

# End Notes

## Organizational Acronyms Used in Notes

<b>A&amp;P</b>	Atlantic & Pacific Railroad
<b>APS</b>	Arizona Public Service
<b>ASHPO</b>	Arizona State Historic Preservation Office
<b>ASU</b>	Arizona State University
<b>AT&amp;SF</b>	Atcheson Topeka and Santa Fe Railroad
<b>BLM</b>	Bureau of Land Management
<b>BOR</b>	Bureau of Reclamation
<b>BPR</b>	Bureau of Public Roads
<b>CAA</b>	Civil Aeronautics Administration
<b>CCC</b>	Civilian Conservation Corps
<b>CWA</b>	Civil Works Administration
<b>DSC</b>	Denver Service Center
<b>DSC-TIC</b>	Denver Service Center-Technical Information Center
<b>ECW</b>	Emergency Conservation Work
<b>FDR</b>	Franklin Delano Roosevelt
<b>FY</b>	Fiscal Year
<b>GCA</b>	Grand Canyon Association
<b>GCNHA</b>	Grand Canyon National History Association
<b>GCNM</b>	Grand Canyon National Monument
<b>GCNP</b>	Grand Canyon National Park
<b>GCNPRL</b>	Grand Canyon National Park Research Library
<b>GCNPMC</b>	Grand Canyon National Park Museum Collection
<b>GCRG</b>	Grand Canyon River Guides
<b>GLO</b>	General Land Office
<b>GMP</b>	General Management Plan
<b>GPO</b>	Government Printing Office
<b>GRCA</b>	Grand Canyon
<b>GTS</b>	Guide Training Seminar
<b>HAER</b>	Historic American Engineering Record
<b>LOC</b>	Library of Congress
<b>NAU</b>	Northern Arizona University
<b>NPS</b>	National Park Service
<b>NRA</b>	National Recreation Area
<b>PWA</b>	Public Works Administration
<b>RFP</b>	Request for Proposals
<b>TWA</b>	Trans World Airlines
<b>UASC</b>	University of Arizona Special Collections
<b>USDA</b>	United States Department of Agriculture
<b>USDI</b>	United States Department of the Interior
<b>USFS</b>	United States Forest Service
<b>WPA</b>	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*, 8, 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 *Ap4 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. Carrel, 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*, RSept 1927-38, 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 L; *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 L. 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 pasture 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 L.
  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 L. 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 L; 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, memoranda, 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

1. *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.
2. *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.
3. 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 Servicewide—Impacts of World War II*, GCNPRL, 1-4.
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.
5. *Report of the Director* 1940, 208; 1945, 207.
6. *Report of the Director* 1945, 207.
7. *Report of the Superintendent* 1944; Lemuel A. Garrison to the Regional Director, memorandum, 13 June 1947, "World War II file, silver boxes, vault," GCNPMC.
8. 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.
9. 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.
10. 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.
11. *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; Hermits 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1951*, 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 Contracts1955-1957*, 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 "wye" 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 Document*, 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 Consensus<sup>1976-1999</sup>

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*, 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 1999, 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.