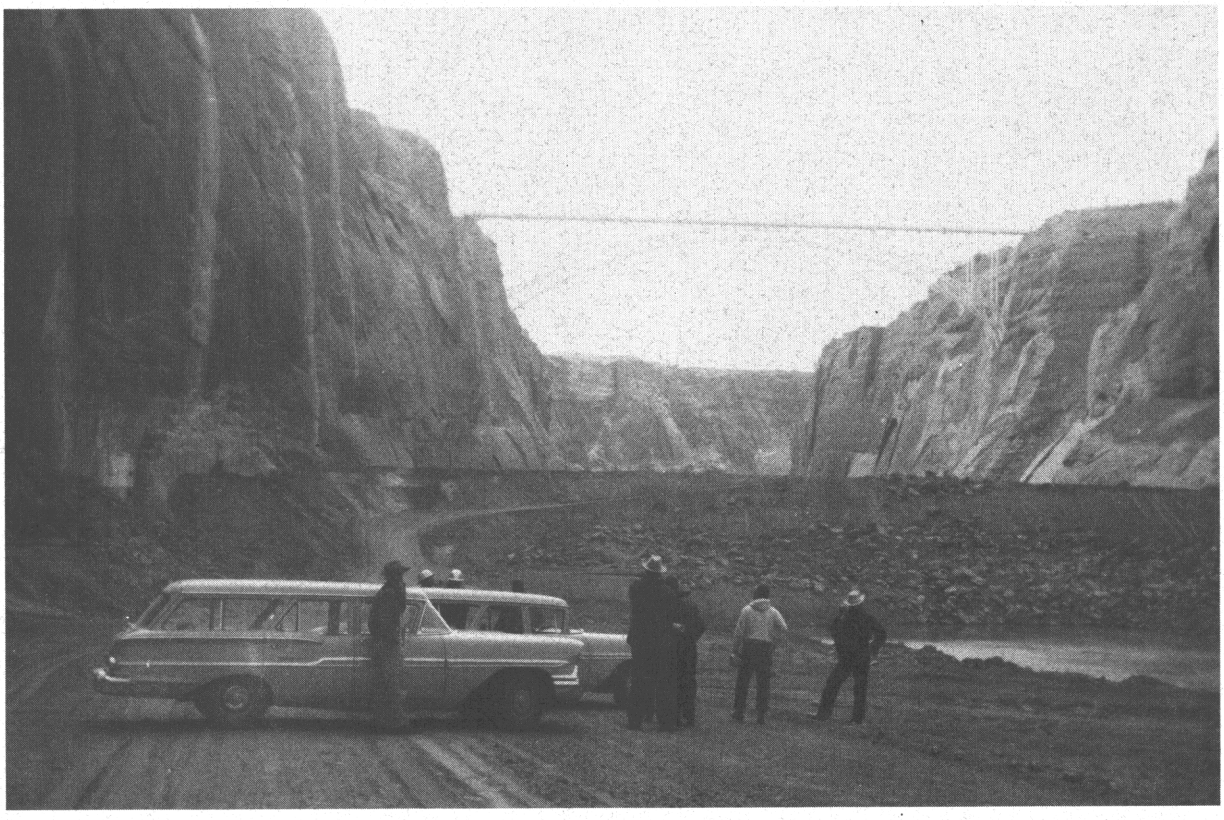
BITS'ÍÍS NINÉÉZI (THE RIVER OF NEVERENDING LIFE)

Navajo History and Cultural Resources of the Grand Canyon and the Colorado River



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BITS'ÍÍS NINÉÉZI (THE RIVER OF NEVERENDING LIFE)

Navajo History and Cultural Resources of the Grand Canyon and the Colorado River

by

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August 9, 1995

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ISBN 0-9639162-1-1

Library of Congress Cataloging in Publication Data pending.

Cover photo: Courtesy of Navajo Nation Museum. Concho archives, B-9. Branch of Land Operations–BIA negative no. 620-59-874.

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Acknowledgments

Many people contributed to the Glen Canyon Environmental Studies–Navajo Cultural Resources Project and to the completion of this report during the past three years. Foremost thanks go to the people who told the stories and taught us the history of the Grand Canyon, especially Mr. and Mrs. Arizona, Mr. Henry Lane, Mr. Sam Spencer, and Mr. Alfred Yazzie, all of whom conducted or assisted in conducting blessing ceremonies during the course of the project, and the officials of the Tuba City, Gap-Bodaway, and Cameron chapters, particularly Mr. James Peshlakai. This report is respectfully dedicated to the Navajo people who have always been and will always be part of the Grand Canyon.

The Navajo Nation Historic Preservation Department deserves equal thanks, especially its director, Alan S. Downer, who gave us the freedom to carry out this project to the best of our abilities, as well as June-el Piper, Katherine K. White, Lillie Lane, John Stein, Angeline Roan, and the entire administrative support staff. A special thanks goes to our environmental consultant, John R. Thomas, who became an integral part of this project and a good friend. Another consultant, David Brugge, contributed expertise to the project since its inception. Also under contract were Jerry Livingston, who produced the figures for this report, and Darryl White, who checked the Navajo spelling. We could not have successfully completed this work without the guidance and help of former Vice President Marshall Plummer, Byron Huskon, council representative Stanley Robbins, Stanley Pollack, Kathy Davidson, Violet Tsosie, Marie Morales and her staff at the Grey Hills Inn in Tuba City, and particularly Allan Yazzie and Darryl Begay, who assisted us in conducting fieldwork.

David Wegner, manager of the Glen Canyon Environmental Studies project of the U.S. Bureau of Reclamation, has been the major force behind this project from the beginning. We hope he is as happy with the results as we are. Also with the Bureau of Reclamation, Sherri Jacobs, Robin Hoggan, Kathleen O'Hare, Gordon Lind, Signa Larralde, Mary Voita, Wayne Prokopetz, and Tim Randel all deserve a word of thanks. Jan Balsom, National Park Service archeologist at the Grand Canyon, has been instrumental in the project, as has Pauline Wilson, tribal liaison with Glen Canyon National Recreation Area, in additional to National Park Service employees Alice Talatke, Helen Fairley, Christopher Coder, Nancy Andrews, and Lisa Leap.

Helping us find our way in the complex EIS process three years ago were Steve Carothers and Jean Ann Mercer, SWCA, Inc.; Leigh Jenkins, Kurt Dongoske, and Mike Yeatts with the Hopi Tribe; and Clay Bravo, Don Bay, and Loretta Jackson with the Hualupai Nation. Brad Dimock and Tom Moody of the Grand Canyon River Guides Association have been interested and supportive throughout the project, and the expertise of river guides Bob Grusy, Chris Geanous, Stuart Reeder, and Steve Bledsoe contributed to this report. Barbara Thurber with the Museum of Northern Arizona library assisted patiently with literature research. Finally, Dr. and Mrs. Irwin Roberts provided us a quiet place in Albuquerque to write.

We hope this report does justice to all the help we received, but any shortcomings are strictly our own.

Alexa Roberts

Chapter 1

INTRODUCTION

This report details the results of the Navajo Nation's Glen Canyon Environmental Studies Navajo Cultural Resources Project (GCES-NCRP). The project is funded by the Bureau of Reclamation through its Glen Canyon Environmental Studies program as part of the scientific research necessary to analyze the effects of Glen Canyon Dam operations on the human environment downstream from Glen Canyon Dam, Arizona. It is one of many background reports supporting analyses presented in the Glen Canyon Dam Environmental Impact Statement (EIS). As of this writing, the EIS is in preparation by the Bureau of Reclamation (U.S. Department of the Interior 1994). The background of the Glen Canyon Environmental Studies program and its relationship to the operation of Glen Canyon Dam are fully described in the EIS. This report is one of many components of the EIS and is intended to be read along with it. As a support document for the EIS, the report is part of the public record and will be filed with the National Technical Information Service.

The history of the Navajo Nation's involvement in the EIS is not very long, but it is somewhat complicated, and some background knowledge is essential to a full understanding of the Navajo Cultural Resources Project. That story is also interesting in its own right because of complex issues it has raised about tribal/federal co-management of resources important to the Navajo Nation both inside and outside the Navajo Reservation. This history is briefly summarized below, as an introduction to the findings of the Navajo Cultural Resources Project presented in the rest of the report.

A Brief History of the Navajo Nation's Role in the Glen Canyon Dam EIS

In 1989, the Secretary of the Interior directed the Bureau of Reclamation to prepare an EIS to evaluate alternative Glen Canyon Dam operating scenarios that may minimize the dam's impacts to natural and cultural resources and Native American interests along the Colorado River in Glen Canyon National Recreation Area and Grand Canyon National Park (see U.S. Department of the Interior 1994 for discussion). In August 1990, the National Park Service invited Navajo Nation representatives to go on a boat trip on the Colorado River through Grand Canyon National Park. The National Park Service was conducting an intensive archaeological inventory of the Colorado River corridor as part of the resources analyses for the EIS (see Fairley et al. 1991 for discussion) and wanted representatives of various tribes to say whether they had concerns about the effects of dam operations on sites their tribes consider important. Richard M. Begay, an anthropologist with the Historic Preservation Department, represented the Navajo Nation on the trip. He concluded that although none of the sites visited seemed to be of Navajo cultural affiliation, there was probably a great deal of unrecorded Navajo oral history about the Grand Canyon and that there may be places of significance to the Navajo Nation that the National Park Service archaeological inventory had not identified.

At the same time, the Bureau of Reclamation was responding to a 1978 jeopardy opinion issued by the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act on the effects of Glen Canyon Dam operations on the endangered humpback chub population in the Little Colorado River. In 1990, the bureau funded several "conservation measures" to help mitigate the effect described in the jeopardy opinion. As part of these conservation measures, the Navajo Nation Fish and Wildlife Department's Natural Heritage Program entered into a Cooperative Agreement with the Bureau of Reclamation to conduct a literature review and develop a computerized data base of resources in the Little Colorado

River corridor, most of which is under Navajo Nation jurisdiction. This research is funded through the Glen Canyon Environmental Studies program, although it is not specifically part of the background scientific research supporting the EIS.

Despite the fact that the Bureau of Reclamation notified the Navajo Nation about the EIS soon after receiving a directive from the Secretary of the Interior to prepare it, the Navajo Nation's full participation in the process got off to a rocky start. This slow start was due in part to poor communication, both inside and among agencies, and confusion over the roles of various agencies, all of which surfaced between February and March 1991.

The Navajo Nation seemed to assume that its role in the EIS process was being covered by the Natural Heritage Program's Cooperative Agreement with the Bureau of Reclamation for development of a resources data base on the Little Colorado River. As noted above, however, this agreement was part of the Bureau of Reclamation's conservation measures for the humpback chub resulting from the U.S. Fish and Wildlife Services' jeopardy opinion; it was not directly related to the EIS. The Phoenix Area Office did not notify the Navajo Nation until February 1991 that the Bureau of Indian Affairs had been representing the Navajo Nation as a Cooperating Agency in the development of the EIS. Bureau of Indian Affairs staff met with representatives of the Navajo Nation to ask how the Navajo Nation would like to be involved and represented in the EIS process.

At the same time, the Navajo Nation Historic Preservation Department received a copy of a letter from the Arizona State Historic Preservation Office to the National Park Service expressing concern that the Navajo Nation's potential cultural resources concerns were not being addressed in the EIS development and that the Navajo Nation needed more direct participation.

By the end of February 1991, the Navajo Nation notified the Bureau of Reclamation that it had serious cultural resources concerns in the Grand Canyon and wished to enter into a contract with the Bureau of Reclamation to conduct a cultural resources study.

Pursuant to the provisions of the regulations implementing the National Environmental Policy Act of 1969 (40 CFR 1501 § 6), the Bureau of Reclamation invited the Navajo Nation to participate as a Cooperating Agency in the development of the EIS. Although not formally signed until June 1993, a Memorandum of Understanding between the Bureau of Reclamation and the Navajo Nation was drafted in April 1991. The MOU recognizes that the Navajo Nation "has a major interest in the project because the Glen Canyon Dam operations currently and potentially impact areas in which the Navajo Nation has jurisdiction by law and expertise" (see Appendix A). At the time both the Bureau of Reclamation and the Navajo Nation perceived the Navajo Nation's primary area of expertise as the identification of potential effects of dam operations on cultural resources in the Grand Canyon. As discussed below, we quickly found out that the Navajo Nation had many concerns in addition to impacts to cultural resources.

