because the park was developing a new master plan in conjunction with Mission 66 and was uncertain where to put a new building, it did not write a construction program into the 1955 contract, thus the historic building was saved from demolition. The 1955 contract called for a grounds rental fee of \$500 per year plus 3 percent of gross receipts.
39. Since the late 1920s, in the interests of visitor convenience, the Fred Harvey Company had been allowed to sell some groceries and delicatessen items at the Motor Lodge, the most popular overnight facility, taking considerable grocery business from the Babbitt store a quarter mile away. See James E. Babbitt to James Lloyd, letter, 8 April 1940, and J.V. Lloyd to the Director, memorandum, 18 April 1940, File *C3823 Babbitts 1922-1950*, GCNPR.
40. The Babbitts had built their old store building with adjacent warehouse and tent-cabin employee housing in 1921 for \$1,644. They built their new store in 1925-26 for \$21,025, and added to the building in 1929 and 1936 at a cost of \$5,500, in the latter year also building an adjacent warehouse and garage for \$2,000. In 1929, they built the "Clark House" in the residential area for \$537, constructed another 675-square-foot, frame residence in 1941 for \$2,800, and remodeled and added on to the store in 1947 at a cost of \$18,300. See "Building and Improvement, Grand Canyon Branch," a Babbitt asset sheet, [1949], and "Babbitt Brothers Trading Company (February 28, 1950)," an extract from the Babbitts 1949 financial report, 22 March 1950, File *C3823 Babbitts 1922-1950*, GCNPR, for details of early Babbitt structures.
41. A.E. Demaray to Acting Under Secretary, memorandum, 10 August 1940, and USDI, NPS, Contract No. I-1p-272, 15 January 1941, and "Grand Canyon National Park, Grand Canyon, Arizona," Babbitt financial data, 22 March 1950, File *C3823 Babbitts 1922-1950*, GCNPR. The contract was effective 1 January 1941 - 31 December 1950.
42. Babbitt Brothers Trading Company to Newton B. Drury, letter, 19 June 1950, and Assistant Superintendent to the Superintendent, memorandum, 15 November 1950, and Superintendent to Regional Director, Region Three, memorandum, 27 November 1950, File *C3823 Babbitts 1922-1950*, GCNPR.
43. Hillory Tolson to Regional Director, Region 3, memorandum, date-stamp 21 June 1951, and Lemuel Garrison to Regional Director, Region Three, memorandum, 3 August 1951, and R.G. Babbitt, Jr. to Lemuel Garrison, letter, 4 August 1951, and Conrad Wirth to R.G. Babbitt, Jr., letter, date-stamp December 1951, and Conrad Wirth to Regional Director, Region Three, memorandum, date-stamp [April] 1951, and H.C. Bryant to Regional Director, Region Three, 15 January 1952, and USDI, NPS, Contract 14-10-0100-22, 18 April 1952, and Paul J. Babbitt to H.C. Bryant, letter, 8 April 1953, File *C3823 Babbitt Brothers Contracts 1951-1953*, GCNPR. A complete list of Babbitt properties in 1951 is found in the latter source. These included a new 1,430-square-foot cinder-block residence with two apartments of four rooms each built in 1952. The NPS typically did not grant twenty-year contracts unless a concessioner's promised investment equaled or exceeded \$1 million; for \$50,000, the Babbitts were fortunate to receive a fifteen-year contract.
44. USDI, NPS, Contract I-100np-444, 12 February 1952, and P.P. Patraw to Regional Director, memorandum, 9 July 1954, and John S. McLaughlin to Regional Director, memorandum, 26 January 1956, and Hugh M. Miller to the Superintendent, letter, 13 March 1956, and McLaughlin to Regional Director, memorandum, 2 May 1956, and Hugh Miller to the Director, memorandum, 5 June 1956, and USDI, NPS, Contract No. I-14-10-315-123, 19 September 1956, File *C3823 Kolb Studios 1952-1957*, GCNPR. The 1952 contract was actually for six years but post-executed by a little more than a year, extending from 1 January 1951 through 31 December 1956; the 1956 contract covered 1 January 1957 through 31 December 1961. Kolb's business fared well enough to support himself and Blanche, averaging a bit more than \$40,000 per year during 1950-57, roughly half from curio and photograph sales and half from lectures. The NPS did not want the concession to pass to Kolb's daughter Edith, in any event, because she was an outspoken critic of park management and married to long-time NPS ranger Carl Lehnert. The Lehnert's son, Emery, was also an NPS ranger.
45. *Report of the Superintendent* 1946. Bright Angel Lodge reopened 15 April 1946; Hermit's Rest reopened and scenic tours along West Rim Drive resumed 16 April 1946; the first passenger trains since 30 September 1942 pulled into the depot on 2 June 1946.
46. The pre-fab cabins were built of plywood and were intended to be temporary until better facilities could be budgeted. They were crammed into the Motor Lodge area with as little as a two-foot clearance between units. See Frank L. Ahern, Chief, NPS Safety Office, "Report on Fire Hazard Survey, El Tovar, Bright Angel Lodge, and Other Facilities for the Public," internal report, April 1948, and other miscellaneous documents in File *C38 Santa Fe & Fred Harvey 1946-60*, GCNPR. Motor Lodge cabins were removed and added regularly, the number peaking in the late 1940s and early 1950s at well over 100, perhaps as many as 150.
47. *Report of the Director* 1946, 311; 1951, 320-21; *Report of the Superintendent* 1947-48; *Monthly Report of the Superintendent* June-August 1949. The author estimated pillow count by taking the greatest number of overnight guests at each establishment during June-August, months when they were reported full and turning away visitors, and dividing by thirty. The number of reported guests were El Tovar, 5,354 in August; Bright Angel Lodge, 8,020 in July; and Motor Lodge, 19,409 in August. The numbers do not include NPS campground sites or Phantom Ranch which accommodated as many as 340 overnight guests in June 1949. In contrast, there were approximately 450 pillows available at the North Rim (August 1949 figures at capacity were lodge cabins, 10,348, and inn cabins, 3,115) with only 10-15 percent of park visitation. South Rim managers apparently could stuff in more when pressed, as the numbers vary each month but facilities are reported full every day of all three months.
- Note that a postwar scarcity of building materials and skilled craftsmen, high costs of labor and materials, difficulty hiring good help of any type for low-wage service jobs, resistance to tourist construction by the postwar Civilian Production Administration, and moderate restrictions imposed by the Korean Conflict hampered building programs as well. The number of turnaways continued into the 1950s, administrators doing a fair amount of guessing but also conducting spot surveys as visitors left the park. Bryant reported counting "a hundred or more cars" being turned away nightly at the El Tovar and Bright Angel Lodge; some of these visitors slept in their cars, others left the park "disgruntled." The superintendent, in H.C. Bryant to the Atcheson, Topeka and Santa Fe Railway Company, letter, 30 August 1946, File *C38 Santa Fe & Fred Harvey 1946-60*, GCNPR, succinctly relates the park's needs and dependence on the Santa Fe Railroad to fulfill them in 1946; all other sources and accounts indicate that the situation did not improve through the mid-1950s. Lon Garrison reported as many as two-hundred people per day being turned away from the Bright Angel Lodge alone in summer 1951.
48. M.R. Tillotson to Director, memoranda, 13 December 1950 and 26 February 1951, File *C3823 Fred Harvey Contracts 1951*, GCNPR. Many of the Santa Fe Railroad's postwar improvements and plans for more are documented in File *C38 Santa Fe & Fred Harvey 1946-60*, GCNPR. Plans included tearing down the El Tovar and replacing it in the same location with a two-story masonry hotel similar in appearance to Colter Hall.
49. H.C. Bryant to Regional Director, memorandum, 18 November 1949, File *C38 Santa Fe & Fred Harvey 1946-60*, GCNPR, quoting Gurley's written statement to the U.S. House of Representatives.

50. H.C. Bryant to Regional Director, memorandum, 14 February 1951, File *C3823 Fred Harvey Contracts 1951*, GCNPRL. Some NPS and concessioner personnel lived in a portion of the campground set aside for employee trailers, nicknamed Tent City.
51. M.R. Tillotson to the Director, memorandum, 28 September 1951, File *C3823 Fred Harvey Contracts 1951*, GCNPRL.
52. The consultant's report, "Fred Harvey Grand Canyon Cost of Utilities," [1954], *Reference File—Fred Harvey Cost of Utilities*, GCNPRL, depicts specific costs of electricity, fresh and reclaimed water, and steam for the Fred Harvey Company, equations used to determine those costs, utility capacities to some extent, and Fred Harvey village facilities receiving these utilities. This constitutes a fair list of what buildings the concessioner operated in early 1954.
53. *Report of the Director* 1954, 341; R.G. Rydin to Conrad Wirth, letter, 9 March 1954, and "Instrument of Donation," 9 March 1954, *Reference File—L425b—S.F. Railroad Instrument of Donation*, GCNPRL. The latter document stipulates that the donation not interfere with the Santa Fe Railroad's continuation of railroad operations. A seven-page document labeled Exhibit A and titled "The Atchison, Topeka and Santa Fe Railroad Company — Coast Lines, Grand Canyon, Arizona — Utility Facilities," [ca. 1953], *Reference File—L425b—Santa Fe Railroad*, GCNPRL, lists in great detail the utility-related structures built and operated by the Santa Fe Railroad during 1905-ca.1950, including dates and costs of construction and depreciated cost. This is likely an exhibit to the instrument of donation of utilities, though it may not constitute everything that was transferred in 1954. The easement was obtained because prior to 1952, both the Santa Fe Railroad and NPS believed that the depot grounds were the railroad's private property. Legal opinion in 1952, however, cited case law strongly indicating that the grounds were simply an easement with the United States as servient tenant holding fee title and would expire when they ceased to be used for railroad purposes. Nevertheless, with the easement included in the instrument of donation, the NPS was covering its bases until the matter would become a legal issue, which it did in the late 1970s. See Regional Counsel to Regional Director, memorandum, 30 January 1952, File *D18 Planning Program—Santa Fe Right of Way 1898-2000*, GCNPRL, and *Report of the Director* 1954, 341.
54. P.P. Patraw, "Working Memorandum to Accompany Permit," 28 May 1954, and Assistant Director to Regional Director, Region Three, memorandum, 2 April 1954, *Reference File—L425b—A. T. & S.F. Railroad, Part 3, 1954-1955*, GCNPRL.
55. "Agreement for Purchase of Electric Service," 22 June 1954, Contract No. 14-10-0100-290, *Reference File—L425b—A. T. & S.F. Railroad, Part 3, 1954-1955*, GCNPRL.
56. APS Engineering Department, "Right of Way to the Brink of Time and the River," [1954], and USDI, NPS, "Commercial Power Comes to Grand Canyon," press release, 29 January 1955, and Paul Miller to the Director, memorandum, 3 August 1954, and APS press release, 7 December 1959, *Reference File—Power and Water*, GCNPRL. The 69 kv power delivered to the new 1,500 kva substation located between the old plant and the laundry was stepped down to 12,000 volts by three 1,000 kva transformers and provided single- or three-phase, 60-cycle power at variable voltage. Rates were controlled by the Arizona Corporation Commission, with residential service in 1955 costing one dollar minimum for 13 kwh, seven cents per kwh for the next 42 kwh, and two and a half cents per kwh thereafter. The new system replaced all residential and commercial electrical power at the village and Indian Garden, with APS replacing the old 2,400-volt cable with a new 12,000-volt power line from Maricopa Point to Indian Garden in 1959-60. APS obtained the power from the hydroelectric plant at Davis Dam and from steam turbine generators at APS's Saguaro Steam Station southeast of Phoenix, routed through the BOR substation at Prescott.
57. Paul Miller memorandum, 3 August 1954, and Daggett Harvey to Conrad Wirth, letter, 30 June 1954, *Reference File—Water and Power*, GCNPRL; Daggett Harvey to Conrad Wirth, letter, 24 September 1954, and Conrad Wirth to Daggett Harvey, letter, [July 1954], *Reference File—L425b—A. T. & S.F. Railroad, Part 3, 1954-1955*, GCNPRL. Estimated cost to remove the chimney, \$8,000; to install the draft fans, \$16,000.
58. The bill of sale and details were not found, but the sale price is noted in Daggett Harvey to Conrad Wirth, letter, 1 July 1954, File *C3823 Fred Harvey Contracts 1951*, GCNPRL. Financial statements after 1954 reflect the debt being repaid promptly, the intent being to retire it during the new twenty-year contract.
59. "Fred Harvey's Dynasty Continues to Expand," *Hospitality Magazine* (May-June 1966): 5, 13-15, and James David Henderson, "Meals by Fred Harvey: A Phenomenon of the American West," *Hospitality Magazine* [1966], *Reference File—Fred Harvey*, GCNPRL; C.R. Tucker to Conrad Wirth, letter, 22 November 1954, and Conrad Wirth to C.R. Tucker, letter 26 January 1955, and USDI, NPS, "Special Use Permit," 27 June 1956, *Reference File 130 AT & SF Railway Ca 1/1/55 - 12/31/56*, GCNPRL; R. H. Clarkson to J.E. Shirley, letter with attached plat maps to developed areas, 16 February 1924, and M.R. Tillotson to R.B. Ball, letter with policy attachments, October 1928, and M.R. Tillotson to Frederick Harvey, letter, 26 January 1929, and H.C. Bryant to the Director, memorandum, 7 December 1951, File *L425 Fred Harvey Lands 1922-1951*, GCNPRL. Details of the sale were not located, but it is certain that the railroad kept all rail-related facilities, trackage, depot, employee housing, and associated structures and that the intent was to donate only utilities, roads, and trails to the NPS, leaving the remainder of the Santa Fe Railroad holdings—those concerned with visitor services—to the Fred Harvey Company.
60. See File *C3823 Fred Harvey Contracts 1951*, GCNPRL, for details of negotiations. The Fred Harvey Company's reluctance also centered around an NPS proposal, systemwide, to place franchise fees in a special investment account to be spent on concession improvements which would give the government ownership of these improvements. Most of the canyon's concessioners balked at this plan, which was struck down by the U.S. Attorney General within a couple years but resurrected in the 1990s. See also Assistant Director to Regional Director, memorandum, date-stamp December 1952, File *C3823 Fred Harvey Contracts 1951*, GCNPRL.
61. The logic behind contract terms is expressed in Donald E. Lee to the Director, memorandum, date-stamp 23 September 1953, and M.R. Tillotson to Byron Harvey, letter, 6 January 1953, and M.R. Tillotson to the Director, memorandum, 28 January 1954, and especially Conrad Wirth to Daggett Harvey, letter, date-stamp 16 December 1953, and Conrad Wirth to Assistant Secretary Lewis, memorandum, date-stamp 5 April 1954, File *C3823 Fred Harvey Contracts 1951*, GCNPRL. The Fred Harvey Company in the early 1950s was grossing about \$3 million annually, with franchise fees of \$62,500 and net profits of \$100,000 on average. In order to finance the building program promised by the new contract, the company had to borrow another \$1 million from the railroad's subsidiary, Chanslor-Western Oil and Development Company, also to be repaid over the life of the new contract.
62. Orme Lewis to Richard M. Nixon, contract transmittal letter, date-stamp 9 September 1954, and Director to Lewis, memorandum, 29 July 1954, and USDI, NPS, Contract No. 14-10-0100-346, 1 August 1954, File *C3823 Fred Harvey Contracts 1951*, GCNPRL. Lewis reported that the new franchise fee would be about \$27,500 annually, less than half of that paid under terms of the 1933 contract. By the Act of 31 July 1953 (67 Stat. 271), all long-term concession contracts had to be submitted to Congress for 60-day review before being executed by the government. The new contract was dependent on the utilities donation and facilities sale being consummated.
63. John S. McLaughlin to Regional Director, memorandum with 1954-58 Fred Harvey financial summary, date-stamp 28 July 1959, and F.W. Witteborg to John S. McLaughlin, letter, 23 October 1959, File *C3823 Fred Harvey Contracts 1955-1957*, GCNPRL. Fred Harvey spent \$1,094,000 on new construction with completion of the Yavapai Lodge in April 1958, meeting its commitment to invest \$1 million. During the same period it invested another \$558,000 on facility improvements. During 1960-64, the company would still be paying more than \$200,000 a year to retire its debts to the Santa Fe Railroad, but had the financial health to undertake new development programs.
64. *Report of the Director* 1945, 209.
65. *Report of the Director* 1945, 222-24; 1946, 330-34; 1948, 343-44; 1952, 383.
66. Drury laid out his general plan in *Report of the Director* 1946, 317-20. He noted that "No national park is officially closed during winter, in the sense that gates are barred or visitors prohibited from entering, [but] for the modern traveler living accommodations and roads in these wilderness areas appear to have become necessities." See also *Report of the Director* 1948, 362-63; 1950, 336.
67. *Report of the Superintendent* 1948, 1953. Bryant did not even have sufficient postage to mail the literature available and counted on the Fred Harvey Company, Grand Canyon Natural History Association, and Williams-Grand Canyon Chamber of Commerce to help out. Advertising in the newspapers and by radio for winter visitation coincided with efforts to improve heating systems in village cabins, but no efforts were made to open up the North Rim to winter tourists.
68. *Report of the Director* 1951, 343; *Report of the Superintendent* 1946-48, 1950-53; *Monthly Report of the Superintendent* January - December 1949. "Show-Me" days began in May 1950 with economic leaders from Williams, but quickly spread to individual events for businessmen from Flagstaff and Phoenix, the Arizona Automobile Association, and Frontier Airlines. Bryant and Garrison also regularly attended the Williams-Grand Canyon Chamber of Commerce meetings, sometimes furthering park advertising but other times simply maintaining good regional relations. Easter sunrise services began in 1955.
69. *Report of the Superintendent* 1947, 1950-53. Beginning in 1947, the entire trail crew consisted of one trail foreman, who supervised packing of all supplies and equipment, and five men, stationed one each at the village (upper segments of South Kaibab and Bright Angel Trails), Indian Garden (river to one mile above Indian Garden), Phantom Ranch (the Colorado River Trail, the South Kaibab Trail for one mile up, and North Kaibab Trail for five miles up), Cottonwood (for 2-1/2 miles in each direction), and on the North Rim (down to Roaring Springs). Trail and road funds totaled \$78,000 for FY 1947, and increased substantially after 1950.
70. *Report of the Superintendent* 1946, 1947; *Report of the Director* 1953, 311. The Fred Harvey Company kept 127 mules in its stables in 1947, more than in former years, and reported them busy every day supplying Phantom Ranch and carrying tourists. Trailhead registers installed at both trails after the war indicated that the number of hikers equaled or surpassed the number of mule riders by 1946. In 1947, nearly 10,000 made the mule trip, compared to 8,030 in 1941, while 9,000 hikers registered at the trailheads (Bryant estimating another 5-9,000 who ignored the registers), 90 percent favoring the Bright Angel Trail. The park acquired a gas-driven, portable rock crusher to create on-the-spot tread material in 1953, greatly facilitating corridor trail maintenance.

71. *Report of the Director* 1953, 311; 1954, 339-40; *Report of the Superintendent* 1946, 1952-53; USDI, NPS, HAER, "South Entrance Road," 1-2, 10-11, 22-24. Funding for roads and trails systemwide during 1946-53 averaged about \$4 million annually. A big boost came with the 1954 Federal Aid Highway Act authorizing \$35 million over a three-year period, all available for immediate contracting.
72. *Report of the Director* 1953, 291, 312; 1954, 343. The first concessioner-operated trailer park within the National Park System was built at Lake Mead NRA in 1953. The NPS subsequently studied this innovation for other parks, the first appearing at GCNP in 1961.
73. *Report of the Director* 1947, 322-23; *Report of the Superintendent* 1945-53. In 1945 the North Rim campground had been so little used that aspen saplings covered much of it. By 1953 rangers were reporting severe damage within the camps and surrounding areas from overuse.
74. The Naturalist's Workshop was the predecessor of today's museum collection, housing most of the park's 19,350 collected artifacts by 1952.
75. *Report of the Superintendent* 1945-53; *Monthly Report of the Superintendent* June 1949. Paul Schultz was replaced by Ernest Christensen in 1947.
76. *Report of the Director* 1946, 311.
77. Santa Fe Railroad, the Fred Harvey Company, "Information and Rates for Grand Canyon Outings," May 1946, *Reference File—Fred Harvey*, GCNPRLEl Tovar rooms ran as high as \$7.00 and up for a room with bath, double, twin beds; Bright Angel Lodge cabins ran to \$4.50 and up for the same; Motor Lodge cabins could run \$4.75 for room with bath and bedding for four. One could still catch the train from Williams, round trip, for \$7.50 first class, \$5.50 coach, though buses from Flagstaff and Williams handled most mass transit to the park.
78. The NPS implemented a new fee schedule in June 1953 that created the 15-day pass costing the same as a park's former entrance fee and an annual pass for double that amount.
79. NPS policy allowed concessioners to charge more for some services, like mule trips, to help subsidize other services the NPS wanted but that lost money. The Fred Harvey Company, in fact, typically lost money on Phantom Ranch operations, at least through the 1960s.
80. Fred Harvey Company, "The Grand Canyon Beckons!," 1955, advertising brochure, *Reference File—Fred Harvey*, GCNPRLEl Tovar parlor suites were available for \$23.00 and a room with bath and twin beds had risen to \$8.50-\$14.00. At the Bright Angel Lodge, a deluxe rim cabin for two cost \$10.00-15.00, and a four-person Motor Lodge cabin with bath, \$7.50. Dinner at the El Tovar could cost as much as \$3.50. The NPS tried to ensure that accommodations met demand, which meant mostly low-cost options, but allowed the concessioner to offer some upgraded rooms at relatively high prices.
81. *Report of the Director* 1945, 217; *Report of the Superintendent* 1951-52.
82. *Report of the Director* 1933-46, identify large exchanges in 1933, 1935, and 1940, smaller ones in intervening years, and no more after 1942, therefore, the author assumes all state lands, or very nearly all, were retired by 1942. Altogether, the GLO exchanged 75,000 acres at GCNP during 1921-42, mostly state lands but probably some railroad grant in-lieu parcels as well. See especially *Report of the Director* 1945, 216-17; 1946, 321; and 1948, 331 concerning postwar policy on purchasing inholdings. At GCNP, administrators kept a sharp eye on Rowe Well, the Hogan parcel, Buggeln homestead, and Kolb Studio, forwarding information to regional managers when opportunities for purchase arose and requesting special funds.
83. *Report of the Superintendent* 1948, 1951-53.
84. See Donald Worster, *Rivers of Empire: Water, Aridity & the Growth of the American West* (New York: Pantheon Books, 1985), 265-66, for the magnitude of federal investments in western waterworks.
85. See *Report of the Director* 20, 21-37, and 1921, 22-23, for Mather's philosophy concerning western water projects.
86. Philip L. Fradkin, *A River No More: The Colorado River and the West* (reprint, Tucson: University of Arizona Press, 1984), 229-30; Edwin D. McKee to Newton B. Drury, report, 21 October 1942, Document #113/D204, DSC-TIC; Byron Pearson, "The Plan To Dam Grand Canyon: A Study in Utilitarianism" (master's thesis, Northern Arizona University, 1992), 34-35, 75. McKee's report reflected, or influenced, the NPS position. He regretted that lava formations in the lower canyon would be inundated, but felt that little else would be lost by construction of Bridge Canyon Dam. His principal objection was for too high a dam, which would flood the mouth of Havasu Creek and make Havasu Canyon a natural tourist ingress to the reservoir, thereby disrupting the Havasupai's way of life and the tributary canyon's scenic beauty. NPS consultant Frederick Law Olmsted Jr., on the other hand, suggested in 1950 that a high dam at Bridge Canyon might be tolerable because it would be unobtrusive and afford recreational opportunities, and the Sierra Club indicated its approval for a dam as high as 2,000 feet.
87. For evidence of NPS opposition to dams in the 1940s and 1950s, see *Report of the Director* 1946, 337; 1948, 338-39; 1949, 294-95; 1950, 303-306; 1951, 318-19; 1952, 354-55; 1956, 328.
88. Pearson, "The Plan to Dam Grand Canyon," 30-34, 40-41. The Kanab Creek tunnel idea was resurrected by the State of California in 1960, but was not a viable proposition.
89. *Report of the Director* 1949, 294; 1950, 306; 1951, 319; *Report of the Superintendent* 1950, 1951. Bryant supported the NPS headquarters office in its struggles over the Grand Canyon projects, citing the Kanab Creek tunnel as "the greatest potential threat" to the integrity of the park, and thankful to private conservation groups for their struggle against "continuous campaigns that are waged by first one interest and then another to whittle away the few remaining natural areas in the United States." Assistant Superintendent Lon Garrison also spoke out against Bridge Canyon Dam in 1950, but was silenced by Regional Director Tillotson who enforced Chapman's edict to restrict statements to factual data. Administrators at the park level could do little more than pass on *all* the facts, including the negative ones, and perhaps surreptitiously undermine the projects among visitors. NPS administrators even in the late 1940s understood that *any* dam upstream of Grand Canyon would affect the park's riparian resources, but their support of western water development generally caused them to narrow their objections to structures and reservoirs within NPS areas.
90. *Report of the Director* 1919, 28-29; 1921, 27.
91. *Report of the Director* 1919, 28-29; 1920, 46-47, 1921, 27-28; 1922, 149; 1929, 30; 1931, 38; 1932, 35. Mather noted that planes were already being used in 1919 to patrol California national forests for fire. The NPS allowed, and viewed with interest, experimental flights and landings within the parks through the 1920s. A national conference to discuss the issue was held in February 1928 among airline, railroad, concessioner, aviation, and NPS personnel, and a committee was organized to study the question further, but no definitive policy was established.
92. *Report of the Director* 1944, 219; 1946, 324, 328-29; 1947, 339; 1948, 355; 1949, 328-29; 1950, 336; 1952, 378. The NPS used aircraft to spot fires and otherwise conduct aerial reconnaissance in the 1930s, employed "smoke-jumpers" to fight fires as early as 1945 at Glacier and other parks of the northern Rockies and at Yellowstone in 1951-52, and to spray insecticides in southwestern parks by 1952. Administrators denied those who wanted to accord aircraft "equal rights in the parks with the automobile"; however, they did approve of strips within a few remote parks such as Mt. McKinley and did not object to the number of scenic overflights or try to limit them to particular park areas until the 1950s.
93. (*Los Angeles Morning Express* 4 February 1919, "Mishap Halts Return Trip Start From L.A. in 3000-Mile Air Tour," and "Army Aviators Spend Several Days in Town," 22 February 1919, and "Aviators Arrive; Tended Banquet," and *Los Angeles Examiner*, "Army Plane Flies Into Grand Canyon 2000 Ft. Below Rim," 25 February 1919, and "Flight Through Grand Canyon Described by Lieut. Searle," 28 February 1919, periodical clippings, Accession # GRCA 19395, GCNPMC. The squadron was on a western tour out of Ellington Field, Houston, Texas, observing topography for future landing fields and air-mail routes, measuring air currents, and gathering other data of use to aerial navigation.
94. *Report of the Director* 1921, 27-28; 1922, 149; *Report of the Superintendent* 1922. An impromptu "landing field" near Plateau Point had been cleared of brush prior to the Thomas-Kolb landing. Superintendent Crosby wrote in favor of transcanon flight service in 1922.
95. *Report of the Director* 1929, 30, 84; 1931, 37-38, 53; 1932, 35; *Report of the Superintendent* 1931, 1937. The tri-motor planes were equipped with "Wasp" motors for greater lift. The NPS had rejected Scenic Airline's repeated efforts to operate within the park and to be officially recognized, but the company won over administrators with its excellent facilities, good safety record, and enormous popularity among tourists. Grand Canyon Airlines was also appreciated for its equipment and safety record, though it managed to secure only 1,000 passengers in summer 1931. One of its more popular flights was a forty-five-minute trip to the rim east of the village then along the rim to the Little Colorado and back. The company probably interrupted service during the depression, Tillotson noting in 1937 that it had "resumed" scenic flights, and it did not operate during the war.
96. *Report of the Superintendent* 1947, 1948. By summer 1947, Arizona Airways and Trans World Airlines had established service to Valle, TWA reporting 624 passengers arriving in the 1947 travel year and 192 arriving in June 1948 with the number on the rise. Valle Airport, Red Butte Airport, and VT Ranch Airport were in operation immediately after the war. Two men from Williams tried to establish another at Rain Tanks in 1948, but gave it up after protests from Grand Canyon Airlines, which was operating from Red Butte. The NPS, USFS, TWA, and the CAA also planned an airport at Rain Tanks during 1950-53, having completed site surveys, but the project folded for lack of funds. Today's airport would be completed at this location in 1965.
97. *Monthly Report of the Superintendent* November 1949; *Report of the Superintendent* 1948, 1950. Montgomery was the pilot who flew a quonset hut into Supai for Episcopal missionaries in April 1948, wrecking a helicopter in that operation as well. Bryant called it a "crude and completely commercial" publicity stunt. Similar proposals to establish helicopter service within the park were rejected in 1948 and again in 1950 when the better-financed Metropolitan Commuting, Inc. proposed using experimental fifteen-passenger helicopters.