The Historic Preservation Department submitted a proposal to the Bureau of Reclamation in April 1991 for a comprehensive cultural resources investigation project. The project was to last for two and a half years and include several elements: (1) identification of previously recorded Navajo archaeological sites and traditional cultural places in and adjacent to the area of direct effect, (2) identification of previously unrecorded Navajo archaeological sites and traditional cultural places in the area of direct effect, and (3) a current use study. The proposal underwent a lengthy review by the National Park Service, which had informally agreed with the Bureau of Reclamation to review GCES-funded cultural resources studies. Negotiation among the Navajo Nation, the National Park Service, and the Bureau of Reclamation over the content of the proposal continued until April 1992, a full year after the original proposal was submitted. The Bureau of Reclamation then finally agreed to add the Historic Preservation Department

to the existing Cooperative Agreement between the Bureau of Reclamation and the Navajo Nation Natural Heritage program. By that time, however, the Bureau of Reclamation had much less money than the Historic Preservation Department had requested for the current funding cycle. The bureau therefore asked the Historic Preservation Department to scale back its proposal.

The Historic Preservation Department's modified proposal covered three main tasks: (1) interviewing knowledgeable residents of the Navajo communities bordering the Grand Canyon, (2) reviewing literature on Navajo history and archaeology in the Grand Canyon, and (3) revisiting some of the archaeological sites previously recorded by the National Park Service in the Grand Canyon.

When it finally received funding, the Historic Preservation Department transferred two anthropologists (Roberts and Begay) from other positions and created the Glen Canyon Environmental Studies Navajo Cultural Resources Project. In May, 1992, the project established a field office in Tuba City, Arizona, as a base for interviewing in the surrounding communities. We needed to start fieldwork right away because the National Park Service had identified only six archaeological sites in the canyon as possibly Navajo (see Fairley et al. 1991), and the draft EIS was already being written. Working drafts of the EIS had already analyzed how various dam operating scenarios might affect the archaeological sites recorded by the National Park Service, but it completely ignored nonarchaeological places of cultural significance that might be affected by dam operations. When we started fieldwork, we saw ourselves as principal investigators in a cultural resources/ethnohistory study that the Bureau of Reclamation would use to support analyses documented in the EIS. We thought that our role in the EIS process would end when we finished our study.

Perhaps our perception of our role in the EIS stemmed from the Bureau of Reclamation's, National Park Service's, and our own implicit assumption that tribal governments were only interested in how Glen Canyon Dam operations might affect cultural resources. "Tribal issues" in the EIS seemed to be considered synonymous with "archaeological and cultural resources." But when we joined the EIS interdisciplinary writing team and had gone to a couple of meetings of the Cooperating Agencies, we quickly realized that many other issues being analyzed for the EIS were probably of direct interest to the Navajo Nation. For example, at the same time, the Navajo Tribal Utility Authority was running advertisements in the *Navajo Times* extolling the virtues of hydroelectric power because it is affordable. We saw then that we had to understand more clearly the Navajo Nation's multiple concerns, and their order of importance (including where our own work fit), so the Navajo Nation's concerns would be considered when the EIS decision-making process culminated in selection of a preferred alternative for dam operations. Was a dam operating alternative that might protect cultural resources more important to the Navajo Nation than dam operations that hold down the price of electricity? Would the Navajo Nation's ongoing interest in construction of Antelope Point Marina on Lake Powell be affected by dam operations? Would various flow releases through the dam or proposed flood protection measures affect the Navajo Nation's water allocations pursuant to the Colorado River Compact? Would protection of humpback chub in the Little Colorado River affect the Navajo Nation's future ability to develop its water resources? Did the involvement of the Bureau of Reclamation and the U.S. Fish and Wildlife Service in the Little Colorado River affect the Navajo Nation's sovereign powers to manage its own resources? Why did the Bureau of Reclamation's recreation economics analyses not include the river- and dam-related tourism on the Navajo Nation side of the river, which is important to the Navajo regional economy? And for that matter, where is the Navajo Reservation boundary line? Does the Navajo Nation actually own land within the affected environment?

These questions and others had to be addressed immediately if the EIS was to consider them. In May 1992, Navajo Nation Vice President Marshall Plummer told the Historic Preservation Department to evaluate the Navajo Nation's multiple concerns and coordinate all Navajo Nation activities related to the

EIS. The director of the Historic Preservation Department, Dr. Alan Downer, was designated as the Navajo Nation's official representative at meetings of the Cooperating Agencies. The Historic Preservation Department also hired an environmental consultant with expertise in NEPA procedures and Grand Canyon ecology to evaluate the Navajo Nation's multiple concerns about dam operations. The consultant, Mr. John Thomas, was to determine which operating scenario the Navajo Nation could endorse based on Navajo Nation priorities. After interviewing various Navajo Nation officials and department directors, Mr. Thomas found that the Navajo Nation has direct and unique interests in all the domains that Glen Canyon Dam operations might affect. These domains include cultural resources, water rights, the humpback chub, riparian and marsh habitat, the trout fishery, tourism, and energy (see Appendix B for full discussion). Furthermore, although the National Park Service and the Navajo Nation do not agree on the boundaries of Navajo Nation land jurisdiction within Glen and Grand Canyons, the Navajo Nation clearly has resources management responsibilities within the affected environment, and indisputably within the Little Colorado River corridor, including the critical spawning habitat for humpback chub. It is also clear that the Navajo Nation's interest in these issues would not come to an end with the Secretary of the Interior's decision on dam operations after the final EIS was submitted. To protect the Navajo Nation's interests, the Navajo Nation clearly must be a full partner in decision-making through the Record of Decision and beyond.

SUMMARY AND REPORT OUTLINE

In the two years since the Navajo Nation first officially became involved as a Cooperating Agency in developing the Glen Canyon Dam EIS, the Nation's role has changed dramatically. What began as an ethnographic interviewing project became the lead role in evaluating and coordinating all the Navajo Nation's multiple concerns, representing the Navajo Nation on the EIS writing team and as a Cooperating Agency, making decisions about dam operations on behalf of the Navajo Nation, overseeing subcontracts, and so forth, all with a staff of two Bureau of Reclamation–funded positions, a Bureau of Reclamation–funded consultant, and a Navajo Nation–funded Cooperating Agency representative.

The Navajo Nation's role in the EIS has evolved from what was originally perceived as an interest in a few archaeological sites in the Grand Canyon to a land-managing agency with direct interests in the economics of electrical power, controlling the waters and humpback chub habitat of the Little Colorado River, protecting water rights in the lower Colorado River and Little Colorado River basins, and generally being a full partner in the decision-making process of a federally controlled undertaking on Navajo and non-Navajo lands. The Navajo Nation's role in the Glen Canyon Dam EIS demonstrates that meaningful consultation between Indian tribes and federal agencies is not only a possibility but a reality (not to mention a necessity), and it sets a precedent for future "co-management" relationships between Indian tribes and the federal government.

Thus, the Navajo Cultural Resources Project has grown to encompass "cultural resources" in the broadest, most holistic sense of the term. The operation of Glen Canyon Dam involves resources that are intertwined with every facet of Navajo culture: from the sites that attest to early Navajo history, to the sacred significance of the rivers as living beings, to the electrical power that affords convenience to contemporary homes, to the tourism that lends to the Navajo Nation's economy, to the very core of the Navajo Nation's sovereign powers to make decisions in the best interests of its land and people. Nonetheless, documenting Navajo ethnohistory in the Grand Canyon and the places that go with it is the original purpose of our Cooperative Agreement with the Bureau of Reclamation, and it is the subject of the rest of this report.

Chapter 2 describes the purpose and methods of the Navajo Cultural Resources Project. [Note: Throughout this work we have tried to standardize the spelling of Navajo names following the orthography of Young and Morgan, except in direct quotes from previously published sources and when information provided by Navajo consultants seemed to indicate alternate spelling.] Chapter 3 outlines the Navajo history of the Grand Canyon region, including an assessment of archaeological evidence of Navajos in the Grand Canyon. Chapter 4 discusses Navajo cultural resources identified by this and other studies in greater detail, and Chapter 5 describes plant, animal, and mineral resources used by Navajos in the Grand Canyon region. Chapter 6 is devoted to the possible impact of Glen Canyon Dam on the cultural resources within the area of potential effect as well as management issues and specific recommendations for the future. Finally, Chapter 7 is an epilogue by Mr. Alfred Yazzie written after the most recent (August 1994) trip down the river.

Chapter 2

PURPOSE AND METHODS OF THE NAVAJO CULTURAL RESOURCES PROJECT

Under the National Historic Preservation Act of 1966 (as amended), the Bureau of Reclamation is responsible for considering how its actions, in this case the operation of Glen Canyon Dam, might affect "historic properties." Therefore, among its many topics, the EIS must analyze how different dam operating regimes might affect these historic properties.

Historic properties are places considered eligible for inclusion in the National Register of Historic Places (16 USC 470w[5]). They may be prehistoric or historical archaeological sites, historic buildings or sites of significant historic events, and "traditional cultural properties." *Traditional cultural properties* are places that may be eligible for inclusion in the National Register of Historic Places because they are associated with the beliefs or practices of a living community (Parker and King 1990). We prefer the term "places" rather than "properties" because the latter term implies ownership. Throughout this report, therefore, we use "traditional cultural places" instead of "traditional cultural properties." The National Park Service identified and evaluated effects of dam operations on archaeological sites by conducting a 100% archaeological survey of the "affected environment." But only living communities can identify and evaluate impacts on their own significant traditional cultural places. Therefore, the Bureau of Reclamation contracted with interested Indian governments to identify and evaluate various "historic properties" as each tribe considered appropriate. The Navajo Cultural Resources Project was conducted under one of these contracts (Appendix A).

The Navajo Cultural Resources Project interviewed knowledgeable Navajo residents of the communities bordering the Grand Canyon about Navajo history and the cultural significance of the Grand Canyon and documented the places that are the physical reminders of that oral history. The Navajo Nation could then make decisions about whether or not the proposed alternative dam operations will affect these places and, if so, how to avoid or minimize any harmful effects.

The interviews with knowledgeable Navajos are the foundation of this project. The Navajo history of the Grand Canyon is oral history. Although some of the stories and places we learned about are also referenced in various historical documents and general literature, many have never been documented. Because these interviews are the basis for the whole project, how they were conducted is described in detail. But first we discuss our background work in the literature, which we started before going into the field and continued throughout the project.

USE OF THE LITERATURE

The Historic Preservation Department began its literature review before drafting the original proposal for involvement in the Glen Canyon Environmental Studies submitted to the Bureau of Reclamation (Kelley and Downer 1991). Klara Kelley (1992) also reviewed background literature for the Navajo Nation's comments to the National Park Service on its draft archaeological survey report (Fairley et al. 1991). The primary literature source for the preparation of these documents was the supporting material for the Navajo Nation's land claim before the Indian Claims Commission in the 1950s and 1960s.

Authorized by the Indian Claims Commission Act of 1946 (60 Stat. 1049; 25 USC § 70 et seq.), Indian tribes could file claims against the United States government for monetary compensation for aboriginal

lands lost to the United States through the enactment of treaties or by other means. For example, in 1868, following the United States' conquest of the Navajo tribe, the federal government and representatives of the Navajo tribe signed a treaty that, among other provisions, established a small reservation for exclusive Navajo use in about the center of the tribe's area of aboriginal use. The reservation was a small fraction of the aboriginal territory, and Navajo aboriginal lands outside the reservation were lost to Navajos. Although additions to the original reservation were made over the years to meet the needs of the Navajo population, still the federal government usurped much of the original territory and was using it for other purposes or it had passed into state or private hands. The Navajo tribe filed a claim against the federal government for compensation of these lost lands.

Background research to determine the extent of aboriginal Navajo use and occupancy of these lands included documentation of both early Navajo archaeological sites and sacred places, collection of oral history from knowledgeable Navajo people, and so forth. In its defense, the United States government employed its own experts to counter the Navajo claim, collecting and submitting their own evidence. The complete set of documentation for the title portion of the claim is massive, including archaeological site reports and tree-ring data used to date the sites chronometrically; depositions from knowledgeable Navajos about history and extent of Navajoland use; Spanish, Mexican, and American explorers' and military campaign accounts and maps; and ethnographic reports. The evidence is summarized in numerous reports and testimony of expert witnesses who worked on behalf of the Navajo tribe. Some of the Navajo land claims data deals with lands bordering the Grand Canyon. HPD staff consulted these reports to prepare the Navajo Nation proposal to the Bureau of Reclamation and to review the National Park Service draft archaeological report. Also consulted were a study of Navajo sacred places in portions of the Navajo Reservation in Arizona for another land claim (Vannette 1988), this time filed by the Hopi Tribe against the Navajo Nation, and a study of Navajo sacred places conducted for the National Forest Service in the Coconino, Kaibab, and Apache-Sitgreaves National Forests (Vannette and Fearey 1981).