CHAPTER FIVE

Infrastructural Last Hurrah, 1956-1975

1. USDI,NPS, "Mission 66 In Action,A Report on the First Year of Mission 66," [ca.June 1957],Catalog #65030, *Mission66 Materials*, GCNPMC.
2. USDI,NPS, "Mission 66 In Action";USDI,NPS, "Mission 66 Progress Report," October 1963, Catalog #65030 *Mission66 Materials*, GCNPMC.
3. USDI,NPS, "Mission 66 Progress Report." NPS planners in 1955 estimated 80 million visitors by 1966, a number surpassed in 1962, with more than 93 million arriving by 1963. Also during 1955-63, general construction costs increased 36.8 percent, road building costs, 18.5 percent. Twenty-seven park units had been added or authorized, raising the number to 212 and encompassing 26.7 million federal acres (686,000 private acres). Appropriations had increased from \$52.7 million to \$119.1 million for FY 1964.
4. USDI,NPS, "Mission 66 Progress Report."
5. USDI,NPS, "Mission 66 Progress Report";Howard Stagner and Conrad Wirth, "Mission 66 Revisited," report,Catalog #65030, *Mission66 Materials*, GCNPMC. GCNP Superintendent Howard Stricklin,in his interview with Julie Russell, type-written transcript, 26 February 1982, File *Oal History Transcripts,Howard Stricklin* GCNPR, 53-55, confirms that administrators viewed Mission 66 as a specific program ending in 1966, but they planned all along to continue with structural solutions under a less-focused program called the "Road to the Future."
6. Mission 66 Prospectus, 5.
7. Mission 66 Prospectus, 9-11, 14-19. Inner-canyon plans included a ranger station at the mouth of Nankoweap Creek to monitor and assist river trips,and three to five patrol cabins and eight trail shelters elsewhere.
8. Mission 66 Prospectus, 3-4, 49-51. The park's 1956 organization chart and employee numbers in FTEs (full-time equivalency):superintendent's office (5),Divisions of Administration (6), Protection (34),Interpretation (17),Construction and Maintenance (41),Concessions Management (1,3),and Landscape Architecture (2,5)—a total of 72 permanent employees and approximately 122 seasonals,using the NPS estimate of 3.5 seasonals per FTE.
9. Mission 66 Prospectus, 36-44. Employee housing was planned for the village principally, but also at Desert View, Indian Garden, Phantom Ranch,Bright Angel Point,and within the monument.Of the \$25 million,about half was estimated for roads and trails and half for buildings and utilities.The figure did not include additions to staff or concessioner investments.
10. About 1960 the NPS started to use the "package system" in master planning, wherein a team of experienced men from the region,engineering and architecture divisions,and the park worked together from start to finish,thus simplifying review and approval procedures. Previously, plans had been developed by superintendents and their staffs with assistance from engineers and landscape architects and were then sent up the chain of command for review. See USDI,NPS, "Mission 66 Progress Report."
11. "Master Plan Handbook, Volume I,Chapter 5, Design Analysis,"January 1961, Cat. #57834, GCNPMC.The "Mather Business Zone" and adjacent administrative zone (Visitor Center area) were intended to serve several purposes:to relieve village congestion by creating one "shopping center";to "segregate visitors and management personnel,"which reflected NPS desires to implement self-interpretation mechanisms,improve traffic flow, and to decrease time-consuming contacts between limited NPS personnel and unlimited visitors;to remove some facilities from the village rim,including the Kolb Studio, Verkamp Studio, the Brown Building and other concessioner dormitories;and to preclude further rimside development.
12. Several unpublished sources offer good descriptions and critiques of national park architecture, including USDI,NPS, National Register of Historic Places, Interagency Resources Division, "The Historic Landscape Design of the National Park Service: 1916 to 1942," by Linda Flint McClelland, 1993; Jonathan Searle Monroe, "Architecture in the National Parks:Cecil Doty and Mission 66" (master's thesis,University of Washington, 1986);Jane A. Ruchman, "Visual Management in the National Parks (master's thesis,University of Colorado, 1987);and USDI,NPS, "Grand Canyon National Park Architectural Character Guidelines," 1994, DSC-TIC.Monroe, 48-57, 64-72, illustrates that the shift toward the Mission 66 style actually began during World War II,but came into its own after 1955. During the 1960s and 1970s the Fred Harvey Company and AmFac used Mel Ensign,an architect from Phoenix,to design many of their major buildings.
13. Monroe, "Architecture in the National Parks," 97-102, offers an unfavorable architectural critique of the building and notes that the center was planned immediately before Mission 66 but is entirely representative of the style. See also "Mission 66 Frontiers Conference: Conferee Inspection, Park and Concessioner Mission 66 Facilities,Grand Canyon Village," 25 April 1961, one of several documents found in the "Mission 66" File, GCNPMC,which provides summary data on Mission 66 construction to that date.The rear administrative wing of the Visitor Center was added in 1966.
14. Frank Kowski to Southwest Region Superintendents,memorandum,date-stamp 20 January 1969, and Acting Superintendent David de L.Condon to the Regional Director, memorandum, 27 January 1969, File *C3823 Fred Harvey 1969*, GCNPR. The NPS broke with its longstanding policy of providing free campgrounds in 1969 as a result of guidelines of the Land and Water Conservation Act of 1965. GCNP would experiment with concessioners operating the "Class A" campgrounds beginning in 1969, charging for their use, and continued charging when the NPS later assumed their operation.The Fred Harvey Company funded and built the trailer park entrance station;the NPS paid \$2,600 per trailer site.Mather campground opened with 231 individual sites costing \$1,650 each,and seven group sites costing more than \$10,000 each.
15. "Mission 66 Frontiers Conference, Conferee Inspection";USDI,NPS, "Contract Awarded for Water and Sewer Facilities..."press release, 17 June 1957, *Reference File—Power and Water*, GCNPR. The amphitheater cost \$22,700 with seating for 650. Storage tanks cost \$376,000 in 1957 and \$148,390 in 1961.
16. *Report of the Director* 1963, 98.
17. "Grand Canyon National Park — Summary and Projection of Park Staff," misc document, [1964], Cat. #57834, GCNPMC; "Master Plan Handbook, Volume I, Chapter 4," April 1961, Cat. #57834, GCNPMC.The entire ranger force in 1961 consisted of a chief and an assistant chief ranger in charge of three ranger districts (South Rim, North Rim, and Monument), a park forester, biologist, law enforcement specialist, and management assistant, the latter two positions filled seasonally. Total ranger headcount equaled sixteen permanent and twenty-eight seasonal. Responsibilities did not vary much from prior postwar years—forest fire, insect, and disease control, backcountry patrol, policing roads and campgrounds, traffic control, search and rescue, law enforcement, wildlife management, and manning entrance stations remained major duties while some time was devoted to wildlife studies.
18. "Master Plan Handbook, Volume I, Chapter 4," 19.
19. "Master Plan Handbook, Volume I, Chapter 4," 19-20. Superintendent Stricklin implemented the fingerprinting policy prior to 1954, and generally supports the difficulty of policing the village in his oral interview with Julie Russell, 26 February 1982, 32-36, 49-52. The uranium mine also posed traffic problems, as ore trucks ran through the village and along East Rim Drive to reach a processing plant near Tuba City.
20. "Mission 66 Frontiers Conference, Conferee Inspection." Cost of residences: \$42,500 for the 1957 apartments; \$48,000 for the 1961 apartments; \$20,000 for the 1957-58 3-br, 2-bath, 1,584 sq. ft. house; \$18,375 for the 1960-61, 3-br, 1-1/2 bath, 1,804 sq. ft. house. It is assumed that grades K-12 moved out of the 1939 school located southeast of the Fred Harvey Garage in 1958; total K-12 enrollment in 1961 was about 275.
21. Juti Winchester, "A Sign of the Times: The Shrine of the Ages and Grand Canyon National Park," research paper, 1995, Winchester's possession; J. Donald Hughes, *In the House of Stone and Light*, Grand Canyon Natural History Association, (1978), III; "Prospectus for Hospital, Medical, and Dental Services Concession," a call for proposals, [1973], File *C3817 Concessions, Contacts and Prospectus 973*, GCNPR; "Prospectus for Medical Services," a call for proposals, 15 December 1975, and Superintendent to Regional Director, memorandum, date-stamp 18 February 1976, and Raymond L. Tate to Merle Stitt, letter, 19 November 1975, File *C3817 Concession Prospectus 974-1976*, GCNPR. The Shrine of the Ages was originally envisioned in the early 1950s as a grandiose structure (roughly ten stories high) along the rim, but NPS policy prevailed over rimside advocates, resulting in a scaled-back version within the new business zone. The \$1 million, twenty-two-bed hospital, complete with dental facilities, was intended to serve the South Rim's 1,000 permanent residents (2,000 in summer months), as well as residents of Tusayan, who numbered 350 by the early 1970s, and members of the Havasupai Tribe. Like other remote small towns, the village has always had trouble attracting and keeping doctors and medical providers.
22. F.W. Witteborg to Howard Stricklin, letter, 1 August 1966, and Howard Stricklin to F.W. Witteborg, letter, 24 August 1966, File *C3823 Fred Harvey 1966*, GCNPR. The idea for two-lane, one-way roads to relieve congestion arose in the mid-1960s, along with initial ideas for shuttle or taxi services within the village. The Fred Harvey Company experimented with taxi service in summer 1966, grossing only \$83.50 in the peak month of June.
23. USDI,NPS, HAER, "South Entrance Road," 31-34.
24. USDI,NPS, HAER, "East Rim Drive," 29-44. Much thought was also given to inflicting as little landscape scarring as possible, for example, the roadway was widened on only one side and shoulders remained gravel. The extant permanent exhibit cases were installed at Desert View, Lipan Point, Moran Point, and Grandview, and at Pima Point along West Rim Drive, all in 1961 and 1963. East Rim Drive reconstruction during 1956-63 also marked a switch from the old "wyé" form of spur-road intersection to the "T" form used today. All spur roads and parking lots were rebuilt during these years, but retaining walls at the points and scenic pullouts for the most part remained as built by the earlier contractor and CCC. Two of today's three east entrance structures—the eastern-most kiosk and the pueblo-style building adjacent—were completed in 1964; today's east entrance boundary sign was completed in 1963.
25. USDI,NPS, HAER, "West Rim Drive," 25-26; USDI,NPS, HAER, "North Entrance Road," 26-32; USDI,NPS, HAER, "Cape Royal Road," 26-34. Cape Royal Road was widened from fourteen feet to eighteen feet during these projects, but some original culvert headwalls remained in the 1990s. New or improved parking areas included those at Greenland Lake, Pt. Imperial, Farview, Vista Encantada, Painted Desert and Walhalla overlooks, and Transition Zone and Angels Window pullouts.