Another source of background information is previous research by Roberts in the Wupatki Basin, centered on the Little Colorado River between Cameron and Grand Falls. Roberts reviewed the literature and interviewed 27 people in the Cameron Chapter in 1984 and 1985 as part of an ethnohistorical study of Wupatki National Monument for the National Park Service (Roberts 1990). The current and former Navajo residents of Wupatki National Monument are the descendants of Peshlakai Etsidi, a well-known leader from the Cameron area who lived with his family in the Grand Canyon in the early 1860s (Brewer 1937; Johnston 1939; Navajo Tribe of Indians 1963; Van Valkenburgh 1941). Roberts's interviews and literature review, which included government documents from the National Park Service, the Bureau of Indian Affairs, and the Navajo Nation, revealed a great deal about Navajo history and land use in the Little Colorado River/Gray Mountain region. Her study also produced a genealogy of the families whose customary lands include those bordering parts of the Grand Canyon. Roberts expanded the study of historical and contemporary Navajo settlement in the area in her doctoral dissertation (Roberts 1992), and she also reviewed selected material gathered for the Navajo Nation's defense in a lawsuit filed by the Hopi Tribal government against the Navajo Nation over title to lands delineated by the 1934 Arizona Navajo Boundary Act. The expanded research resulted in documentation of evolving Navajo land use patterns in the Grand Canyon area from about the 1700s to the present (Roberts 1992).

All these sources together made up the Historic Preservation Department's starting knowledge of early Navajo history and traditional cultural places in the Grand Canyon region before the Navajo Cultural Resources Project began.

When we started fieldwork, we also looked for general references to Navajo history and the cultural significance of the Grand Canyon. We conducted a computer search of the collections at Northern Arizona University library, reviewed the collections at the Museum of Northern Arizona library, and

searched popular literature available to the public. We looked at river guidebooks, popular travel and "coffee table" books, books on the politics and history of Glen Canyon Dam and Lake Powell, books on the history of Lees Ferry and the Grand Canyon, place name references, and so forth. Scanning the literature as the general public might, we were surprised at the shallowness, or even lack, of Navajo history and use of the Grand Canyon according to popular interpretations. A general lack of Navajo presence in the Grand Canyon throughout history was certainly not the impression we had gained from previous research and our introductory consultations with knowledgeable Navajos. Some conjectures on why the published references to Navajo history in the Grand Canyon differ so greatly from ethnohistorical sources of information and archaeological evidence are presented later in this report.

A final body of literature referenced here is embodied in Klara Kelley's (1993) compilation of references to the Grand Canyon and surrounding regions from her personal research files, which systematically identify the places mentioned in almost all published versions of Navajo ceremonial stories and inventories of Navajo sacred places. Kelley's compilation from her research files was conducted for the Glen Canyon Environmental Studies-Navajo Cultural Resources Project pursuant to Personal Services Contract number C-40143 (after she left the Historic Preservation Department). The results of this compilation are incorporated in this report, along with the results of a larger-scale compilation for the Navajo-Hopi Land Commission (Kelley and Francis 1994), which assigns reference numbers to these places and updates the information on many places based on Kelley's ongoing personal research.

BACKGROUND TO THE ETHNOHISTORICAL FIELDWORK

In June 1991 we attended our first meeting about the Glen Canyon Environmental Studies cultural resources research after the National Park Service archaeological inventory in the Grand Canyon. The Bureau of Reclamation asked us if the Navajo Nation would identify traditional cultural places by setting up a committee or council of elders, as the Hopi Tribe had done, to identify sacred places in the Grand Canyon area. Because Navajo traditional land use is multifaceted and holistic, not merely esoteric, the methods for consulting Navajos about traditional cultural places are fundamentally different from a "representative committee" approach, and the Bureau of Reclamation's question is impossible to answer with a simple "no." Klara Kelley and Harris Francis explain at length that

> the land-based family is the anchor for the Navajo stories about the Navajo past. These stories cover each family's use of the land and the places that the family has used in getting its living. They also cover the origin of the universe and the world, Navajoland, the Navajo people, their clans, ceremonies, and other customs. The Navajo way of life involves all the family's activities at these places to sustain and reproduce itself. . . .
>
> These land-based activities involve the family sometimes by itself and sometimes as part of the larger local "community," or network of interrelated and intermarried extended families. . . .
>
> Daily life, land use, ceremonialism, and stories therefore form an integrated whole around the extended land-based family. . . .
>
> Directly or indirectly, the family is the main thing that perpetuates the Navajo way of life and stories. The older members of the family tell younger ones about the family's past. . . .

> Navajo beliefs also include a tremendous amount of esoteric knowledge that only certain medicine people know. Navajo medicine people learn their specialties by apprenticing themselves to particular older specialists. *There is no central authority, and until recently no organized groups of medicine people, no other hierarchy* beyond the temporary difference in status between the apprentice and the teacher, which disappears when the apprentice completes the training . . .(1992:1.8–1.11, emphasis added).

Consulting with knowledgeable Navajos about culturally significant places requires talking to individuals who have acquired knowledge through their families, and with individual knowledgeable *hataalii* ("singers," often mistranslated as "medicine men") and with other practitioners ("medicine people"), such as herbalists, diagnosticians, and so forth, whose specific expertise includes certain stories in which certain places are prominent. There is no "representative body" of knowledgeable individuals who speak for the Navajo people as a whole about tradition.

To find out who should be consulted about a particular area, one usually starts with the official representatives of the nearest Navajo communities. These communities, known as chapters, are the most local-level Navajo governing bodies. Chapters are administered by elected officials, including the chapter president, vice president, secretary, and grazing committee representative. The community services officer (formerly known as the chapter manager), also a chapter official, is a hired position. Each chapter is also represented by an elected delegate to the Navajo Nation Council. Chapter members meet at least once a month to discuss and decide various matters that affect the chapter, such as issuing homesite leases, authorizing community development projects, spending chapter money, and so forth. The chapter officers hold planning sessions before each general meeting to set the agenda for the meeting.

We started with three chapters bordering the Grand Canyon: Gap/Bodaway, Tuba City, and Cameron (Figure 1). We chose these chapters because (1) previous ethnohistorical research shows that descendants of early Navajo settlers in the Grand Canyon region live there (see Roberts 1990, 1992); (2) literature reviewed before we began our fieldwork documents sacred places and early Navajo archaeological sites associated with the Grand Canyon in these three chapters (Kelley and Downer 1991; Kelley 1992); and (3) the time and money available would not cover work in a larger area. We originally hoped to extend our project to the Leupp Chapter, but we quickly realized that to do so would detract from our work in the other three chapters.

The Gap/Bodaway, Tuba City, and Cameron chapters encompass 1,066,100 acres (1,666 square miles) (Navajo Nation 1993). Population density in the grazing district (Land Management District 3) in which these chapters are located averages less than four people per square mile (Navajo Nation 1988:9). Some families live in housing clusters in the rural towns of Cameron and Tuba City, but most live in homesites scattered across the countryside, accessible only by dirt roads. Almost no households have telephones, and the majority lack other utilities, such as electricity and plumbing. Travel to the area from the Historic Preservation Department main office in Window Rock, Arizona, takes about four hours, even before one starts driving among the scattered homesites for interviews.

Since commuting from Window Rock was not feasible, the project rented a small field office in Tuba City, more-or-less centrally located within the project area. The two project personnel (Roberts and Begay, hereafter referred to as "we") stayed in Tuba City from May 1 to September 30, 1992. We served as co-principal investigators and conducted the fieldwork. At various times Ms. Pauline Wilson, Tribal Liaison, Glen Canyon National Recreation Area; Mr. Alan Yazzie, Navajo Cultural Resources Project Volunteer; and Mr. Daryl Begay, Historic Preservation Department Summer Student Intern, provided invaluable assistance.

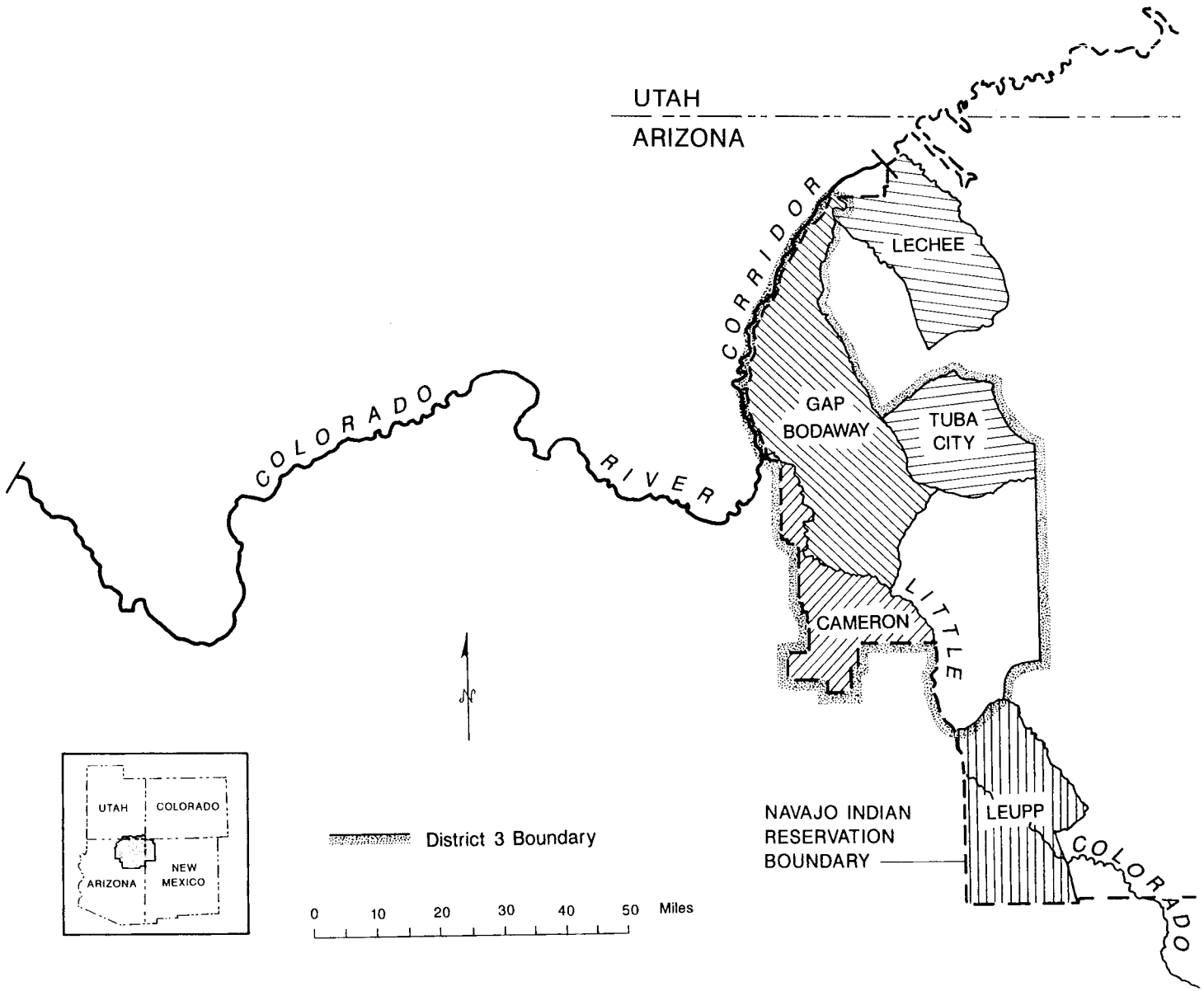

Figure 1. The GCES-NCRP study area

THE INTERVIEWING PROCESS

We started consultation by speaking about the project at general chapter meetings at the Cameron Chapter on February 23, 1992; at the Gap/Bodaway Chapter on December 28, 1991, and April 26 and May 30, 1992; and at Tuba City on May 18, 1992. We had not officially started the Navajo Cultural Resources Project before April 1992, but we attended the earlier chapter meetings in Cameron and Gap/Bodaway because the National Park Service was "scoping" there for Grand Canyon National Park's Ten Year General Management Plan. We were trying to get the Bureau of Reclamation to approve our project, and we wanted to hear the communities' general concerns about the Grand Canyon. We also wanted to introduce ourselves and meet people who know about the Grand Canyon. Later, after the Navajo Cultural Resources Project officially started, we went to additional meetings at the Cameron, Gap/Bodaway, and Tuba City chapters to introduce ourselves and the purpose of the project.

The chapter meetings helped us spread word about our project, but not to learn who we should interview. In Tuba City we learned of two people, at Gap/Bodaway, two people; and in Cameron, no one. Luckily, we had been introduced to Ms. Pauline Wilson, Tribal Liaison with Glen Canyon National Recreation Area, whose family's customary land borders the Grand Canyon in the Gap/Bodaway Chapter. Ms. Wilson arranged several meetings between us and various members of her extended family. We asked all interviewees to refer us to others, as they saw fit. Through the chapter referrals, Ms. Wilson and her family, and subsequent referrals from these people, we ended up interviewing 21 people altogether. These people represent many of the extended families who now use or have used the Grand Canyon and nearby lands for traditional purposes.