26. USDI, NPS, HAER, "Village Loop Drive," 24-30. When imposed in 1969, the one-way regulation did not allow a left turn at the intersection of the South Entrance Road and Village Loop Drive, requiring motorists to travel around the north side of the loop to reach the south side.
27. (*Flagstaff*) *Arizona Daily Sun* 4 August 1969; Louise Hinchliffe, "Information regarding Grand Canyon (South Rim) water supply," data sheet, March 1972, *Reference File—Water and Power*; GCNPR; George Davenport to M.C. Blanchard, report, 26 September 1941, *Reference File L425b—Santa Fe Railroad*, GCNPR.
28. U.S. Steel Corporation, press release, [ca. 1957], and John S. McLaughlin to Grand Canyon Village residents, memorandum, 1 July 1960, and Howard B. Stricklin to park residents and visitors, memoranda, 14 April 1964, 3 June 1964, 29 April 1965, 10 August 1966, and 24 May 1968, and USDI, NPS, press release, 19 June 1968, and Robert Lovegren to Grand Canyon residents, memorandum, 16 May 1969, *Reference File—Water and Power*, GCNPR.
29. Chief, Water Resources Branch, to NPS Director, memorandum, 28 November 1952, *Reference File—Water and Power*, GCNPR. The park's applications to the state during 1936-41 numbered ten, with existing use measuring about 400 acre-feet and future use (estimated in 1952 for the mid-1970s) 713.7 acre-feet for domestic, stock, irrigation, power, and municipal uses. Rights to the flow of Roaring Springs date to a State of Arizona certified water right issued on 16 March 1938. The Arizona State Land Commissioner by 1952 had recognized Bright Angel Point and Grand Canyon Village as "resort communities," or municipalities, which allowed for increased water use based on population growth. GCNM's water use in 1952 totaled only fifteen acre-feet for stock, wildlife, visitor, and administrative purposes.
30. Davenport report, 26 September 1941; George Davenport to M.C. Blanchard, reports, 1 December 1945 and 10 February 1947, and George Davenport to C.E. Shevlin, letter, 16 April 1954, *Reference File L425b—Santa Fe Railroad*, GCNPR. By 1941, production at Indian Garden was limited by spring capacity. Supply varied widely depending on floods and siltation, drought, season, and equipment failures. The NPS also required some flow for saddle stock, tourists, and riparian growth. Haunted Creek produced 572 gpm or 25 million gallons per month, but by the postwar years, a Phantom Ranch system with hydroelectric plant and without a new bridge was favored. Engineers did not think of Roaring Springs as a source during this period. See Davenport's reports for interesting, in-depth depictions of alternatives, water flows, and estimates of future needs and capacities considered in 1941-54.
31. "Donation and Conveyance of Chattels," 30 April 1965, File *L425 Lands, Deeds of Conveyance or Documents*, GCNPR, executed by the Union Pacific Railroad and USDI on the above date, clearly identifies the transfer of the entire Roaring Springs water system and all associated equipment. General correspondence thereafter indicates that the U.P. continued to operate the system until 1972 when all Utah Parks Company facilities at the North Rim were donated to the federal government. See also Merle Stitt to Director, Western Region, memorandum, date-stamp 21 November 1972, File *C387 Concession Contracts, Permits, Prospectus 1971-1972*, GCNPR, concerning the NPS assuming responsibility for system operation.
32. Robert Bendt, Acting Superintendent, minutes of special meeting, 7 December 1966, File *D32 Contracts 1965-1966*, GCNPR. Principal contractors were Elling Halvorsen of Seattle and Lents, Inc. of Bremerton, Washington. Maintaining his sense of humor in a bad situation, Bendt wrote that "two-thirds of [the] contract job is up the Bright Angel Creek."
33. Reynolds Metals Company, press release, 24 July 1970, and CH2M Hill, "Water Supply and Wastewater Reclamation, South Rim, Grand Canyon National Park," water study report, [1973], and Chief of Administrative Management to the Superintendent, "Meeting on Tusayan Water," report, date-stamp 6 April 1979, *Reference File—Water and Power*, GCNPR; USDI, NPS, "Sale of Water to Tusayan, AZ," environmental assessment report, Document 113/D-103A, November 1986, DSC-TIC. Upon completion, full spring flow was returned to Garden Creek. The new system's ultimate limits rested with Roaring Springs' variable flow, which has been measured at about 1,500 gpm but is reduced in the summer months through autumn, the park's thirstiest period. Historically, 300-700 gpm have been withdrawn from the springs (700 gpm = 30.24 million per month = 362.88 million per year) but the North Rim has consumed as much as 100 gpm of this. Other restrictions on delivery to the South Rim have included pipe width and stress capacity, occasional breaks in the pipe and other physical failures, withdrawals at Phantom Ranch and other inner-canyon locations, pumping power at Indian Garden, consideration of riparian biological needs, and leakage that averaged 43 million gallons per year during the 1970s.
34. USDI, NPS, "Mission 66 for Grand Canyon," 7, 9, 10, 14, 20-23, 26, 29, 38-39; George Von der Lippe to T.E. Murray, letter, 27 June 1969, File *C383 Utah Parks Co, 1964-1971*, GCNPR. Planned NPS expenditures at the North Rim topped \$8 million, including roads and trails. In 1956, the Utah Parks Company owned and operated the entire Roaring Springs water system and power facilities. The sewage disposal system, originally built and owned by the concessioner, had been rebuilt and operated by the NPS since the early 1940s. The NPS also operated the incinerator, short-wave radio system, and shared responsibility for telephone services. As at South Rim, the NPS wanted Mountain States Telephone and Telegraph to assume phone responsibilities and wanted a private service company to supply power, though none operated in the vicinity of the Kaibab Plateau.
35. F.K. Warner to John S. McLaughlin, letter, 17 April 1957, and John S. McLaughlin to the Director, memorandum, 23 April 1957, "Mission 66, Volumes 1 & 3 1958-1965," DSC-TIC.
36. T.E. Murray to Frank F. Kowski, letter, 16 April 1971, File *C383 Utah Parks Co 1964-1971*, GCNPR. The total number of inn and lodge pillows by 1966 had actually decreased to 606. The Utah Parks Company spent \$1.85 million during 1961-68 renovating facilities within Bryce, Zion, and Grand Canyon, and nearly another \$1 million in 1969-71, but did not construct new facilities.
37. Superintendent to the Regional Director, memoranda, 23 November 1965, 7 October 1966, and 9 December 1966, and Robert Lovegren to the Regional Director, memorandum, 29 September 1969, File *C383 Utah Parks Co 1964-1971*, GCNPR.
38. Acting Director to Deputy Director, memorandum, 20 April 1971, File *C383 Utah Parks Co 1964-1971*, GCNPR; Regional Director to Superintendents, memorandum, 27 June 1967, and Superintendent, Zion, to the Regional Director, memorandum, 12 July 1967, and Superintendent to the Regional Director, memorandum, 28 July 1967, and Concessions Analyst, Santa Fe, to Chief, Office of Concessions, memorandum, date-stamp 2 August 1968, File *C383 Utah Parks 1967-1969*, GCNPR. General Host was a holding company, or "bank," for its operating units which included a Western Tourism Division. Its intent was to use its Yellowstone Park Company as a "mother ship" for other companies in this division, including The Utah Parks Company, and to provide technical and financial assistance. It also wanted to immediately raise rates, extend the operating season, redesign menus, and move key employees between tourism units.
39. James J. Murray to Thomas F. Flynn, letter, 15 February 1968, and Acting Regional Director to Superintendents, memorandum, date-stamp 15 July 1968, and "Grand Canyon Lodge, North Rim, Arizona," statement of understanding with price lists, 29 July 1968, and "Fact Sheet—Lodging, Restaurant, and Transportation Concession," [August 1968], and assistant director to James J. Murray, letter, date-stamp 11 September 1969, and USDI, NPS, "Utah Parks Company," draft concession contract, date-stamp 16 September 1968, and E.H. Bailey to George Hartzog, letter, 3 October 1968, File *C383 Utah Parks Co 1967-1969*, GCNPR; Associate Director to E.H. Bailey, letter, date-stamp 6 May 1969, and North Rim Area Manager to Concessions Analyst, memorandum, 15 August 1969, and "Notice of Intention to Negotiate Concession Contract," 8 August 1968, Federal Register notification, File *C383 Utah Parks Co 1964-1971*, GCNPR. No one other than the Utah Parks Company-General Host submitted a bid in 1968.
40. O.W. Welch to the Honorable Russell Long, letter, 10 September 1968, and the Director to Russell Long, letter, 4 November 1968, and W.N. Matteson to the Superintendent, meeting minutes, 15 August 1969, File *C383 Utah Parks Co 1967-1969*, GCNPR.
41. "Amendment No. 4, Concession Contract No. I-100np-102..." 10 March 1972, File *C383 Utah Parks 1970-1972*, GCNPR; Merle Stitt to the Director, Western Region, memorandum with attachments, date-stamp 21 November 1972, and Howard Chapman to the Director, memorandum, 5 May 1972, File *C387 Concession Contracts, Permits, Prospectus 1971-1972*, GCNPR; "Revised Master Contract Negotiation—TWA Services, Inc., Operational Plans," December 1972, File *C383 Utah Parks 1970-1972*, GCNPR. The Utah Parks Company's depreciated assets in 1972 totaled about \$380,000. The donation was stipulated in the last year's contract extension.
42. Lawrence C. Hadley to Don E. Humphreys, Jr., letter, 2 March 1973, File *C387 Concession Contracts and Prospectus 1973*, GCNPR; Acting Regional Director, Rocky Mountain Region, to Superintendents, memorandum with attachment, date-stamp 7 April 1977, File *C2621 Financial Report—TWA 1977-1978*, GCNPR; Secretary of the Interior to the President of the Senate, letter, date-stamp 22 January 1973, and Lawrence C. Hadley to J.E. Stephenson, letter with attached operational and maintenance plans, date-stamp 29 December 1972, File *C383 Utah Parks 1970-1972*, GCNPR; USDI, NPS, Contract No. 9900C20039, File *C383 TWA (North Rim) 1972-1973*, GCNPR. Bids were received from the Yosemite Park and Curry Company, Romney International Hotels, Golden Circle Tours, Inc., of Kanab, Utah, the Fred Harvey Company, National Park Concessions, Inc., and TWA. TWA actually took over operations from The Utah Parks Company on 1 January 1973 by provisional agreement, and their contract period was from that date to 31 December 1982.
43. Donald E. Lee to Regional Director, memorandum, date stamp 14 September 1962, and "Bill of Sale," 27 November 1962, and Emery Kolb to Horace Albright, letter, 5 November 1962, File *C383 Kolb Studio 1961-1963*, GCNPR. The NPS wanted to pay him book value of less than \$700, but congressional friends ensured he was paid based on a 1958 impartial appraisal, minus subsequent depreciation and life-interest value.
44. USDI, NPS, "Concessioner Annual Financial Report," 1969, File *C2621 Financial Report—Kolbs 1970*, GCNPR; "Concessioner Annual Financial Report," 1972-76, File *C2621 Financial Report—Kolbs 1973-75*, GCNPR; *Arizona Daily Sun* 13 December 1976; Douglas J. Wall to Merle E. Stitt, letter, 21 December 1976, and John Ozanich to Messrs. Shaw et al., memorandum, 4 March 1977, and Merle Stitt to A.W. Scott, Jr., letter, date-stamp 31 March 1977, File *C383 Kolb Studio 1976-1977*, GCNPR. Emery consistently grossed between \$90,000-110,000

- annually during 1969–76, about 25 percent from lectures, and paid 3 percent of gross (excluding native handicrafts) through 1976. The concession officially ended with Emery's death and the studio passed to the NPS in March 1977, remaining mostly unused through the 1980s as it was considered unsafe. Currently, the renovated building is used as a GCA bookstore and art gallery.
45. USDI, NPS, Contract No. 14-10-9-900-148, 22 January 1969, File *C3823 Verkamps 1968-1969*, GCNPRL; "Articles of Incorporation of Verkamps, Inc.," in *Arizona Daily Sun* 7 March 1970; USDI, NPS, "Concessioner Annual Financial Report," 1961, File *C2621 Financial Report—Verkamps 1962-1963*, and 1966, File *C2621 Financial Report—Verkamps 1967*, and 1976, File *C2621 Financial Report—Verkamps 1977-1979*, GCNPRL. Verkamps' 1954 contract was extended year-to-year from 1964–67 prior to the new agreement. The new contract was executed in January 1969 but was effective 1 January 1968 through 31 December 1977. Net income after taxes equaled \$33,000 in 1961 and \$83,000 in 1966 under the 1954 contract; \$87,000 in 1976 under the 1968 contract.
 46. G. W. Jakle, Jr. to Howard B. Stricklin, letter, 10 August 1966, and Ted Babbitt to Howard Stricklin, letter, 9 September 1966, and Assistant Director to Ted Babbitt, letter, date-stamp 16 December 1966, and George Hartzog to Carl Hayden, letters, date-stamps 2 February 1967 and 15 March 1967, and Robert Bendt to Director, memorandum, 16 August 1967, and Edward A. Hummel to Regional Director, memorandum, [August 1967], and Howard Stricklin to the Director, memoranda, date-stamps 20 September 1967 and 2 October 1967, File *C3823 Babbitts 1966*, GCNPRL; Howard Stricklin to Ted Babbitt, letter, 19 April 1966, and USDI, NPS, Contract No. 14-10-9-900-137, 21 October 1968, File *C3823 Babbitt Bros. 1966-1968*, GCNPRL.
 47. John S. McLaughlin to Leslie Scott, letter, 5 April 1957, File *C38 Fred Harvey 1957-1958*, GCNPRL; "Mission 66 Frontiers Conference: Conferee Inspection"; Leslie Scott to John McLaughlin, letter, 18 April 1957, and John McLaughlin to the Director, letter, 23 April 1957, in "Mission 66, Volumes 1 & 3, 1958-1965," DSC-TIC; Leslie Scott to Howard Stricklin, letter, 11 August 1967, File *C3823 Fred Harvey 1967*, GCNPRL. Yavapai Lodge opened in May 1958. "Pillows" or "pillow count" is a term used by the NPS and concessioners to indicate the number of people that can be accommodated; room counts do not convey the same information. The Camper Services Building opened in April 1961 with public showers, laundromat, and snack bar. Renovations to existing facilities involved new carpeting, furnishings, electrical systems, and baths. The concept of "dormitory"-type public accommodations originated with Yavapai Lodge and would be incorporated at the Motor Lodge with the replacement of single- and double-unit cabins in the 1960s and 1970s. The reason was economy: the NPS would effect savings with utility hookups and service roads, the concessioner would save in building costs, and the rooms could thus (theoretically) be offered at lower rates. The concessioner and NPS also experimented with low-cost, "canvas-top" cabins, similar to the old tent cabin concept, placing several at the Motor Lodge in the late 1960s.
 48. Note that by 1972, fifty of the trailer sites were occupied by NPS and Fred Harvey Company employees. The old campground was not abandoned until several years after completion of the Mather Campground due to unrelenting demand for campsites.
 49. The NPS and Fred Harvey vacillated on the future of Phantom Ranch and building overnight facilities at Desert View during the 1960s. The concessioner considered turning over the unprofitable ranch facilities to the NPS for use as a backcountry hostel, and insisted that it could not be operated profitably unless it was provisioned by helicopter. The NPS considered abandoning Phantom Ranch, leaving inner-canyon hikers and rafters to their own devices, and at the same time eliminating mule trips to avoid the rising conflict between hikers and mule parties. NPS and Fred Harvey Company officials went as far as selecting the site for a Desert View overnight facility, but never broke ground, probably because of delays in building the new water system and extending water pipes to the area. See Leslie Scott to Howard Stricklin, letter, 11 July 1965, File *C38 Fred Harvey 1966*, and Howard Stricklin to the Regional Director, memorandum, File *C3823 Fred Harvey 1952-1971*, GCNPRL.
 50. Figures here and hereafter for numbers of rooms, cabins, pillows, and dining seats as well as gross receipts, net profits, and franchise fees through 1976 were calculated by the author using concessioner's annual reports found in microfiche files labeled *C2621 Financial Report Fred Harvey*, followed by the date or date range, GCNPRL. In 1966, the Motor and Bright Angel Lodges contained 187 cabins totaling 565 pillows; the El Tovar (93 rooms) and Yavapai Lodge totaled 1,078 pillows. The El Tovar dining room seated 250; the Bright Angel dining room, 385; the Motor Lodge cafeteria, 190.
 51. Howard B. Stricklin to Regional Director, memorandum, 30 July 1965, File *C38 Fred Harvey 1964-1965*, GCNPRL; Andrew C. Wolfe to Acting Superintendent, memorandum, 20 August 1963, File *C3823 Fred Harvey 1963*, GCNPRL; Daniel B. Beard to the Director, memorandum, date-stamp 6 December 1963, and John S. McLaughlin to Regional Director, memorandum, 21 October 1963, File *C38 Fred Harvey 1962-1963*, GCNPRL; Leslie Scott to George Hartzog, letter, 18 October 1966, File *C3823 Fred Harvey 1966*, GCNPRL. Per the latter document, the Fred Harvey Company had been anxious to build a new hotel beside the Bright Angel Lodge and to expand facilities at the Motor Lodge, Yavapai Lodge, and Desert View since 1963, but was thwarted mainly by the NPS not undertaking the new water system. Another delay came from the NPS hedging over rim developments, manifested in delays in the revision of master plans.
 52. Leslie Scott to Mr. Wirth, letter, 2 August 1963, File *C3823 Fred Harvey 1963*, GCNPRL; Marlow Glenn to the Superintendent, memorandum, date-stamp 10 August 1964, and Daniel Beard to the Director, memorandum, date-stamp 18 August 1964, and Superintendent to Regional Director, memorandum, 11 August 1964, File *C3823 Fred Harvey 1964*, GCNPRL; USDI, NPS, Contract No. 14-10-0100-346, Amendment No. 1, 24 September 1965, GCNPRL. Return on investment decreased each year to 30.3 percent in 1964 as the Fred Harvey Company's assets increased, but profits rose steadily. Gross receipts also increased each year, from \$3.1 million in 1955 to \$6.02 million in 1966.
 53. Leslie Scott to Howard Stricklin, letter, 11 August 1967, and Assistant Director to Regional Director, memorandum, date-stamp 20 October 1967, File *C3823 Fred Harvey 1967*, GCNPRL; "Proposed Fact Sheet," [ca. July 1968], and Thomas F. Flynn, Jr. to the Director, "Follow-up Slip," 2 April 1968, and Howard Stricklin to Leslie Scott, letter, 22 August 1968, File *C3823 Fred Harvey 1968*, GCNPRL; USDI, NPS, Contract No. 14-10-9-900-158, 26 March 1969, File *C3823 Fred Harvey 1969*, GCNPRL. Other standard contract provisions included NPS control over concessioner rates with due consideration to cost of producing goods and services and an NPS/concessioner right to renegotiate fees every five years. One notable change was that "general, infrequent, and non-scheduled" tour buses visiting the South Rim incidental to a larger tour would not be subject to Fred Harvey control and that the secretary of the interior could "terminate or modify" the transportation preferential right after 31 December 1973. Negotiations indicated that Desert View developments were of lesser priority. A Grandview campground was deleted from the building program by 1970. The Fred Harvey Company was to pay \$3,750 per year for using the powerhouse. The NPS wanted to eliminate the transportation right entirely, but backed down due to resistance by Leslie Scott.
 54. Fred Harvey Company press release, 22 January 1968, File *C3823 Fred Harvey 1968*, GCNPRL; Fred Harvey Company press release, 10 July 1968, File *C3823 Fred Harvey 1969*, GCNPRL. The merger consisted of an exchange of 1-1/10 AmFac shares, valued at \$51.50 on 20 January 1968, for each of the Fred Harvey Company's 484,800 outstanding shares; essentially, a \$27.5 million buyout. The merger made the Fred Harvey Company a subsidiary of AmFac but left its executive structure unchanged. Fred Harvey Company revenues nationwide in 1967 totaled \$42.8 million with profits of \$930,500; AmFac revenues worldwide were \$145.9 million with profits of \$5.8 million.
 55. R. B. Moore to Wayne N. Aspinall, letter, date-stamp 20 January 1969, and Host International, statement of position by Vice President C. T. Harris, 14 February 1969, and Ronald Reagan to Walter J. Hickel, letter, 10 March 1969, and Congressman Bob Mathis to Walter J. Hickel, telegram, 12 March 1969, and Gary W. Hart to the Office of General Council, U.S. General Accounting Office, letter, 6 June 1969, and George E. Robinson to Mr. Haycock, letter, date-stamp 9 July 1969, File *C3823 Fred Harvey 1969*, GCNPRL; Director to All Regional Directors, memorandum, date-stamp 10 December 1976, File *C3823 Verkamps 1955-1977*, GCNPRL. Host International's complaints centered on several contradictory explanations for awarding the contract and telegrams sent to the Fred Harvey Company by the NPS, after the fact, soliciting a matching bid. NPS administrators appeared surprised and unprepared for anyone challenging the Fred Harvey Company's interests as no one had ever done so. They eventually stuck to the excuse that Host's bid and plans would "overdevelop" the South Rim. Strictly speaking, the NPS was following policy enunciated in Regional Director Daniel Beard's memorandum to Southwest Regional Superintendents, 12 May 1967, File *C3823 Fred Harvey 1967*, GCNPRL, based on Public Law 89-249 of 9 October 1965, and longstanding NPS policy of considering concessioners' requests for new contracts, working out concessioner/NPS requirements, then advertising for thirty days and recognizing existing concessioners' preferential rights.
 56. Howard Stricklin to the Regional Director, memoranda, [April 1968], 1 February 1968, 14 August 1968, and 10 February 1969, and Andrew C. Wolfe to the Regional Director, memoranda, 19 April 1968 and 22 May 1968, and B. F. Quinn to Howard Stricklin, letter, 14 May 1968, and Howard Stricklin to B. F. Quinn, letter, 22 May 1968, and M. T. Allen to Howard Stricklin, letter, 9 September 1968, and Glenn O. Hendrix to the Regional Director, memoranda, 4 October 1968 and date-stamp 4 March 1949, and Howard Stricklin to Chief, Design and Construction, memorandum, 16 January 1969, and Frank Kowski to the Regional Director, memoranda, date-stamp 7 April 1969 and 11 June 1969, and Glenn O. Hendrix to the Superintendent, memorandum, date-stamp 13 May 1969, and John M. Parks to B. F. Quinn, letter, 23 June 1969, and Robert Lovegren to B. F. Quinn, letters, 30 June 1969 and 17 November 1969, and Chief of Project Design to Chief, DCSSC, memorandum, 10 September 1969, and B. F. Quinn to Robert Lovegren, letter, 13 October 1969, File *C3823 Fred Harvey 1968-1969*, GCNPRL; "Development Planning Meeting May 5 and 6, 1970," minutes of meeting with attachments, [May 1970], File *L1425 Santa Fe Railroad*, GCNPRL; Howard Stricklin to the Regional Director, memorandum, 10 February 1969, File *Fred Harvey 1967-1969*, GCNPRL.
 57. Grand Canyon National Park Lodges, "Grand Canyon National Park," rates brochures, 1977, *Reference File—Fred Harvey*, GCNPRL.
 58. Pearson, "The Plan to Dam Grand Canyon," 54–58, 78–80.
 59. Pearson, "The Plan to Dam Grand Canyon," 71–124. Another important lesson learned by environmentalists was that the greed of individual states and extractive interests, reflected in congressional bickering, could be used as a divisive lever.

The developmental scheme of the mid-1960s was a bit too grand, and the uneasy coalition which included the seven basin states unraveled just as the environmental coalition grew stronger.

60. Pearson, "The Plan to Dam Grand Canyon," 60-61, 99, 102-104, 122-25; USDI, "Interior Department Proposal Would Expand Area of Grand Canyon National Park," press release, 14 March 1967, File *History—GC—Legislation & Boundary Matters*, GCNPR.L.
61. USDI, NPS, "Grand Canyon National Park Final Master Plan," August 1976, GCNPR.L., 10-14, hereafter noted as 1976 Master Plan.