Most consultations involved three steps. When we found a recommended person at home, Richard Begay introduced us and the purpose of the project. (Conversations and interviews with all but one consultant were in Navajo.) After explaining the purpose of the project and our backgrounds, we asked each potential consultant if he or she would like to work with us. If they agreed, we arranged interviews at a later date.

We interviewed each consultant at home. Before beginning each interview we asked each consultant if (audio) tape recording or note-taking was acceptable. We also had available 1:100,000-scale USGS topographic maps for reference. We were able to plot some places on the maps as people spoke. All interviews were conversational and open-ended. We used a checklist of questions as a reminder of topics to cover, but we avoided rigid questionnaire protocols. Each person could speak in his or her own way about the things that seemed important to him or her. The interviews were intended to invite the telling of stories and other information that are the contexts for the significance of the places, rather than to predetermine those contexts with a rigid set of questions eliciting bits of information most easy to plot and tabulate. When the interviewee rather than the interviewer guides the conversation, the interviewee is not pressured to speak beyond the extent of his or her own knowledge or ethics about what one should tell outsiders. Some people know about historical events and places in and around the Grand Canyon, some have highly specialized esoteric knowledge about the sacred nature of the Grand Canyon, and others know about use of specific plants and other resources. Asking each person the same set of questions would have wasted everyone's time and patience while leaving out much of what each person uniquely knows. We asked people who told us about specific places if they would like to visit those places later with us. Of the 21 people interviewed, 11 went on field trips.

Field trips constituted the third phase of each consultation. When a consultant agreed to a field trip, we picked them up at their home early in the morning and they set the day's agenda. Some people wanted other family members to go on the trips. The project provided lunch for everyone. Generally, Roberts drove while Begay kept notes of conversations and plotted the places pointed out on USGS 1:100,000 or

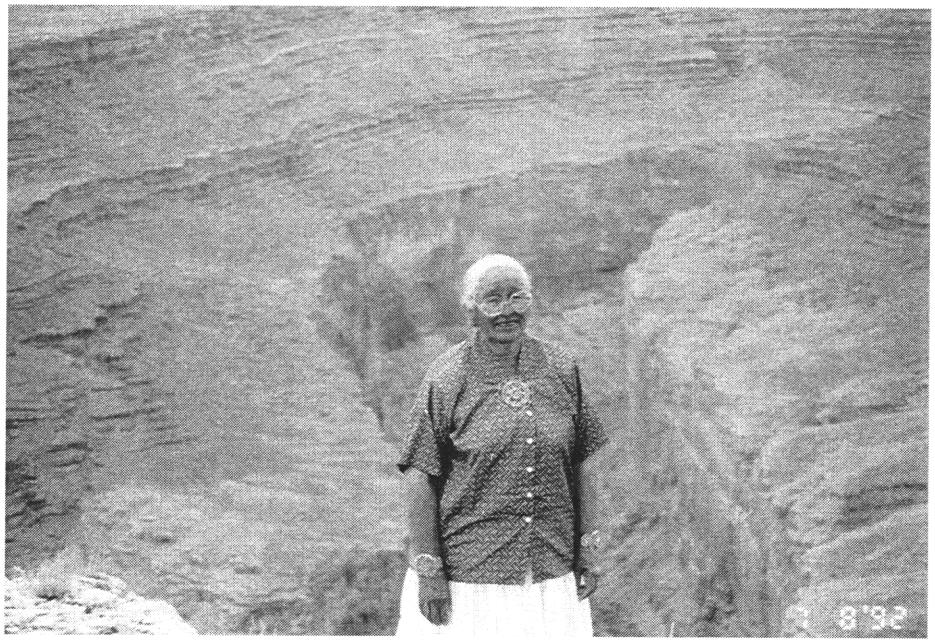

Figure 2. GCES consultant Betty Huskon standing on the rim of the Grand Canyon, where she grew up.

1:24,000-scale maps. (The maps reproduced here are generalized versions of our original field maps and were drawn specifically for public dissemination.) We photographed each location but did not complete site forms or designate precise site boundaries, nor did we make recommendations of register eligibility. Consultants pointed out most places from the rims along the east side of the canyon between Lees Ferry and Desert View (Figure 2). Because travel within the area is difficult, several people went on more than one trip to visit all the places they wanted to see.

From initial introduction to completion of field trips, some consultations took the entire five months to complete. Because of the lack of telephones and the great distances between homesites, and because people are busy in summer with branding and counting livestock, we had to make repeated visits before we found interviewees at home with time to spare. All interviewees received $15.00 for each hour spent in interviewing and field visits.

Each interviewee signed a consent form specifying how the information he or she provided can and cannot be used, and whether or not their names can be used with the information they provided. Any information they specified as confidential is neither in this report nor included in any other way in submissions to the Bureau of Reclamation or the National Park Service. It is interesting to note that, while many people specifically refused audio tape recording, they did not restrict the use of the information they provided. Many people imposed no confidentiality restrictions at all, stating that it is important for the stories to be told and documented. However, one interviewee did forbid both tape recording and all other forms of documentation and required the information provided to remain strictly confidential. When we finished fieldwork, documentation of each interview (except when forbidden) included notes, (audio) tapes, map locations of places discussed or pointed out, and slides or prints of each place visited. These records are in confidential files at the Historic Preservation Department office in Window Rock.

As mentioned above, each interviewee was asked to recommend other people for us to consult. By August, our fourth month of fieldwork, referrals were redundant, and we think that we contacted all the people who were recommended to us. But we emphasize that not all these contacts resulted in interviews. A few problems that prevented some interviews are worth mentioning.

PROBLEMS ENCOUNTERED

We did our fieldwork in the summer, but Navajos are only supposed to tell most ceremonial stories in winter, when the snakes, spiders, and insects are asleep. This is one reason that people did not give us esoteric information about many of the places that we identified. Ideally, we would have extended our fieldwork into the winter, but time and money did not allow it.

Of the 21 people we interviewed, two dropped out after the first meeting. In both cases the children or grandchildren of the interviewees requested, perhaps demanded, that they not work with us. Many families have proprietary feelings about the traditional knowledge of their elders, who normally would pass it down to younger generations within the family while restricting it to outsiders. Telling the information to us for public dispersal contradicts this ethic. Another reason is based on the belief that stories are part of a person, or make up a person. To tell stories, especially those of special significance, is to give a part of yourself to others; telling stories to strangers like us is giving a part of oneself to a stranger. Both men who dropped out were elderly and were bothered by various ailments, and their families were probably protecting them.

As discussed above, Historic Preservation Department representatives attended meetings at the Gap/Bodaway and Cameron chapters in December, 1991, and February, 1992, respectively, when the National Park Service was making presentations about the Ten Year General Management Plan for Grand Canyon National Park. Some unexpected confusion resulted from these meetings and minimized our ability to interview in the Cameron Chapter.

Just when the National Park Service was consulting chapters about the general management of Grand Canyon National Park, we were telling the communities that as soon as we received funding we would be coming back to talk to people about the Navajo history of the Grand Canyon and places that might be affected by the flows through Glen Canyon Dam. The chapter residents and officials did not perceive the Ten Year General Management Plan and the Glen Canyon Environmental Studies Project as separate projects. They saw the two projects as the National Park Service's need for information on Navajo concerns about the Grand Canyon.

The Cameron Chapter residents decided to conduct their own ethnohistory project to record the oral history of their own community and make recommendations to the National Park Service. The chapter sought and received funding from the Navajo Nation, hired a temporary staff of chapter residents, and established a Historic Preservation Office at the chapter house. The Cameron Historic Preservation Office initiated an ethnohistorical interviewing project that coincided almost exactly with the Navajo Cultural Resources Project. We met with the Cameron Historic Preservation Office staff four times between April and June to discuss how we might combine our efforts in the Cameron Chapter—how we might conduct interviews together and share maps, vehicles and so forth. While not explicitly stated, it was clear to us that the Cameron Historic Preservation Office wished to handle their project completely internally, without interference from "Window Rock." A report on the results of their project has been submitted independently to the National Park Service (Cameron Chapter 1993).

Community control of oral history projects conducted by and for the community is a direction that we, as members of the Navajo Nation Historic Preservation Department, wholeheartedly endorse. In this case, however, the purposes of the two simultaneous efforts were not clearly defined or articulated. Chapter residents therefore thought that the two projects were one. Thus, often when we contacted Cameron residents suggested by people from Gap/Bodaway or Tuba City, the Cameron residents told us that they had already been interviewed and had told their stories to someone else. The consultations that we did have with Cameron residents were extremely successful, but most of our interviews were with Gap/Bodaway residents. Suggestions for avoiding similar situations in the future are provided in the last chapter of this report.

Summary of Ethnohistorical Interviewing

Kelley and Francis (1992:4.12–4.18) summarize the previous studies whose main purpose was to identify places of significance to Navajos. These studies exhibit two main methods for defining the type of people to be consulted. One method defines representatives of all the families living in or near the area of interest as potential consultants. The other begins with a list of knowledgeable people, who make referrals to more people, and so forth, until the referrals become redundant. The second method is what Wood and Vanette (1979:5 cited in Kelley and Francis 1992:4.12) refer to as the "snowballing, non-random technique" and is the one we used, although in the case of the Colorado River study, we would probably refer to it as the "go with the flow technique."

Kelley and Francis note that the first method, attempting to seek out representatives of all the families living in or near a given project area, is generally possible in a small project area, but that this method risks missing religious practitioners who may live elsewhere but who have specialized esoteric knowledge about specific places. In cases where the project area is very large (and, it is hoped, in which the researchers have a considerable amount of time) most studies have used the second method, although Kelley and Francis note that "few probably reached the point where most referrals were to people already known" (1992:4.14). Regardless of which method is used, however, Kelley and Francis point out that all previous studies were "open-ended" and did not use questionnaires to structure the interviews.

> To use questionnaires gives the interviewer the superior, controlling role in the discourse and is therefore disrespectful of the elders and medicine people, as well as inconsistent with the way requesting the gift of valuable knowledge subordinates the interviewer (Kelley and Francis 1992:4.18).

While we have undoubtedly overlooked some people who should have been interviewed for the Navajo Cultural Resources Project, we believe that our methods are consistent with similar studies elsewhere in Navajoland. We are confident that our results are a reliable representation of Navajo ethnohistory and cultural resources protection concerns in the Grand Canyon.

Identification of Navajo Archaeological Sites and Traditional Cultural Places in the Grand Canyon

The National Park Service identified 475 archaeological sites in the Colorado River corridor between Glen Canyon Dam and Separation Canyon, a distance of 255 miles. The survey covered the canyon from the river bank to the point where the river has historically reached a flow of 300,000 cubic feet per second (cfs), a total of 10,506 acres. Of the 475 sites, only six were considered to exhibit evidence of

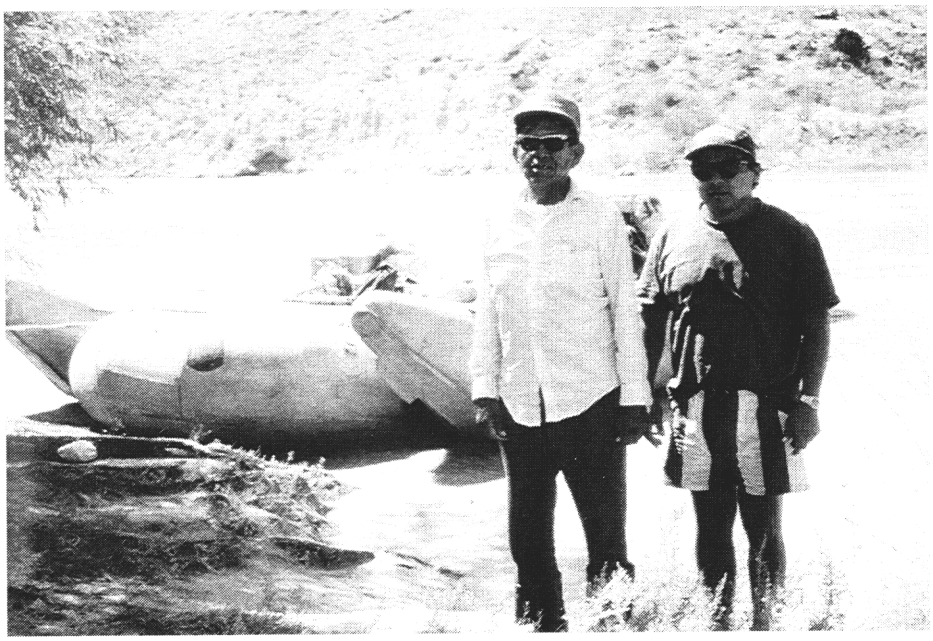

Figure 3. Richard M. Begay, GCES-NCRP, and Henry Lane, GCES consultant, on river.

Navajo use or cultural affiliation. These six sites are clustered in the Lees Ferry area, and most seem to date to the twentieth century (Figure 3).

Sites AZ:C:2:11, AZ:C:2:57, AZ:C:2:58, and AZ:C:2:60 are all twentieth-century sites, mostly with documented histories of Anglo use or occupation, but also with evidence of Navajo use or occupation in the form of dry-laid masonry structures or features (Fairley et al. 1991:331–335). The other two sites recorded as possibly Navajo by the National Park Service are AZ:C:2:56, an undated petroglyph that the archaeologists thought resembled Navajo ceremonial masks, and AZ:C:2:106, an undated roasting feature containing two brownware sherds reportedly either Navajo or Southern Paiute in origin (Fairley et al. 1991:342).

Although the survey concentrated on the river corridor and not the upper terraces of the canyon, the scarcity of Navajo sites was surprising given the intensity of historical Navajo occupation in and around the canyon indicated by previous ethnohistorical and other studies discussed above. Furthermore, based on various brown and gray wares identified during the NPS archaeological survey, 110 sites with late pre-/proto-/historical Pai, Southern Paiute, Pai/Paiute, and Hopi, historical, or ceramic unknown occupations were identified (Fairley et al. 1991:55, also Tables 5 and 10). However, the authors of the NPS report also note that

> The perishable nature of most late prehistoric-protohistoric artifacts, the lack of stylistic development in nonportable goods, the opportunistic use of raw materials ad Anasazi artifacts, and the transiency of most site occupations make the identification of temporal subdivisions of Pai and Paiute occupations in the Grand Canyon difficult. Because of the general lack of temporally sensitive artifacts, the dating of Pai and Paiute sites largely depends on the presence of aboriginal and Euro-American trade items. The primary diagnostic artifacts for the late prehistoric period are Hopi ceramic types, Awatovi Black-on-yellow, Jeddito Black-on-yellow, and Jeddito utility wares. Hopi tradewares such as

> Sitkyatki Polychrome, European trade beads, and various other historic artifacts are indicative of the protohistoric and early historic period. Hopi ceramics are by far the most common temporally diagnostic artifacts recovered from Pai and Paiute sites. In the western canyon, the presence of these widely traded ceramic types can not be taken as evidence of a past Hopi occupation per se . . . (Fairley et al. 1991:198).

It is interesting that these same criteria did not seem to apply to identification of sites with possible Navajo cultural affiliation. As noted by Kelley (1992:7), late eighteenth- to early nineteenth-century Navajo sites on the canyon rim recorded by archaeologists for the Navajo Land Claim contain mixed ceramic assemblages including few Navajo sherds. For example, W-LLC-C-CC, a site in the Gray Mountain vicinity containing a Navajo hogan, had a ceramic assemblage of "six Walapai, three Anasazi, three unidentified and one Pinon grey (Navajo) sherds" (Navajo Nation n.d.). Similarly, site W-LLC-C-A, a site four miles south of Desert View containing six hogans, had a ceramic assemblage of only Hopi and Anasazi sherds. W-LLC-C-D and W-LLC-C-G, late eighteenth-century Navajo sites in the same vicinity as W-LLC-C-A, contain similar mixed ceramic assemblages (Navajo Nation n.d.).

Kelley also questions the extent to which Jeddito yellow wares indicate strictly a "Hopi presence," since Hopi refugees from Awatobi, a center of production of Jeddito yellow ware, sought refuge among Navajo groups and eventually became Navajos after an attack on Awatobi by other Hopis in 1700. These Hopi Tobacco clan refugees intermarried with Navajos and became the contemporary Navajo Tobacco Tachii'nii clan (see Kelley, Scott, and Francis 1991 for discussion). According to Kelley, "Indeed, forebears of a Navajo man who described his childhood memories around 1860 living in the Grand Canyon and south rim . . . are linked by other sources . . . to a possible descendent of the Awatobi refugees (Big Backbone) or a locality associated with the refugees (Tachee)" (Kelley 1992:6–7).

Thus, the same criteria used to identify the 90 late pre-/proto-/historical Pai, Southern Paiute, and Pai/Paiute sites or the eight late pre-/proto-/historical Hopi sites, or even the seven "historical unknown" sites, may also indicate that these sites are Navajo. (The remaining five sites were identified as "ceramic unknown," presumably including the possibility of Navajo affiliation.) Nonetheless, implicit in the descriptions of the four sites containing Navajo components (AZ:C:2:11, 57, 58, and 60), is a more limited set of identification criteria: (1) they border the contemporary Navajo Indian Reservation on the left bank of the river, (2) they date to the twentieth century, and (3) they contain dry-laid sandstone masonry architecture. We believe that anthropological and historical conventions in the literature have misled the NPS archaeologists (and others) into assuming that (1) Navajos entered the Grand Canyon region in the late nineteenth century and (2) their presence was limited to the south side of the eastern canyon. These unwarranted assumptions influence the criteria used to identify Navajo archaeological remains, the misinterpretation of which then (circularly) reinforces the assumptions on which the misinterpretation is based and related stereotypes created by the scholarly and popular literature.

In her review of the draft archaeological survey report, Klara Kelley (1992) identified 62 sites in the eastern part of the canyon bordering the Navajo Nation that the National Park Service described as (1) Euro-American or historical Pai/Paiute on the basis of historical artifacts, (2) Hopi on the basis of Jeddito yellow wares, (3) "cultural affiliation unknown" on the basis of lack of diagnostic artifacts, and (4) late prehistoric or early historical Paiute on the basis of plain gray or brown wares (Table 1). Based on the extremely problematic ethnic affiliations suggested by the artifact/structural assemblages on these 62 sites, and particularly given their locations with respect to historical and contemporary Navajo use of the Grand Canyon, the Navajo Nation has suggested that these sites could represent early Navajo occupation as easily as "unknown," "proto or historic Pai/Paiute," "Hopi," or "Euro-American" affiliation.

Table 1. Sites identified as possibly of Navajo affiliation

AZ:C:2:40	AZ:C:5:1	AZ:C:9:1	AZ:C:13:3	AZ:C:13:344
AZ:C:2:41	AZ:C:5:2	AZ:C:9:5	AZ:C:13:5	AZ:C:13:345
AZ:C:2:50	AZ:C:5:5	AZ:C:9:33	AZ:C:13:10	AZ:C:13:347
AZ:C:2:72	AZ:C:5:6	AZ:C:9:57	AZ:C:13:71	AZ:C:13:349
AZ:C:2:75	AZ:C:5:8	AZ:C:9:64	AZ:C:13:132	AZ:C:13:350
AZ:C:2:76	AZ:C:5:33	AZ:C:9:69	AZ:C:13:274	AZ:C:13:353
AZ:C:2:77	AZ:C:5:37	AZ:C:9:74	AZ:C:13:321	AZ:C:13:355
AZ:C:2:78		AZ:C:9:75	AZ:C:13:325	AZ:C:13:356
AZ:C:2:89	AZ:C:6:5	AZ:C:9:76	AZ:C:13:328	AZ:C:13:361
AZ:C:2:92	AZ:C:6:8		AZ:C:13:331	AZ:C:13:367
AZ:C:2:96	AZ:C:6:10		AZ:C:13:332	AZ:C:13:372
AZ:C:2:101			AZ:C:13:335	AZ:C:13:373
			AZ:C:13:337	AZ:C:13:376
AZ:C:3:10			AZ:C:13:338	AZ:C:13:389
			AZ:C:13:342	AZ:C:13:390

Source: Kelley 1992

Using Kelley's list, we reviewed the National Park Service archaeological site forms housed at Northern Arizona University for all 62 sites. On the basis of our review and conversations with National Park Service archaeologists, we selected 33 sites to visit: 19 of the 62 from Kelley's list, the six recorded as Navajo by the National Park Service, and eight others pointed out by National Park Service archaeologists (Table 2). Visits to most of the sites were accomplished on three separate river trips (Figure 4).

The six sites recorded as Navajo were visited on two upriver trips between Lees Ferry and Glen Canyon Dam provided by Glen Canyon National Recreation Area on July 10 and August 21, 1992. Navajo Cultural Resources Project members were accompanied by Ms. Pauline Wilson, Glen Canyon National

Table 2. Archaeological sites we selected to visit during river trips on the Colorado

AZ:C:2:11	AZ:C:5:1	AZ:C:13:325	AZ:B:15:126
AZ:C:2:41	AZ:C:5:2*	AZ:C:13:328	AZ:B:15:132
AZ:C:2:56	AZ:C:5:6	AZ:C:13:342	AZ:B:15:135*
AZ:C:2:57	AZ:C:5:37	AZ:C:13:344	
AZ:C:2:58		AZ:C:13:349	AZ:B:13:139
AZ:C:2:60*	AZ:C:6:5	AZ:C:13:353	
AZ:C:2:70		AZ:C:13:355*	AZ:B:16:3*
AZ:C:2:89	AZ:C:9:1	AZ:C:13:367	
AZ:C:2:106	AZ:C:9:69	AZ:C:13:373	
	AZ:C:9:76	AZ:C:13:384	
	AZ:C:9:82*		

* Sites from which sherd "nips" were taken for ceramic analysis; see Chapter 3

Figure 4. Chris Coder, National Park Service archaeologist, showing an archaeological site to GCES consultants Stanley Robbins, Henry Lane, and John Thomas.

Recreation Area; Mr. Tom Workman, Grand Canyon National Park; and Mr. John Sloan, one of the project consultants from the Tuba City chapter. In addition to visiting the sites described as Navajo by the National Park Service, Mr. Sloan identified several other places outside the river corridor associated with Navajo history and use of the Lees Ferry area.

We visited the remaining sites downriver from Lees Ferry during an eight-day research trip provided by the Bureau of Reclamation to the Navajo Nation from September 15 to September 23, 1992. In addition to visiting previously recorded archaeological sites, the trip served two additional purposes: identifying Navajo traditional cultural places and familiarizing Navajo Nation officials involved in the EIS decision-making process with the affected environment and the issues that needed to be addressed. To accomplish these purposes, seven Navajo Nation representatives accompanied us on the trip: Dr. Alan Downer, the Navajo Nation's representative to the EIS Cooperating Agencies; Dr. Klara Kelley, Historic Preservation Department anthropologist; Mr. Stanley Robbins, Cameron and Gap/Bodaway delegate to the Navajo Nation Council; Mr. Stanley Pollack, Navajo Nation assistant attorney general specializing in Navajo water rights and land jurisdiction; Mr. Adrian Hansen, Navajo Nation geologist; Mr. John Thomas, Navajo Nation environmental consultant for the EIS; and Mr. Henry Lane, Navajo Cultural Resources Project consultant from the Gap/Bodaway chapter. Also present between Lees Ferry and Phantom Ranch was Mr. Chris Coder, National Park Service archaeologist, who guided us to some of the sites we wanted to see in addition to several others that we had not previously identified. Mr. Coder also relocated some of the ceramics discussed in the draft archaeological survey report (Figure 5), from which we removed small "nips" for further analysis by a specialist of the Navajo Nation's selection. Mr. David M. Brugge, an anthropologist retired from employment with the Navajo Nation and National Park Service who has specific expertise in Navajo history and archaeology, analyzed our small collection of 11 sherd "nips" from six sites (marked with asterisks in Table 2). The results of his analysis are discussed in Chapter 3.

Figure 5. Nineteenth-century Navajo pot sherd at site.

In sum, the GCES-NCRP used interviews with knowledgeable Navajos, a review of popular and scholarly literature, and visits to archaeological sites and other significant places inside and outside the Colorado River corridor to document the Navajo history of the Grand Canyon and to determine if Navajo cultural resources will be impacted by the operation of Glen Canyon Dam. The results of the study are reported in the following chapters.

Chapter 3

NAVAJO HISTORY IN THE GRAND CANYON

NAVAJO ACCOUNTS OF NAVAJOS AND THE GRAND CANYON

The present Navajo world begins at *Hajíínáí,* the Place of Emergence. The people began their journey through several underworlds until they finally emerged into this world. A Navajo elder tells us why the people had to leave the world below:

> Coyote stole Water Monster's baby and because of that water started to rise up, rising up like the clouds. The people wanted to use rock to get out of the world, it was too short, then they tried wood, but it didn't go far enough; they tried Spruce, Pine, they were too short. Then they tried a long skinny reed, it was too short, then they tried the Strong Reed, finally it reached into the sky. The people climbed inside the reed with the turkey last. Because the turkey was last, the water kept lapping at his tail feathers, so that is why the ends of his tail feathers are white to this day. This is what they tell.
>
> From the place where the people moved out from, a creature known as *Chíłshta dilhił* was seen living to the east, *Chíłshta dootł'izh* to the south, *Chíłshta łitso* to the west, and *Chíłshta łigaii* to the north. They said, "Earth Surface people do not belong here, move back down." The people gathered and discussed this, much like meetings today. At that point, *Chíłshta dilhił* put long sharp objects into his mouth and took them out from his anus, and said "Do this first and then it (the land) will be yours." This angered Locust, who said "Why (put in and) take out things from already existing holes," he then proceeded to pass the sharp objects through his heart, and said "You do this and then we will move back." He said no, and then the land was won, it was Locust who did it (SS in Begay and Roberts, field notes, 1992).