CHAPTER SIX

An End to Consensus¹⁹⁷⁶⁻¹⁹⁹⁹

1. Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 4-5; 8-10. Although I disagree with Sellars on the degree to which the NPS has intentionally practiced facade management and on its authority to do otherwise, I support his contention that the NPS has always taken a "capitalistic, business-oriented approach" to management.
2. For the evolution of administrators' thoughts toward ecological awareness, in their own words, see *Report of the Director* 26, 11-18; 1929, 20-27; 1930, 9; 1931, 20; 1932, 7-8, 25-29; 1933, 177-181; 1937, 41, 50; 1938, 8, 37-38; 1940, 165, 179; 1944, 207-210, 220-23, 229; 1945, 211-14, 223; 1946, 324-28; 1949, 317; 1951, 328-29; 1952, 366; 1954, 344-45, 350-51; 1959, 336, 341; 1961, 375; 1962, 80, 84-87, 91-94; and 1963, 98, 101-103.
3. National Academy of Sciences, National Research Council, "A Report by the Advisory Committee to the National Park Service on Research," [August 1963], DSC library; Sellars, *Preserving Nature*, 185-90, 200, 214-16; Director, NPS to the Secretary of the Interior, letter, 10 March 1961, Cat. #65030, File *Mission 66 Materials*, GCNPMC; "Study Paper, Mission 66 Reappraisal: Mission 66 Frontiers Conference, April 23-28, 1961," NPS position paper, [April 1961], and USDI, NPS, "press release," paraphrasing the remarks of Conrad Wirth at the conference, 24 April 1961, and *The Frontiersman* conference newsletter, 28 April 1961, File *Mission 66 Materials*, GCNPMC.
4. *Report of the Director* 56, 309; 1957, 331-2; 1958, 292-93, 314; 1959, 336, 341; 1960, 285-86; 1961, 375; 1962, 93; 1963, 95-96, 98, 101; Lowell Sumner, "Biological Research and Management in the National Park Service—A History," May 1967, DSC library.
5. Sellars, *Preserving Nature*, 213, 217, 219, 234-43.
6. *Report of the Superintendent* 1919. The NPS inherited this policy from the USFS, which continues to permit grazing on adjacent lands.
7. For references to early grazing in and near the park, see *Report of the Superintendent* 1919, 1923, 1924, 1929-31, 1933-37, 1939-40, 1944-49; *Report of the Director* 1931, 24. See M.R. Tillotson to the Director, letter, 21 September 1931, attached to the *Report of the Superintendent* 1931, for objections based on damage to the normal growth of flowers, grasses, shrubs, and forest cover. Rangers did general roundups beginning in 1930, again in 1931, and by 1933, when the grazing season ran from June through October, permittees had begun to do roundups themselves. A USFS drift fence extended from Yavapai Point to Hermits Rest just east, south, and west of the village in 1919, but adequate boundary fencing did not exist until just before World War II. Seven permittees ran cattle, sheep, or horses within original park bounds in 1922-24; Grand Canyon National Monument added another dozen or so permittees after 1932. The Havasupai traditionally ran cattle and horses on Great Thumb Mesa (excluded from the park in 1975) and continue to graze special use lands designated by the 1975 park enlargement act. In 1935 the H.R. Lauzon and Cataract Livestock Company permits were cancelled, eliminating all grazing from the southwestern segment of the park, except Havasupai lands. Martin Buggeln's permit for 175 head of cattle ended with his death in 1939, marking "the end of all legal grazing of domestic stock in the park" except Great Thumb Mesa although monument permits to thousands of acres continued until 1985, ten years after it became part of the park. Most grazing, of course, took place along canyon rims, but the Esplanade west of Tapeats Creek had been a favored winter range of Mormon ranchers since the 1880s, and cattle were also known to make their way down to the Tonto Platform.
8. *Report of the Superintendent* 1919-20. The NPS did not target winged predators as the USFS did on the Kaibab Plateau.
9. *Report of the Superintendent* 1919, 1924, 1928, 1930-31; *Report of the Director* 1931, 53. Sellars, *Preserving Nature*, 47, 73-74, 119-23, identifies the early efforts of Joseph Grinnell, George Wright, and others to alter predator-killing policies at the system-wide level, as well as general opposition by superintendents, reflected in Tillotson's 1928 and 1931 policies. The park also banned dogs and shot both unrestrained dogs and house cats on sight, reporting that these measures evidenced increased numbers of birds, squirrels, chipmunks, and other small animals. Although a predator control policy remained in effect, no killings are noted after 1931, by which year government hunters, or "predatory animal killers," had reported the removal of 182 coyotes, 41 bobcats, 22 mountain lions, 15 house cats, 3 foxes, and 2 dogs, with additional, probably smaller, numbers not enumerated. The forest service on adjacent lands killed far greater numbers. In 1933, Tillotson reported bobcats increasing, mountain lions holding their own, and coyotes down due to trapping in the national forests and dispersed deer herds in that year. In 1935, he reported coyote, fox, and bobcat "quite common" and mountain lions rare. These observations, like those of the more popular animals other than deer, were not the result of detailed surveys, however. Arizona Game & Fish, the U.S. Fish and Wildlife Service, and the USFS joint examination of North Rim predators in 1946 reported "relatively few" within park bounds.
10. *Report of the Superintendent* 1919, 1933, 1944, 1946, 1949. The USFS maintained such stations on the North Rim at Jacob Lake, Ryan, and at each of the five hunting camps from Saddle Mountain on the east to Big Saddle on the west.
11. *Report of the Superintendent* 1919, 1925, 1928-35, 1939-40, 1944-45, 1948-49, 1953; H.C. Bryant to the Regional Director, memorandum, 30 March 1949, Cat. #GCRA 58396, GCNPMC; Anderson, *Living at the Edge*, 139-43; Sellars, *Preserving Nature*, 77-78. Superintendents Peters and Eakin reported the number of South Rim deer increasing in the early 1920s, likely due to predator killing and hunting prohibitions, and Tillotson estimated 2,930 deer at the North Rim, 295 at the South Rim, in 1928. Rangers trucked fawns to the village in 1927-29; Grand Canyon Airlines flew them across in 1930 and 1931. Fawns were kept and fed within pens, then released to the surrounding range. Administrators believed that the South Rim could support as many as a thousand deer and built game tanks with CCC funds and crews in 1933, helping account for the irruption during the 1930s. In 1945, Bryant lamented that there were "so large a number of tame garbage-fed deer within the village area" that they had begun to create a browse-line on village trees.
12. Pronghorn are native to the Coconino Plateau, but none had been reported within park bounds prior to the 1920s experiment.
13. *Report of the Superintendent* 1925, 1928-31, 1933-36, 1938, 1944, 1945. *Report of the Director* 1933, 177, identifies twenty-eight in the herd in 1933. The antelope had been trapped in Nevada and shipped by truck to the South Rim. Tillotson and Bryant attributed the failure to insufficient habitat as well as coyotes and bobcats, all of which took a fearful toll on newborn kids. After the mid-1930s administrators redirected their interest to South Rim herds that were increasing on their own near Red Butte and Grandview w.
14. *Report of the Superintendent* 1944, 1948, 1951-52.
15. Sellars, *Preserving Nature*, 8-82, 123-25, 258-61. Less noted introductions of exotic flora also took place from the 1920s to the 1930s before the park adopted a policy of exclusion and removal. Most plantings were directed toward village landscaping. During the 1930s, CCC crews planted thousands of shrubs and trees (mostly natives) around village structures, 5,000 in 1940 alone, but had also embarked on a program to eradicate "exotic plants." Park employees also sowed wildflowers along roadsides. See *Report of the Superintendent* 1939-40.
16. *Report of the Superintendent* 1928-31, 1933, 1944; Harold Bryant memorandum, 30 March 1949; Sellars, *Preserving Nature*, 82, 92, 258-59; Stricklin interview. Tillotson noted that Tonto Platform flora had recuperated "very markedly," after killing 1,337 burros by 1930. Bryant noted that by the 1940s the burros were disturbing Fred Harvey Company mule parties. Stricklin recalled that mules simply left the trail to follow the burros, causing consternation among tourists and guides. He and several rangers would amble down to the Tonto Platform and shoot thirty to forty burros in a single morning, leave them for the native scavengers, and say nothing about it. Bryant's wife complained that such carnage, clearly audible at the rim, sounded like the "Battle of the Bulge." Rangers also waged a campaign against wild horses in the northwest part of the park in 1931.
17. *Report of the Superintendent* 1929, 1930-37, 1939-40, 1945, 1947-48, 1951; Stricklin interview; *Report of the Director* 1934, 188; 1936, 124; Harold Bryant memorandum, 30 March 1949; USDI, NPS, GCNP, "Grand Canyon National Park Resource Management Plan, Part One—Narrative," January 1997, Science Center, GCNP, hereafter noted as 1997 Resource Management Plan. NPS policy in 1934 was to avoid introducing exotics "where native species can be maintained." This changed in 1936 wherein waters that had not already been stocked by exotics would not be in the future, but that native species would be favored in waters that had already been stocked only "where they are of equal or superior value from the standpoint of fishing." Since Grand Canyon's native species were considered inferior for fishing, and (in any event) most inhabited the Colorado River, which was unsuitable for trout, the regular stocking program continued. Fish plants at GCNP were undertaken with the assistance of Arizona's and Utah's Game & Fish commissions and the U.S. Bureau of Fisheries, who trucked the eggs and fry to the rims where they were reloaded in aerated cans on mules and planted by park rangers. Nankowep Creek apparently was never stocked, probably because of difficult access, although administrators were aware of its potential in the 1930s.
18. Reports of NPS Directors during these years always included narratives of forest conditions and for many years included statistical charts of fires indicating causes and cost of suppression following charts of the number of "big game animals" at each of the parks.
19. Sellars, *Preserving Nature*, 82-84, 162-64, 253-258; *Report of the Director* 1934, 192. The NPS Branch of Forestry was created in FY1934.
20. *Report of the Superintendent* 1924-26, 1930, 1933-37, 1940, 1942-45, 1948, 1952-53; *Monthly Report of the Superintendent* March, July, September, November, and December 1949.

21. *Report of the Superintendent* 1919, 1925, 1929, 1933, 1934, 1936, 1940-42; *Report of the Director* 1929, 82; 1941, 301; *Monthly Report of the Superintendent* April-June 1949. Fire towers existed at Hopi Hill, Bright Angel Point, and Grandview by 1919; the three towers manned in the park in 1929 were at the former two locations, the towers having been rebuilt in that year, and at Signal Hill, also finished in 1929. Signs of smoke were triangulated from two of the three towers. In 1936 CCC crews erected fourteen "tree lookout towers" to help forces on the ground pinpoint fires since rim terrain and dense forest made it otherwise difficult to find reported locations. A tower was built by the International Stacy Company of Columbus, Ohio, at Kanabowits Ridge in 1941 with \$1,360 of CCC funds. Fire control aids are first mentioned in April 1949; one assigned at Signal Hill in that year lived at the tower's base in a tent cabin.
22. *Report of the Superintendent* 1929, 1934-38, 1940, 1942, 1944-45, 1951-52; *Monthly Report of the Superintendent* January, March, June 1949; *Report of the Director* 1936, 131; 1976 Master Plan, 24-25; 1997 Resource Management Plan, 2-25; "Development Study 1969-74," a draft plan for park development, [ca. 1969], 113/MPNAR, DSC-TIC. In 1920 Superintendent Peters wrote that the park's "pine forests are almost entirely free of under growth and furnish wonderful natural saddle trails and foot paths." This was the condition of Arizona ponderosa forests until federal policies at the turn of the century excluded frequent low-intensity burns ignited by lightning, American Indians, and pioneer ranchers. Formal NPS/USFS cooperative plans were implemented in 1929, but since 1919, forest service rangers in particular assisted their less-experienced counterparts in detection and suppression. Type maps in the parks were intended to obtain "detailed inventory and map of vegetation...for use in planning protection, development, and use of the areas." Field studies to prepare GCNP's map revealed more than two-hundred species previously unreported in the park. Radios in 1937 were considered too delicate for the field, but stationary sets at the village and Bright Angel Point worked well by that year. A new fifty-watt set was installed at the latter site in 1938. Investigations into using aircraft with the USFS began in January 1949. The central dispatching system of 1951 consisted of a permanent ranger on duty twenty-four hours per day at the village, recording and correlating weather and fire data and dispatching crews via radio as needed. Ground-to-air communication in 1952 had a range of only fourteen miles. Numbers of fires, locations, and acreage burned at GCNP were often reported in tables directors' and superintendents' annual reports. The park during the 1960s experienced an annual average of forty fires burning eighty-one acres, 84 percent caused by lightning. As of 1997, only 13 percent of the park's forests targeted for prescribed burns had been so treated.
23. *Report of the Superintendent* 1933, 1936, 1938, 1940, 1944-48; *Monthly Report of the Superintendent* March-May, August-October 1949, 1951-52; Harold Bryant memorandum, 30 March 1949. The GCNHA funded the efforts of part-time botanist, Mrs. Rose Collom of Payson, Arizona, who worked mainly on plant checklists, collections, and a herbarium from the mid-1930 into the 1950s. Dr. Bryant, who wrote of park wildlife in terms of "biotic communities," admitted that observations and data were "very inadequate" and blamed lack of personnel, ranger time, and funding for research. Range test plots had been discontinued by 1949 for these reasons.
24. Louis Schellbach III, "Manuscript of Interpretive Data," 14 October 1942, Cat. # GRCA 58395, GCNPMC, provides a history of these efforts, many undertaken by the interpretive staff. Reports of NPS Directors through the 1930s indicate that the NPS undertook biological studies with the intent, at least, to directly influence management decisions. *Report of the Director* 1936, 123, for example, states that such studies were done "mostly to evolve practical management plans." *Report of the Director* 1937, 50, identifies the complaint that would be repeated for the rest of the century, that insufficient staff precluded "the long-time program of research in wildlife needs so necessary to full understanding and adequate handling of biological assets."
25. USDI, NPS, "History and Bibliography of Biological Research in the Grand Canyon Region with Emphasis on the Riparian Zone," by the Museum of Northern Arizona, March 1974, NPS-PX821040040, DSC library; 1976 Master Plan, 23-27; Jan Balsom, Acting Chief, GCNP Science Center, interview by Michael F. Anderson, tape recording, 4 March 1999, author's possession; Rob Arberger, "Superintendent's Annual Report, 1997, Grand Canyon National Park," [1998], GCNPRL, 26-29, hereafter noted as *Report of the Superintendent* 1997. Balsom and Arberger mention that the Science Center, which replaced and expanded the functions of the park's Resource Management Division in 1995, is still funded mostly by "soft" money, available through legislative compliance and for studies of particularly pressing issues like aircraft overflights and river programs. Balsom believes that research trends are marginally promising, but less than 4 percent of the park has been surveyed for cultural resources, few surveys have been done to create useful base lists of natural resources, and there are very few long-term monitoring programs in place to facilitate management decision-making.
26. USDI, NPS, "Concession Prospectus: Hiking Guide Service and Hiking/Backpacking Gear Rental Service," 24 April 1972, and Allen J. Malmquist to Superintendent, letter, 27 January 1976, and David J. Mackay to Marvin Jensen, letter, 17 May 1976, and Merle E. Stitt to David J. Mackay, letter, 27 May 1976, File C3817 *Concession Prospectus 1974-1976*, GCNPRL; USDI, NPS, "(North Rim) Concession Prospectus: Hiking Guide Service...," 1 March 1977, and Wayne Schulz to Superintendent, memorandum, 11 July 1977, File C3817 *Concession Prospectus 1977-1979*, GCNPRL; Gale Burak, interview by Michael F. Anderson, tape recording, 7 June 1996, author's possession; *Backcountry Trip Planner: A Hiker's Guide to Grand Canyon National Park* (Grand Canyon Natural History Association, 1989). The 1972 prospectus mentions a "Hiker Registration/Reservation System," but Burak indicates that there was no system until backcountry office head Kathy Green and Burak implemented an informal one in 1974, mostly to begin tracking the number of users. The system became more formal under Glenn Fuller by 1977. Per Burak, Mary Langdon was the first woman backcountry ranger, stationed at Cottonwood in 1975; Burak, a volunteer and seasonal NPS employee during 1974-83 and 1992-93, was the second, stationed at Phantom Ranch in 1977, Indian Garden in 1978, and at Hermit in 1979. Some of the earliest guide concessions belonged to Allen and Sharron Malmquist of Moccasin Tours, Inc., Fredonia (by 1975); Grand Canyon Trail Guides, Inc., Flagstaff (by 1976); and David Mackay of Colorado River and Trails Expeditions, Salt Lake City (by 1975). The catalyst for backcountry controls came with the Easter weekend of 1973 or 1974 when about 1,000 backpackers trashed the Bright Angel campground, prompting Burak to label the site "Sardineville."
27. USDI, NPS, GCNP, "Aircraft Management Plan: Environmental Assessment, 1986," May 1986, 113/D-148, DSC-TIC, 18.
28. 1997 Resource Management Plan, 1-12; Steve Sullivan to Steve Bone, memorandum, 7 January 1999, Chief Ranger's Office, GCNP. In the 1970s, most backcountry users visited in summer, consistent with overall park visitation. By the 1990s, most were arriving in the cooler months of March-May and October-November, the greater number from Arizona, California, Colorado, Illinois, and Texas, in that order. In 1998, more than 4,600 overnight users came from foreign countries, with Germany, Canada, France, Switzerland, and the Netherlands making up the top five.
29. "1996 Grand Canyon National Park Profile," briefing statement, September 1996, Budget Office, GCNP. Mule riders numbered 16,475 in 1995, not including NPS and concessioner maintenance and supply trips.
30. The author bases these observations on his own experience as a guide for the Grand Canyon Field Institute and conversations with experienced canyon backpackers. Note also that NPS helicopter flights, though far fewer in number than commercial overflights, are more intrusive since they descend below the rims and land in any location they choose.
31. Few commercial companies persist in this endeavor, and most guided hikes are conducted by Grand Canyon Field Institute, a non-profit, educational branch of GCA.
32. USDI, NPS, "User Carrying Capacity for River Running the Colorado River in Grand Canyon," by F. Yates Borden, CX 0001-3-0054, 22 November 1976, 113/D-43, DSC-TIC, 1, 3; USDI, NPS, "Private and Commercial Trips in the Grand Canyon," by Bo Shelly and Joyce M. Nielsen, Technical Report No. 4, CX821040104, June 1976, 113/D-38, DSC-TIC, 7; USDI, NPS, GCNP, "Synthesis and Management Implications of the Colorado River Research Program," by Roy Johnson, Technical Report No. 17, September 1977, 113/D-51, DSC-TIC, preface, 19; Larry Sanderson, interview by Michael F. Anderson, handwritten notes, 29 March 1999, author's possession. Some pioneer outfitters included David Rust within Glen Canyon in the 1920s, Norm Nevills who ran at most one trip per year from the late 1930s until his death in 1949, Ted Hatch, Gaylord Stevely, George White, Ken Slight, and the Sanderson Brothers, all of whom timed their few annual trips to higher seasonal flows. The NPS limited the number of outfitters to the twenty-one operating in 1972, all of whom became concessioners.
33. USDI, NPS, "User Carrying Capacity," 40, 66, 68, 76; USDI, NPS, "Private and Commercial Trips," 7-11, 28; USDI, NPS, GCNP, "Synthesis and Management Implications," 19, 29, 51-52; Laurie Domler, "NPS-Colorado River Management Plan (CRMP)," talks given to participants of the Grand Canyon River Guide's (GCRG) training seminar (GTS), handwritten notes, 31 March - 6 April 1999, author's possession; Linda Jalbert, "NPS-CRMP," speech presented to the GCRG-GTS, handwritten notes, 27 March 1999, author's possession; "1996 Grand Canyon National Park Profile," briefing statement, September 1996, Budget Office, GCNP. Today, about 22,000 people run the river each year—19,000 with outfitters, the remainder private users, researchers, and others—but user days in 1995 totaled 113,636 commercial, 52,615 noncommercial, reflecting longer noncommercial trips. Park administrators are currently working with NAU and the University of Arizona to create a computer simulation model of day-to-day river use. The private waiting list is managed such that if a potential trip leader keeps in constant touch with the river office, he may be able to secure a trip each year through cancellations. The park implemented a "no-repeat" rule for private applicants in 1974, but dropped it in 1976 when attempts to extend the concept to commercial trips failed. Despite greater use, many consider the riverine environment today far less polluted than twenty years ago thanks to greater awareness of damaging practices, compliance with NPS restrictions on fires and waste disposal, and cleanup programs undertaken by both private and commercial parties.
34. USDI, NPS, "User Carrying Capacity," 2, 74; USDI, NPS, "Private and Commercial Trips," 5, 18-21, Table A-15 and A-16; USDI, NPS, GCNP, "Synthesis and Management," 25, 48-49, 52-53; GCNP, untitled planning framework document for the CRMP, presented to the GCRG-GTS by Linda Jalbert, 28 March 1999; Kim Crumbo, NPS, speech presented to the GCRG-GTS, handwritten notes, 28 March 1999, author's possession. Motor trips of the 1970s used up to 55-hp outboard engines which allowed trips to average thirty-five miles per day and be completed in five to eleven days; oar trips averaged twelve to twenty-two days. A 55-hp outboard at full speed during the summer season certainly contributes to the noise

coincident with congestion; a 25-hp, four-stroke engine operated sufficient to add 1-2 mph to the river's 4.2 mph average flow during the winter "secondary season" is far less intrusive. Surveys in 1976 revealed that those who take commercial motor trips tend to live in urban centers and do not view environmental damage and overcrowding as critically as participants on oar trips.