In this world, water was everywhere, and it was named *Ni' Hodisǫs,* the Glittering World. After a series of trials with the native inhabitants of this world, the people were given this world to live in.

The people discussed ways to make the world habitable. After much talk, they decided that rivers, creeks, and streams would be created to drain the world, which in turn would become the "veins" of the earth. The Colorado River is one of those drainages. *Haashch'ééh yáłt'i'í,* the Talking God, and *Haasch'ééh oghaan,* the Evening God, became the advisors to the people and under their direction, the world was created as it is today. Some say *Ghąą'ask'idii,* the Humpback God, created the Grand Canyon.

> After this world was given to us by the Holy People, they cleared the water away. The Humpback God stood in the center of the world and dragged his cane from east to west and created the canyon. The water drained and created rivers and creeks which then became the veins of the earth (BW in Begay and Roberts, field notes, 1992).

Others say he used his horns: "The old men used to say that a ram used his horns to plow the earth to create this canyon" (BH in Begay and Roberts, field notes, 1992). (The Humpback God is manifested by bighorn sheep and mountain goats.) Regardless of how the canyon was created, the Navajo people were here during the creation of this world as it is today and thus they still have the stories and remember the creation.

> All these stories are a continuation of the stories that began at *Hajíínáí.* One always mentions the origin story. In *Hózhǫǫjí* [Blessingway], once the people came into this world, a House of Planning, *Nahat'á hooghan,* was built. Stories are connected to that event. From there the House Songs were created. Our songs and the stories begin from there and we still have them today (NJ in Begay and Roberts, field notes, 1992).

The Colorado River is of divine creation and it itself is alive. The interconnectedness with other rivers, such as the San Juan, the Green River, and the Little Colorado, are all part of this creation. They keep the people and earth alive and are a part of the larger landscape we call Navajoland (Figure 6).

The Colorado River is comparable to the sacred mountains that define Navajoland: *Sisnaajinii,* Sierra Blanca or Blanca Peak, in south-central Colorado, the east mountain; *Tsoodził,* Mount Taylor, near Grants, New Mexico, the south mountain; *Dook'o'óóshííd,* San Francisco Peaks, near Flagstaff, Arizona, the west mountain; *Dibé Ntsaa,* La Plata Mountains, near Durango, Colorado, the north mountain; *Dził Ná'oodiłii,* Huerfano Mountain, New Mexico, the center mountain; and finally *Ch'óol'ʼí,* Gobernador Knob, New Mexico, the "smokehole" of Navajoland (Map 1).

The rivers have a gender identity. Generally the Colorado River is male because of its force, whereas the Little Colorado is identified as female because of its gentle blue color and smooth flow (at least for a good part of the year). However, there is disagreement about these gender identities.

> Many people say the Colorado is a male river, and the Little Colorado River is a female river, so then, why does the Little Colorado only flow intermittently [above Blue Springs]? The Colorado flows year round. A woman never runs out of things, she can be very resourceful. Men are always running out of things, and they depend on women. In addition the Little Colorado flows *into* the Colorado, so the Colorado River is a female river (SS in Begay and Roberts, field notes, 1992).

> The Colorado River and the Little Colorado River are both holy rivers. There seems to be some confusion as to which is male and female, but it really doesn't matter. The medicine men know the stories to the river and they know the sex of the rivers. The rivers offer us protection. We pray to them and make offerings so that we may live a long and beautiful life (BBH in Begay and Roberts, field notes, 1992).

The Colorado River and the Little Colorado River have specific functions in the ceremonial sphere of the Navajo people. Many of the people interviewed explained the different meanings of the river in their lives as well as that of the community they are part of, and the entire Navajo Nation.

> The river is a protector of our people. The river forms a natural boundary that protects us and helps to define the extent of Navajoland; it protects us and provides many things to our people (MM in Begay and Roberts, field notes, 1992).

> Offerings are made to the river for protection. During World War I and II, the Korean Conflict, and the Vietnam War offerings were made to the river for protection of our soldiers. Even now with Desert Storm, we have made those offerings (CEK in Begay and Roberts, field notes, 1992).

> People used to gather and decide to do a prayer offering. Sometimes, two or three households would get together to do this. The water is used in a lot of ways, and can lead to a good way of life for all people, and that is why people make offerings to the

Figure 6. Tooh Ahidiilíní, the confluence of the Colorado and Little Colorado rivers [GCES-33]. A very sacred place.

> river. If this is not done, then the people will scatter. The offerings are much like the ones offered to the sacred mountains (NJ in Begay and Roberts, field notes, 1992).
>
> During the John Collier Era (the federal livestock reduction program), many people, including a man by the name of *Ółta'í Néez,* herded their sheep, goats and horses into the canyon, to protect and hide them (MM in Begay and Roberts, field notes, 1992).

Aside from being the home of the Colorado and Little Colorado rivers, the Grand and the Little Colorado canyons are the homes of many Navajo deities, or *Diyin dine'é* or *Haasch'ééh,* gods, including *Haashch'ééh zhiní* (Black God), *Zaha'doolzhaaí* (Fringe Mouth God), *Tééhoołtsódii* (Water Monster), *Tééh líí* (Water Horses), *Ghąą' ask'idii* (Humpback God), and *Áshiih asdzáán* (Salt Woman).

The salt sources in the canyon were the subject of much of the discussions about the sacred nature of the canyon.

> The salt is sacred. There is a lot of teaching associated with collecting the salt. For instance, you shouldn't say "I am going to get salt, or I am going down the Salt Trail" [GCES-1 and GCES-2; Figure 7] while having no intention to go. The salt is very sacred and you must not endanger yourself like that. When you go down the salt trail you must make offerings at all the right places. You have to take your own water and food. Your lunch should be corn food, preferably white corn food, maybe mush or bread. When you get to the salt mine you must make an offering there and also on the way back up. When you are down there, you must think holy, do not think or say bad things. The salt is sacred and is a gift from Salt Woman. The canyon itself is a home for Holy People, they live in the canyon and all the side canyons. That is why when you are at the canyon, or in the canyon, you must prepare yourself. You may injure yourself physically or

Figure 7. Áshįįh deez'á, the Salt Trail leading into the Little Colorado River gorge [GCES-2].

spiritually if you do not keep your visits holy (MM in Begay and Roberts, field notes, 1992).

My grandfathers and my grandmothers made salt from there [GCES-35, the salt mine in the Little Colorado]. The salt mine is in a cave, it sticks out like icicles, until they reach the ground and then it spreads out. Some of the salt is in pools of water. To make that salt, you just reach into the water and scoop it out; that salt crumbles and is heavy when you carry it (M&BH in Begay and Roberts, field notes, 1992).

I remember people going down to the Salt Mines [GCES-34 and GCES-35]. Some people still go down there to collect salt. The salt is heavy, so you can't bring up a big bag full. It is wet and even a small bag is heavy to carry. In the old days, when the salt was brought back, the people would separate it. The nice clean white salt was separated from the reddish salt. The white salt was set out to dry and later would be ground to use as table salt, like the kind we use today. The reddish salt would be put into water to soak. Once it was soaked, the red would wash off. The salt would settle to the bottom and then it was put out to dry. I have never been down to the salt mines. My father had been

> down there several times and that is how I know about the salt. When people went to collect salt, it was sacred. You had to pray and make offerings when you went down and when you came back up. It was a lot of work (SS in Begay and Roberts, field notes, 1992).
>
> I have been to the [Zuni] Salt Lake and the Salt Mine in the Canyon [GCES-34 or GCES-35]. The salt in the canyon is hard to get. The canyon is steep and it is hot. I went with another person and it took us all day. I went with another person to the Salt Lake. I went to get cured by the salt. My legs had been bothering me for some time. After we did our offerings, we bathed in the water and on the return trip, our aches went away. The salt is holy and can cure you of your illnesses (CT in Begay and Roberts, field notes, 1992).

The sacred significance of salt is further emphasized when consultants mention other salt sources that are not nearby.

Other Navajo deities also make their homes in the canyons:

> A long time ago, the time when there were only Holy People living here, there was a creature that lived in *Tó bihooyéé'* [GCES-10, a water source in the LCR]. It was a *tééh łtą́'* [water horse]. It lived in the water and whenever anything would get near, it would make loud noises and make the water explode. This was his home and it did not want anything getting near. One day it rained so hard that it had to leave his home, maybe he got washed out. This *tééh łtą́'* went out into the canyon, into the Little Colorado canyon, and entered the waters of the Colorado River. It lives there now at the bottom of the river. One of these creatures used to live at the spring near Tuba and later was also forced to migrate to the Colorado. There is probably a lot of them that live in the river (SD in Begay and Roberts, field notes, 1992).

Still other stories don't seem to have anything to do with the canyon, but on closer examination they explain other events that were taking place in the beginning and these add to the complexity of Navajo use and occupation of the Grand Canyon region.

> When the people first came up, there was water everywhere. Only the tops of mountains could be seen. Birds were used as messengers, and to retrieve needed items from the mountains. The Wind People lived here. One evening, there was a cloud of smoke to the east. People gathered and wondered what it was. Birds were sent over there to find out what the smoke was all about. It turned out to be Black God and he gave the people the gift of *Oolk'ą́ą́h* (fire-starting kit). To this day, this kit is used to start fires in ceremonies. In addition to the Wind People, there were dangerous birds. The dinosaur tracks near Tuba City are testimony to this (NJ in Begay and Roberts, field notes, 1992).

The Plant People also reside in and around the canyon. The many different kinds of plants that are present in and around the canyon provide food, medicine, homes, tools, and other items to the Navajo people (see Chapter 5 for full discussion).

> Now, all these plants are our medicines, the greasewood, everything. *Ntł'iz* (precious stones) was planted and from *Bááshzhinii* (jet) grew *nididlídii,* Indian Rice Grass, if you have seen this, the seed of it is black, and it is *bááshzhinii. Dootł'izhii* (Turquoise) was planted next and up grew *Díwózhii łibahí,* next abalone was planted and up grew *Tł'oh'ałts'ózí,* next was white shell, and *Gahtsoh dą́ą́'* grew up, it is for sheep and horse.

> I know a few plants. I know the medicines for *Hóchxǫ́'íjí.* You must offer the plants [for *Hóchxǫ́'íjí*] *ntł'iz,* before you pick it, and you must say certain things. There are a lot of plants, and some people don't know them (SS in Begay and Roberts, field notes, 1992).
>
> I've made all kinds of medicines in the canyons and on the rim for various ceremonies. The plants in the canyon are all of the male gender. Back then we didn't need permits, now we must have permits for everything, even to make medicines (BH in Begay and Roberts, field notes, 1992).

The canyon region also provided game for food and clothing. Deer were abundant, and many people came to the Grand Canyon from far away.

> Hunting was our only source of food. My grandfathers, my grandmothers existed on that. At that time there were no firearms. They only used arrows. Or they would chase the game into cul-de-sacs. Some places had *niidzíí,* or they would use the edge of the canyon. The way they would do it, someone would wear a buckskin *(naak'aałgaií)* and lead the herd into the niidzíí, or the cul-de-sac or near the cliffs. Then they would kill the game with the arrows. You can't use arrows from a long distance, you must be up close to kill. There was no metal then, so they used real arrowheads then, made from rocks (MH in Begay and Roberts, field notes, 1992).

In the canyon are also places of clan origins and migrations. Navajo clans are named exogamous descent groups with membership inherited through one's mother and affiliations with the clans of one's father, mother's father, and father's father. The *Tł'ízí łání* (Manygoats) clan has its origins in this area.

> My stories come from my Grandmother. She told us how her people moved from west of the Grand Canyon, and that a grandmother of mine, she was *Naagízí dine'é,* moved with her people from there. They came up from the canyon and up the Salt Trail [GCES-2], north to Red Mountain [GCES-43, Shinumo Altar] and up to Coppermine. And from there to Kaibito, to Betatakin, to the summit of Black Mesa, then south to Wide Ruins. These people brought with them a bundle of soil from the place they had left, perhaps they came from California. The soil was their guiding tool as they traveled. The people would gather soil along the way and compare it to the soil bundle they were carrying. It was at Wide Ruins that the soil matched the one in the bundle. The people decided that it was a good sign, a good place to live, and the people scattered in all directions from there. Some went to the Hopi villages, others to Zuni, and others east and south of *Tsoo Dził* [Mount Taylor] to the pueblos down that way. Still others went to south of Sandia Mountains, and north along the Rio Grande, to *Kin łigai* [White House], to *Kin łitsoi* [Yellow House], to *Kin dootł'izh* [Blue House], or to *Kin łichíi'nii* [Red House].
>
> After some time, one of the men that was involved in the migration began to think of his homeland to the west. He wanted to return to his people he had left behind. He went to the San Juan, and he burned out a log for a canoe. He took a turkey with him as his companion. They entered the river at a place called *Tsédáá'.* From there, he put the boat into the river and left with the turkey and sailed down. It was near *Naatsis'áán* [Navajo Mountain], in a rock overhang that a group of Water People and Water Horses blocked the voyagers' passage. They said: "Earth surface people are not allowed here". They held the voyagers hostage for a while. It was only when the Wind told the man to say a specific prayer and make an offering of Precious Stones, or *Ntł'iz,* that they were released. They continued with their journey.

Further down the river, other Water Monsters blocked their way again. The Wind told them to call them by their sacred ceremonial names, say prayers and to make offerings to them. After the voyagers completed this ritual they were allowed to continue. As they advanced down the river, a group of *Téehoołtsódii* [Water Monsters] blocked their passage. Again the voyagers were told that no Earth Surface people were allowed. It was here that the Wind told them to ask *Haashchééh Zhiní* [Black God] for *Tł'ééł* [fire-making kit]. They were given the *Tł'ééł,* and the man put the river on fire. The black markings on the canyon wall [GCES-32] attest to this event. The voyagers were allowed to continue again. It was after all this that they continued on to *Tó nehelʒh.* When they got there, the Turkey shook himself and from his feathers came corn; this corn was planted and the harvest was plentiful. The man and the turkey were in the cornfield in the evening when they saw a fire off in the distance.

Two days in a row they saw that fire. The third time, they cut a *tsin halgizhí* [forked stick], and used it to locate the locale of the fire when the sun came up. The man and the turkey began the journey once they made preparations. When they arrived at their destination, they found people living there. *Hastiin Łóó' neinił'íní* was the headman, he was also called *Biʒh yiniłt'ánii,* unbeknownst to the voyager, he would become his son-in-law. He later became an in-law. The father-in-law tried to kill him with the poison corn mush during the wedding ceremony. The Wind told the groom to take the mush from the side of the basket, from all four cardinal directions. The in-laws also used several other tests to kill him. They called this time *Ch'ééh áho'dooł'ʒd.*

In the morning the father said do not go to the East, but he went and brought back a deer. The father was angry and said "I told you that you weren't supposed to go over that way." He went to the Four Directions and to all the places he wasn't supposed to go. It was there and then that he once again became part of his own people again. It was because of their journey that many people moved back from *Dził ná'ooditii* [GCES-38].

First, the people came and settled *Tónaneesdizí.* The leader was named *Hastiin Biighąąni* and he was the one that moved around with my grandmothers. They had many sheep and horses. *Tónaneesdizí* got its name from the many bends in the stream near there. The headman's *naalte'e* [workers, slaves] would go to *Dził Łibéí* [GCES-45, Gray Mountain] and to Gap/Bodaway, and they would say that no one is living up this way or that way and many people from *Tónaneesdizí* moved up to Gray Mountain or this way. And when enemies *(anaa')* came around, many people moved to Gap/Bodaway and into the canyon. They used a trail called *Ádahji'nah* [GCES-8]. A rock cairn marks the trail head. Some people used the Salt Canyon trail [GCES-2] into the canyon. There were cornfields down in the canyon [GCES-23], near here (in the canyon just west of *Dził Łichíí'* [GCES-43]). Two of the women who lived in the canyon during that time are named *Asdzą́ą́ Naabaahí* and *Asdzą́ą́ Łíchíí'* (HL in Begay and Roberts, field notes, 1992).

A branch of the *Táchii'nii* clan also has origins in the Grand Canyon:

They say there is *Anaasází Táchii'nii* among us, they came from the Anasazi. Not many people know of this clan. There are several different kinds of *Táchii'nii*—there is the *Naneesht'ézhí Táchii'nii,* the *Nát'oh Dine'é Táchii'nii,* they originated from the Hopi, and there is the *Anaasází Táchii'nii,* and they are the ones that came from here, the Grand Canyon. They say they originated from a site located under a rock overhang or cave [GCES-30; Figure 8]. Something like bad air killed the Anasazi off, but this cave

Figure 8. Consultant looking at possible origin place of a Navajo clan [GCES-30].

> or overhang protected a group of Anasazi. After the bad air passed those that survived left the canyon in search of others. They finally ended up at Canyon de Chelly where they lived. After a while they began to interact with Navajos and finally became Navajos themselves. They became known as the *Anaasází Táchii'nii*. There must be some of this clan up towards Chinle, Canyon de Chelly area (HL in Begay and Roberts, field notes, 1992).

Places associated with specific ceremonies or ritual events are found in and around the Grand Canyon:

> I did a blessing once over by Lake Powell. I made an offering of Precious Stones and Corn Pollen for a woman. She wanted a Protection Prayer done. I made the offering for her and later I was informed by the woman that everything was working out well. The source of the problem had disappeared and she was once again happy. The water is very holy. It is *ayóo diiyęęę*. I respect that river. It is powerful and can be merciless (CT in Begay and Roberts, field notes, 1992).

> When I was small we moved around the rim of the Grand Canyon. The canyon and the Colorado River were used intensively by the Navajo people. We all made offerings to the river. . . . We offer Corn Pollen to the river before we cross it. We also made offerings of Precious Stones from the rim, I've had it done several times (BS in Begay and Roberts, field notes 1992).

> As long as I can remember the Colorado River has been given offerings. I myself have given the river offerings. You talk about the fluctuating flows of the river, well, maybe we should make some offerings to the river, so it will calm down and not do too much harm to the land (MM in Begay and Roberts, field notes, 1992).

More recent events that centered in and around the Grand Canyon region have become part of the oral history of the canyon. For many people who live around the canyon, the stories of these events create yet another link to this area. The most important of these events are hostile interactions with various non-Navajo groups.

> There are two different stories about enemies coming out this way, and both happened over by Gray Mountain [GCES-45]. In the old days, Navajos used to buy children from Paiutes. The Paiutes used to do that, sell their children, maybe they needed food or needed good horses. Anyway one of my grandmother's female relatives had bought a Paiute girl and they would go out and herd sheep. The woman would bring her own two children also. The Paiute girl was the guard. She would sit on a high point wherever they were herding sheep and she would look for Utes. One day she spotted a group of Utes headed their way and she warned the woman and her children. The woman told the Paiute girl to hide and she ran to hide her daughters. She hid the older girl in a small cave in the Little Colorado canyon and covered the entrance. She then hid her youngest child and she ran back to the sheep and goats to scatter them when the Utes came upon her. She was killed. The Paiute girl and the younger daughter were also found by the Utes and they too were killed. The sheep and goats were driven off, leaving the young lambs and kids behind. It was only later that the older girl came back out and saw what had happened. She saw the dead bodies of her mother, her sister and their Paiute slave laying about. She tried chasing the baby goats and sheep back home but they wouldn't go, so she just sat and waited. Later some of her relatives came and saw what had happened. They killed some of the lambs and kids and made that their lunch and left the place, taking the lone survivor.
>
> The second story also happened by Gray Mountain. A young lady, one of my grandmothers, was herding sheep with her four-year-old son when they were attacked by Utes. The Utes scattered the sheep and took both the little boy and the woman. They took the pair south (presumably into New Mexico) and sold them to some Mexicans as slaves. The mother and son were separated in one small town. The boy was taken north and the lady was taken south. Before they departed she told the boy that when he was strong enough and old enough he should run away back to their homeland. She pleaded with the boy not to become one of the Mexicans. They were separated and she was taken to a small settlement. She was instructed to take care of the livestock, so that was her job. She fed the pigs, the chickens, cows, and horses. She also milked the goats and the cows. Whenever the Mexican family would leave, they would leave a woman who appeared to be retarded to watch her. The family would often go to the church to attend Mass. The Navajo woman began to plan her escape. Over the next several days, she would sneak out bread, flour, fruit or whatever she could steal and hide it near the pig pen. One day the family left and she did her chores as usual. She knew the woman was not very watchful and that the family would be at the church a long time so when she was out feeding the pigs, she went to grab her stash but it was not there. She figured the pigs got to her cache. She had taken some flour with her when she left the house and this was all she had. She had waited until it was almost dark to feed the animals. When she escaped, she ran for the mountains to the north of the village. She had been staying at that village for about a month when she escaped. She ran all night and hid in the mountains until the next day when she continued. About noon she saw two Mexicans trailing her from a distance. She ran deep into the woods and came upon a spring. A bear had watered that morning and had left some fresh tracks. In desperation she placed her hands and feet on the tracks and prayed to the bear to hide and protect her from the Mexicans. After she

drank some water she ran north and west. The Mexicans never caught her. She found the place where she had been separated from her child and followed the trail for a while. She found her son's tracks and picked up some of that dirt for a ceremony back home, but when she picked it up she knew she would never see her son again and threw the dirt back down. She continued her journey back to her family near Gray Mountain. It took her sixteen days to get back to Gray Mountain from the Mexican Ranch in New Mexico (MM in Begay and Roberts, field notes, 1992).

Other people tell of extensive stays in the canyon. The refugees often lived in the canyon for months or even several years to escape foreign intruders.

During the time when Navajos were being herded to *Hwéél̨di* [Fort Sumner, New Mexico, where many Navajos were detained between 1864 and 1868 when the U.S. Army conquered the formerly autonomous Navajo Nation], some of the people around here hid in the Grand Canyon. In order to make it to the bottom of the canyon a trail was constructed and it is called *Adahjíínná* [GCES-8]. To build this trail the people would build stairs into the rocks, or sometimes would have to build up retaining walls along the trails. Rock cairns marked the route of this trail. Many of the people had goats, sheep, horses, and donkeys. The river didn't run like it does now. Sometimes the river was very narrow, and ran wide only when there was a lot of rainfall. There were wide beaches and there was plenty of drinking water available. There was an abundance of plants down there, some were used for medicines, and some were used for foods. Many types of berries grew down there, including *Haashch'éé'dą́ą́'* [wolfberry], which was mixed with *dleesh* [white clay] for a meal. *Ché'ch'il* [oak, acorns] was also used for food. Rabbit was hunted. Deer were available when they crossed the river, usually when the river froze. Antelope were also hunted, also desert bighorn sheep—we only see one or two occasionally now. *K'aa'* was present down there also, I don't think that it grows down there any more. At that time, perhaps three or four families moved into the canyon. I have never seen corn planted down there, but I have heard stories that tell about that [GCES-23] (RB in Begay and Roberts, field notes, 1992).

A long time ago, near *Tó hajisho',* some people moved into the canyon, probably to protect themselves from enemies. Two men scouted a trail down to the river [GCES-7] and returned to tell their families. The families decided to move down and in order to get the sheep and goats to follow the trail into the canyon, one person led a goat down (he tied a rope around the goat's neck) and then the rest of the herd followed. In the spring, the family planted corn and squash down there [GCES-23]. The harvest that fall was abundant because of the water from the river. The family only spent two years down in the canyon. In addition to the sheep and goats they used for food, they also used many types of plants for food. In the spring, desert bighorn sheep was hunted. Deer was also hunted. The next spring they planted again, but the family moved back up to the rim. Again a goat had to lead back up the trail so that the rest of the herd would follow. They left their cornfields and in the fall, they returned to collect their harvest. That is the first and last time that family lived down there. That is one story of the trail at *Tó hajisho'* [GCES-7]. My-great-great grandfather, *Hastiin Chą́ą́tsoh* also moved into the canyon to protect his family. His family had to use ropes to lower their goats and sheep down some parts of the trail they used (MM in Begay and Roberts, field notes, 1992).

There is a trail, near a place called *Dá'ák'ǫ́zhí kǫ́'* (Saltbush Fire) that was used by the Navajos during Fort Sumner times [GCES-11]. Many families had moved into the canyon

> during that time. Several families used the trail by *Dá'ák'ǫzhí kǫ́'*, to move into the Little Colorado River. The families lived and farmed in the Little Colorado and in the Grand Canyon [GCES-24]. Of course people were afraid of strangers, even other Navajos. Few people on the rims knew of the people living in the canyons. These families were living in the canyons when Washington and the Navajos signed a treaty and the Navajos were allowed to return to their country [1868]. Word spread fast and many people gathered to discuss this, and word was sent to every group that was hiding out. Two people were sent to the families living in the Little Colorado. To get to these families they used this trail to notify the families. Like I said everyone was afraid and suspicious, so when the two messengers descended down the trail, they were ambushed, until they pleaded for their lives in Navajo. The messengers told the men who had attacked them that they came to tell them that the "good relations had been established" with Washington, and that they no longer had to hide out. Immediately, the men notified their families and moved back on the rim shortly thereafter (JS in Begay and Roberts, field notes, 1992).

Not all people took refuge in the canyon to escape enemies. During the latter part of the 1800s many families moved into the canyons to flee drought conditions on the rim.