35. Rose Houk, *An Introduction to Grand Canyon Ecology* (Grand Canyon Association, 1996), 46-51; Jeremy Schmidt, *Grand Canyon National Park* (Boston: Houghton Mifflin Company, 1993), 178-81, 209-210; Fradkin, 205-208; Rene Dubos, *The Woeing of Earth* (New York: Charles Scribner's Sons, 1980), preface, 45-47, 80-84.
36. *Hidden Passage: The Journal of Glen Canyon Institute*, vol. 1, No. 1, n.d..
37. Balsom interview; Ted S. Melis, "Future Simulations of Beach/Habitat-Building Flow Opportunities Under Currently-Adopted Hydrologic Triggering Criteria," and Barry D. Gold, "A House Built of Sand? Lessons Learned to Date from Implementation of the Glen Canyon Dam Adaptive Management Program," and "Grand Canyon Monitoring & Research Center: The Biological Resources Program," and Kate S. Thompson and Andre R. Potochnik, "Erosion of Cultural Resources in River Terraces along the Colorado River in Grand Canyon," abstract handouts of talks given at the GCRG-GTS, 27-28 March 1999, author's possession. The NPS contributes personnel to ecological and cultural research along the river and to planning and support, but is primarily engaged in managing river use and mitigating the effects of use.
38. 1997 Resource Management Plan, 90-95.
39. E.T. Scoyen to Regional Directors, memorandum, 15 August 1956, and Vernon R. Hanson to John S. McLaughlin, letter, 8 May 1957, and A. Lynn Coffin to F.F. Aldridge, letter, [November] 1957, and Chief, National Air Sampling Network Section to program participant, letter with attached readings for GCNP, December 1957, File *L24 Encroachments, Other 1953-1966*, GCNPRL. The monitoring device was moved to the new visitor center roof in late 1957.
40. U.S. Department of Health, Education, and Welfare, Public Health Service, "Executive Order 11282 dated May 26, 1966, Control of Air Pollution Originating from Federal Installations," and USDI Deputy Assistant Secretary for Administration to Heads of Bureaus, memorandum, date-stamp 12 October 1966, File *L24 Encroachments, Other 1953-1966*, GCNPRL; USDI, NPS, GCNP, "1992 Gaseous Pollutant and Meteorological Monitoring Annual Data Summary," Technical Report, February 1994, 113/D-276, DSC-TIC; USDI, NPS, GCNP, "General Management Plan," 21 August 1995, GCNPRL, 17, hereafter noted as 1995 GMP; 1997 Resource Management Plan, 90-95. Specific 1995 GMP measures include limiting automobiles in the village, more extensive shuttle services with cleaner emissions, encouraging clean fuels in Tusayan, and prohibition of additional wood-burning stoves and fireplaces.
41. USDI, NPS, GCNP, "Aircraft Management Plan, 1986"; Richard Marks, interview by Mike Quinn, 29 May 1996, transcript, GCNPMC. Administrators estimated 50,000 overflights in 1986, 80-90 percent of which were low-level tour craft, the remainder private planes, NPS flights, and military aircraft. There were no restrictions on the number of flights and where they went in that year. Superintendent Marks recalled 180 people being killed in crashes over a ten-year period preceding the late 1980s.
42. USDI, NPS, GCNP, "Aircraft Management Plan, 1986"; USDI, NPS, "Grand Canyon Aircraft Management Recommendation," December 1987, 113/D-126, DSC-TIC. The recommendations also restricted the NPS to "essential" flights, otherwise undefined, which in 1986 consisted of facility maintenance, sewage removal, research, resource monitoring, wildfire suppression, transport of people and supplies for varied projects, law enforcement, and search and rescue.
43. 1997 Resource Management Plan, 167, 195; 1995 GMP, 7, 17, 57; Stricklin interview; Marks interview; Balsom interview.
44. *Report of the Superintendent 1997*; "1996 Grand Canyon National Park Profile," September 1996, Budget Office, GCNP; "Grand Canyon National Park Comparison of Base Funding Distribution," and other untitled, undated working materials, obtained from the Budget Office, GCNP, March 1999, author's possession. NPS staff in 1997: a full-time equivalency of 325, about 400 total permanent and seasonal employees in summer, 275 permanent employees the rest of the year. Allocation of the 325 FTEs: Superintendents Office, 13.04; Administration, 27.11; Science Center, 31.5; Concessions, 6.0; North Rim, 15.42; Maintenance, 100.84; Interpretation, 33.53; Protection, 76.56; Fire, 20.0. In the same year, base operational funds equaled \$14.34 million, with an additional \$1.5 million for special projects such as maintaining historic trails (\$250,000) and rewiring historic buildings (\$400,000). The park received \$5.6 million from other sources including the Glen Canyon Monitoring & Research Program (\$426,000), fire preparedness (\$550,000), and residence rehabilitation (\$2 million), plus \$3.95 million from the new Fee Demonstration Program, for a grand total of \$25.37 million. In 1989, FTEs totaled 267 and base funding was a little more than \$8 million; thus, manpower and money have been increasing at a greater rate than at any time since the depression.
45. "1996 Grand Canyon National Park Profile." The park today has 355 miles of roads and 400 miles of trails, nearly all of which existed in 1935, although a few trails have been built since then, like the Bill Hall, Tapeats Creek, and Widfors Trails. In 1997 the roads crew consisted of a work leader, three equipment operators, and five motor vehicle operators who performed standard maintenance. Major projects are still undertaken by contract and directed by the Federal Highways Administration. The trail crew consisted of a supervisor, two crew chiefs, and 12 furlough, 15 seasonal, and 15 Youth Conservation Corps workers.
46. GCNP, "Trip Planner," January 1999, GCNP; USDI, NPS, "Transportation User Fee Study, South Rim Village," by Rockrise Odermatt Mountjoy Amis and Economics Research Associates, September 1974, 113/D-11, DSC-TIC; *Report of the Superintendent 1997*; Richmond, *Cowboys, Miners, Presidents & King* 208-220. As begun in 1973, the NPS reimbursed AmFac for shuttle operating costs, about \$850,000 in that year. Mandatory shuttle use along West Rim Drive resulted in "dramatic" reductions in traffic, noise, and littering. The NPS considered operating the shuttle itself, but decided to use a concessioner because of personnel ceilings and wage scales, concessioners paying less for labor.
47. GCNP, "Trip Planner," January 1999. The Desert View and North Rim campgrounds are open only in mid-May through mid-October on a first-come, first-served basis. Mather campground operates this way during December-February. Capacity in 1995: Mather, 350 family and 7 group sites; Desert View, 50 family sites; North Rim, 83 family sites.
48. L. Greer Price to Michael F. Anderson, note, September 1999, author's possession. GCA spent about \$1 million during 1989-96 funding installation of more than two-hundred new wayside exhibit panels at the North Rim and South Rim.
49. *Report of the Superintendent 1997*; Arnberger interview; Ellis Richard, Chief of the Interpretive Division, interview by Michael F. Anderson, tape recording, 3 March 1999, author's possession. Arnberger notes that only 3 percent of South Rim visitors are reached through traditional programs. The 1997 report indicates that 15 percent of North Rim visitors are so informed.
50. Steve Bone, Chief Ranger, interview by Michael F. Anderson, tape recording, 3 March 1999, author's possession; miscellaneous organizational materials provided by Steve Bone, March 1999, author's possession. Ranger Operations has five geographical districts: Corridor, Desert View, River, South Rim, and Wilderness. The division also has a permits office, responsible for reservation systems and all permits. The North Rim has operated as a separate management unit reporting directly to the superintendent since the late 1990s.
51. Bone interview; Arnberger interview; *Report of the Superintendent 1997*; "1996 Grand Canyon National Park Profile." The U.S. Magistrate also holds court in the village a few times per month.
52. Bill Johnston, AmFac General Manager, interview by Michael F. Anderson, tape recording, 1 March 1999, author's possession.
53. *Report of the Superintendent 1997*.
54. USDI, NPS, DSC, "Parkwide Water System Improvements: Inner Canyon & North Rim Developments," February 1995, 113/D-300, DSC-TIC. There were 430,000 North Rim visitors in 1994; 411,000 in 1997. The DSC report indicates that the North Rim system is "relatively trouble-free." Wastewater treatment has been of the activated sludge type since 1984, and reclaimed water with an average daily flow of 76,000 gpd is stored in a one-million-gallon tank for fire protection. The North Rim obtains electricity through Garkane Power Association, Inc. today, but the NPS owns the transmission line and provides standby power with emergency diesel generators.
55. USDI, NPS, DSC, "Environmental Assessment: Sale of Water to Tusayan, AZ," November 1986, 113/D-03A, DSC-TIC. The system in fact does take 700 gpm from Roaring Springs, measuring about half of the spring flow and 20 percent of Roaring Springs Creek overall. That is the maximum possible through the six-inch pipe. The bottleneck was at Indian Garden where the pumps could deliver only 400 gpm to the South Rim where an estimated 25-30 percent was lost through leakage. The pump was upgraded and a new pipeline built to the rim in the mid-1980s. In 1973, 131.8 million gallons were pumped, 195.1 million in 1981, 183.7 million in 1985. Maximum pump operation in the mid-1980s was estimated at 90 percent, with 85 percent being optimum due to the age of the pipeline north of the river. Operation in 1973 was 60 percent; in 1981, 88 percent; in 1985, 83 percent. The issue is actually more complex given modern ecological considerations and the system is vulnerable because of occasional turbid water that cannot be pumped, variable spring flows, and the constant threat of pipeline breaks.
56. USDA, USFS, "Historical Resources of the Kaibab National Forest," by Elizabeth Coker, report, 1978, NAU Cline Library, 15.
57. Gary Branges, interview by Michael F. Anderson, handwritten notes, 3 March 1999, author's possession; "Water Supply and Wastewater Reclamation, South Rim, Grand Canyon National Park," by CH2M Hill, summary of report findings, [1973], and "Position of the National Park Service," policy statement, [1974], and "Water Supply and Demand: South Rim and Tusayan," fact sheet, [1975], and Groundwater Conditions and Potential Yields of Wells, Moqui-Tusayan Area, Coconino County, Arizona," hydrologist's report, [1977], *Reference File—Water & Power*, GCNPRL; "Sale of Water to Tusayan, AZ," November 1986. Since Tusayan was, and still is, an unincorporated community, requests were pressed by only a few of the prominent business owners, Thurston among them. The law allowed sale to nonprofit entities if their business was to provide services to the National Park System and only if no reasonable alternatives existed. The commu-

- nity formed the Tusayan Water Development Association (TWDA) in 1971 to meet the "official" status required. It was supplemented by the Tusayan Water Corporation in 1979. By 1977, there were eleven wells in the Tusayan area, all ranging from 514-1,275 feet deep, and all poor producers.
58. "Position of the National Park Service," [1974], and Wesley E. Steiner to the Superintendent, letter, 19 December 1975, and "Conference on Environmental Statement, Master Plan of the Grand Canyon Park," meeting minutes, 18 February 1976, and Governor Castro to Merle Stitt, draft letter, [1976], and "Briefing Statement" concerning water delivery to Tusayan, 21 September 1978, and Chief, Administrative Management, to the Superintendent, meeting minutes, 30 March 1979, *Reference File—Water and Power*, GCNPRL.
 59. "Sale of Water to Tusayan, AZ," November 1986; Balsom interview; Brad Traver, 1995 GMP Implementation Team, interview by Michael F. Anderson, tape recording 1 March 199, author's possession. The remainder of Tusayan water came from Bellemont and Williams with no appreciable water obtained from local wells. The park also provided reclaimed water to the community, but demand was not great. It sold water to the TWDA in 1980 for \$5.65 per 1,000 gallons which included a \$.75 charge for tanker wear to park roads and water system maintenance and operations, but not major repairs. The TWDA sold this water to town businesses for \$6.05, but charged residents \$18.50. Businesses hauled their own water from the I-40 towns, as did the TWDA which sold it to residents for \$28.50. Compare to Williams residents paying \$4.50 for the first 1,000 gallons and \$2.25 thereafter, and a \$2.58 rate for Flagstaff residents, in the same year. The first deep water well was drilled in 1988 and several others followed in the 1990s, but the park continues to supply water during off-season months.
 60. *Report of the Superintendent* 1997; Raymond Gunn, Chief of Concessions, interview by Michael F. Anderson, tape recording, 2 March 1999, author's possession; Ginger Bice and Alan Keske, GCNP Concessions staff, interview by Michael F. Anderson, tape recording, 3 March 1999, author's possession. Commercial use in 1997 included twenty-two concession contracts (sixteen with rafting companies), two-hundred incidental business permits, and ten special use permits. Business volume totaled \$108.1 million.
 61. See Mackintosh, "Visitor Fees in the National Park System," 25-85, for this philosophical transition during 1965-82, owed especially to Public Law 88-578, The Land and Water Conservation Fund Act of 1965.
 62. *Report of the Superintendent* 1997; GCNP, "Trip Planner," January 1999. GCNP has charged for campsites since the late 1960s; today the fee is \$10-15 per night and \$19 at the trailer village. The vehicle entrance fee went from \$10 to \$20, and individual entrance fee from \$4 to \$10, on 15 January 1997. Other recent charges include river permit application fees (\$100), launch fees (\$200), and backpacking fees (\$10 permit plus \$5 per night per person). Fee Demonstration revenues accrued to the park totaled \$5.9 million in 1997 and was expected to total \$40 million for the three-year period ending 1999. In 1974 entrance fees totaled \$612,000 and all went to the U.S. Treasury; in 1997, \$18.42 million, with 80 percent of the increase over the prior \$10 charge accruing to the park, about \$6 million. The Fee Demonstration program was amended for 1998 and future years whereby the park would receive 80 percent of *all* entrance fees.
 63. Marshall J. Vest, "Arizona's 1997/98 Economic Outlook," in *Arizona's Economy* (February 1997): 1-6; *Arizona's Economy* (February 1997), 7, 10, 13, 15; 1990 Census. Towns with significant tourist facilities and population within two-hundred miles of entrance stations in 1990 included: Flagstaff (45,857), Williams (2,532), Kingman (12,722), St. George (28,502), Cedar City (13,443), Kanab (3,289), Fredonia (1,207), Cameron (493). Facilities have also sprouted at roadside locations like Red Lake and Valle along the South Approach Road and at Jacob Lake, Cliff Dwellers, Vermilion Cliffs, and Marble Canyon along US 89A north of the canyon. Population of Coconino and Mohave Counties in 1990 was 96,591 and 93,497 respectively, and more workers were engaged in service-related industries than any other private sector occupation.
 64. Stephen G. Crabtree, memorandum concerning ramifications of new legislation, 16 December 1998, obtained from the office of Bill Johnston, AmFac, GCNP; Gunn interview; Bice and Keske interview. Concessions with less than \$500,000 gross receipts and certain others may still have renewal preference. The new law also creates an advisory board to help streamline the concession process and tasks the NPS to contract out parts of the program like strategic capital planning, health and safety inspections, and the comparable rates program. The other 20 percent of franchise fees will be expended by the NPS systemwide.
 65. Bice and Keske interview; Gunn interview; Branges interview. Branges relates that the Babbitt stores were recently sold to a concessioner named Delaware North; terms were not available. Keske reports that the Babbitt contract is for twenty years with a 2.5 percent capital account and no franchise fee; Gunn states that it has a fifteen-year term with a 1 percent capital account and a 3.5 percent franchise fee. The contract itself was not available for review. The current Babbitt store at Desert View replaced the earlier "temporary" store in 1983. Other minor concession contracts include the Grand Canyon Railway, Samaritan Health Services, and Grand Canyon Trail Rides at the North Rim.
 66. Bice and Keske interview; Gunn interview. Initial river permits were for five years. Each company has a "possessory interest" in the number of user-days it is allocated, which is the same percentage of the total pie that they were assigned in 1973. This is the real long-term value of each company since user-days go with a sale. Rafting companies have different rates because they offer variable add-on services such as shuttles, and the NPS controls rates only for "essential" services.
 67. Gunn interview; Bice and Keske interview.
 68. Johnston interview; Marshall & Stevens, Inc., "Grand Canyon National Park Reproduction Cost Building Summary," list of AmFac buildings with construction dates, [ca. 1998], author's possession.
 69. Johnston interview; Gunn interview; Bice and Keske interview. Johnston indicates that fees of various types raise AmFac's payments to 3.5 percent of gross, which appears a low estimate because it paid \$3.4 million in fees based on \$72 million in revenues in 1997. The South Rim transportation monopoly ended in the 1990s, allowing other companies—which make up the majority of incidental business permits—to bring tour buses into the park. AmFac is still the only transportation company based on the South Rim and enjoys other such preferences, but can no longer offer tours outside the park from its in-park base.
 70. Gunn interview.

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