> During my grandfather's time, many families moved into the canyon. There hadn't been any rain for a while and the livestock were starving and dying of thirst. They used several donkeys and nine horses to travel into the canyon. The trail they used is called *Adahjíłná* [GCES-8], it is near *Bidáá' hayázhí* [GCES-52]. My grandfather's family spent about a year in the canyon; they moved down in the summer and came out in the late spring. Some of the families had cornfields down there [GCES-23]. During that time the beaches from the confluence of the Little Colorado and the Colorado Rivers to Lees Ferry were wide, enough to drive sheep up and down and to have cornfields. The river didn't run as wide and didn't fluctuate as it does now. The families down there depended on wild foods, particularly *nideesgaii* [century plant] and *tł'ohdeeł* [goosefoot, pigweed]. Many of the donkeys were left in the canyon when the families moved out. Two years after they moved back up to the rim, my father and his father went back into the canyon to look for medicinal plants, one in particular called *Ga'iideelzha'* (BH in Begay and Roberts, field notes, 1992).

Crossing the Colorado River presented a challenge to Navajos. Many people would cross the river to hunt, trade, and gather plants on the north rim.

> A long time ago, not many people had horses, before the ferry was built at Lees Ferry [GCES-14]. Some of the Navajos would trade with Mormons at St. George and would have to cross near Lees Ferry. Groups of men would take the trip up there. Usually, women would not go with them. In order to cross the river, the men would take the bits out of the horses' mouths, tie the rugs the women had woven around their necks, and let the horse swim across with them. Sometimes they would have to tie four or five rugs around their necks. They tied the rugs around their necks so they wouldn't get wet. The men would trade for deer hides to make shoes and other things. If the river was frozen then sand was spread across the river before the horses were led across. The sand was to keep the horses from sliding around (RB in Begay and Roberts, field notes, 1992).

The Navajos in the 1800s also had other interactions with the Paiutes on the North Rim.

> My grandfather had a Paiute slave, by the name of *Asdzáán Ts'ósí.* His family lived on Coalmine Mesa. My grandfather had gone to Paiute country and bought the girl and brought her across the river. The Paiute girl did a lot of work for the family, she herded sheep, cooked meals, etc. My grandfather took care of her. One summer, there was a *Ndáá'* ("Enemy Way") and the family left the Paiute woman behind to take care of the sheep. The day they were to return the Paiute woman butchered a sheep and left to go back to her country. When the family returned they found the sheep in the corral and the Paiute woman gone. They searched all over and learned that she was headed to Lees Ferry. The grandfather figured she was headed back to her people. He gathered a search party and went after the Paiute woman. They tracked her down in Paiute country. She had already shed her Navajo style clothes and put on Paiute clothing. My grandfather begged her to return to Coalmine Mesa with them, but she refused. She wanted to stay. My grandfather returned home without her, and he was very saddened. I believe he made another trip out to Paiute country but still she refused to return (HL in Begay and Roberts, river trip log, 1992).
>
> A man from Willow Spring [GCES-59] would cross the river at Lees Ferry [GCES-14], travel to Kanab, and into Paiute land to trade with the Paiutes. During one of these trips he bought a Paiute girl; maybe her family couldn't feed her. He brought her back to be his slave. That was my father's story. He said he didn't know why he brought her back. He said that it would cause trouble later on. He said he should have already had papers signed at Lees Ferry stating that she is no longer a Paiute, but a Navajo. With these papers he should have brought her across. My father thought about all of this. Now, these Paiutes are taking over. The girl grew up, married a Navajo and began having children. Some of them came from *Dził Ditł'oii,* Abajo Mountains, and got to know each other there. A man named *K'ínłgizh* married there. Some of them also followed the woman from across the river. Her name was *At'ééd Tsoh,* Big Girl (MH in Begay and Roberts, field notes, 1992).

Many Navajos families traded with the Havasupais, as one man tells it:

> They [the Havasupai] have lived in the canyon forever. They were our friends. They have buckskin, and from here we had rugs. They used to come here. They used to come on horseback up *Gohniinii Habitiin* [GCES-25], to *Gohniinii bitó.* They used to bring figs, and buckskin. They used to know each other and trade. Afterwards they would ride back. When I was small, that is what used to go on. From here, they used to take rugs and saddle blankets to them. People used to say "I am going to *Gohniinii.*" They would bring back horses. People used to say that their horses were strong. They were our friends and they never became our enemies (MH in Begay and Roberts, field notes, 1992).

One man talked at length about his family's ties to the Grand Canyon and his father's attempts to instill in him his family's history in the Grand Canyon region:

> I am from Gray Mountain [GCES-45]. I was born near Gray Mountain at a place called *Béésh áłts'ózí.* A long time ago, *Bilagáanas* used to move around here and there was one named *Béésh Ałts'ózí,* who lived there and now it's called that. I was also raised around here, and I don't remember much when I was young. It is like that, you are a baby, then you start to grow up. I was six years old when I started to notice things *(baa ákoniizíí').*

Then it was told to me. I never saw my real grandmother; she died near the canyon, near Desert View Tower [GCES-46]. She is still there, rocks piled on her. There was two of us and we followed our great-grandmother. We herded sheep. Then, people moved around using wagons, and horses carrying packs. I remember and notice it like that.

We used to live north of Red Mountain, *Dził Łichíí'* [GCES-43]. I was real small when we lived over there. There are even places called *Łíí' Łeeyáán* [GCES-66], near the point above the confluence [of the Colorado and Little Colorado Rivers, GCES-65]. Sometimes I would herd sheep with my father, and sometimes we would go to the edge of the canyon, and he would tell me about sheep trails into the canyon, and he would point out the trails. He would say that they would take the sheep into the canyon for water when there was no water on top. At one time, my father said they lived in the canyon for about two years. While living down there, the sheep became semi-deaf, so they had to take the sheep back up. He told me this story. We used to live over there (near the confluence) and my father would show me trails into the canyon. He would tell me where the trails were and tell me that there were rock cairns to mark these trails. He would tell me to check on these trails sometimes in the future. He would say that my grandfathers, the *Kinyaa'áanii,* would use these trails to get down into the canyon and across. He said these are the stories around here. My father even took me to *Tódootł'izh* [GCES-28, Blue Springs] and told me about a trail to it. Now, between here and there, there is a place called *Tó k'eehashchíín hátsaa.* There is a rock house there. When we first moved out here, that is where we first lived. That was our water. There is a pool below it, and when there is no water on top, we would bring water up from this pool. It was almost inaccessible. That is how we lived. It was my father, my mother, me, an older sister [deceased] and an older brother I never saw [deceased] that moved around. Not many people moved around here. People used pack donkeys and horses to move around.

There were no Hopis around here. Not even one walking around here. When I would herd sheep, I would sometimes go to the edge and look down. One can really see clearly down. There was no Hopi wandering around down there. Back then there weren't even very many Navajos around here. There were very few of us then. My grandfather, who lived here for a long time, would say, that is so-and-so rock house.

That water that runs there (Colorado River) is the only one that is used. There is a sheep trail into the canyon near Desert View Tower [GCES-1]. When I was eleven years old, my father and I went down into the canyon on mule. There are many treacherous places on the trail. At one point, there is a slick rock on that trail and you must just lead the horse across. The trail then goes on, around a bend, it is a long journey, onto the Red Point, the trail goes under the point [GCES-3]. That is where we rode our mules. My father wanted me to see the canyon. We spent two nights down there, near the water. There is a lot of fish in the river, they are this long [gestures]. The fish weren't scared, they would swim by the shore. That time, the water was running very clear, and you could see the river bottom. There were elk tracks down there. They must have crossed the river, because their tracks led into the water. There were also a lot of burro tracks down there.

The next day, we left and went near the mountain, it was there we saw some white men coming from the east, they were leading donkeys. They had tools tied to these donkeys. They came down after us [perhaps on the same trail, GCES-1] They were prospecting

down there. They didn't even have any papers, of course then, there were no census numbers or social security numbers. My father said that many of them went into the canyon, but many of them did not come back up. I don't know what happened to them, perhaps they died of the heat. Maybe they did come back up. Some would leave their tools behind, such as their shovels. We saw some of these piles of tools.

After we spent two nights down there, my father woke me up early the next morning, He said "Listen, you hear that noise?" It was daybreak and you could hear noises in the canyon. My father said "That noise is from the bighorn sheep fighting each other." There were also a lot of beaver. In the evening, we could hear them. I was curious and asked, "who is cutting down trees?" My father told me that it was the beaver. We saw some of their houses, near the banks of the river. They were beautifully built. My father pointed those out to me. It was as if we watched a movie [referring to his trip into the canyon], then we came back up. My father said to me, now you have seen the canyon. I said yes. He told me that there is salt in the canyon too. You had to go up the canyon, around the big bend, up to the confluence and then up the Little Colorado [GCES-35].

My father said they used the river a lot. When it didn't rain up here, they would use the river for their livestock. When we came back up and went back to our house, I thought about it, and thought the best thing to do was to make a road down to the river. I never made that road. When I was growing up, we used that river (MH in Begay and Roberts, field notes, 1992).

Although the stories Navajo people told us document their use of the Grand Canyon in the past, ceremonial uses of the all the elements of the Grand Canyon continue. *Sodizin,* prayers, are still offered and will continue to be in the future. Plants for food and medicine and minerals such as salt and red ocher are still gathered for use in ceremonies and in everyday life. Most important, the stories that surround the Grand Canyon will be passed from one generation to the next.

Non-Navajo Accounts of Navajo History in the Grand Canyon

Pre–Fort Sumner Period

Despite the depth of Navajo history of the Grand Canyon as Navajos know it themselves, written histories produced by non-Navajos portray a recent, ephemeral Navajo relationship with the Grand Canyon. Except for an anomalous reference to Navajo migration into the Grand Canyon from Canada about AD 1500 (Belknap and Evans 1969:71), most popular interpretations of Navajo history in the Grand Canyon region suggest that Navajos arrived only recently, in the 1850s or 1860s at the earliest (e.g., Crumbo 1981:4–5; Hughes 1967:13, 1978:29; Martin 1989:81; Rusho and Crampton 1992:7) or later, between the 1880s and early 1900s (e.g., Fishbein 1991:40), if at all (e.g., Grand Canyon Natural History Association n.d.a, n.d.b; Hennessey 1991; Niehuis 1977; Wallace 1973).

These interpretations derive in part from prevailing scholarly theories that in the early nineteenth century the extreme western periphery of Navajoland extended no farther than contemporary Hopiland (e.g., Bartlett 1942:16–17, 1945:42–44; Hester 1962:83–84; Spier 1928:95). Crampton (1959:8, 1960:14, 21), Ellis (1974:408–442), and Pattison (1980:879), for example, argue that Navajos fled west into the Grand Canyon region about 1860 in response to increasing pressure from the U.S. Army just before its full-scale campaign against the Navajo tribe in 1863. According to Ellis (1974:408–442) (an expert witness for the U.S. government in the Navajo aboriginal land claim case), pressure from the U.S. Army was combined

with pressure from other Indian tribes, including Hopis, Utes, Paiutes, and Apaches, who took advantage of the United States' position against the Navajos to wage their own hostilities. Locke (1976:355) offers a similar interpretation of Navajo westward expansion just before 1863:

> [The Navajos'] only line of defense was to retreat as far as they could into their mountains and canyons and hope to avoid both Carson's volunteers and the hoards of New Mexican, Ute and other Indian raiders. . . .
>
> . . . most of the tribe fled west, beyond the Hopi villages and as far as the Grand Canyon. . . .

Dobyns and Euler (1972:53) propose that Navajos did not cross the Little Colorado River until after their release from captivity by the U.S. Army in 1868, and Euler (1961:11, 1969:9, 12) does not believe that Navajos were present in the Grand Canyon region at all before the 1890s, with the possible exception of a few refugees who trespassed into Havasupai territory west of the Little Colorado River as early as the 1860s.

Ellis (1974:425) acknowledges that ethnohistorical accounts establish Navajo presence on Gray Mountain [GCES-45, Coconino Point] on the eastern rim of the Grand Canyon by 1825. But, like Euler, she concludes that Gray Mountain was good piñon nut country where Navajos came from long distances during good harvest years (every seven years or more) and were permitted by other Indian tribes (Hopi or Havasupai) to stay for two or three months during the harvest before returning to their homes in the east.

Leaving aside for now the question of Navajo relations with the prehistoric Anasazis suggested by the Navajo oral tradition quoted in the preceding section, historical and ethnohistorical accounts collected by the Navajo Nation for land claims submitted to the Indian Claims Commission in the 1950s and 1960s (Navajo Tribe 1963) document ancestral Navajo (Apachean) use of the Grand Canyon–Coconino Plateau region by the late 1600s. Archaeological, historical, and ethnographic evidence suggests that Navajo settlement was established on the Coconino Plateau by the 1700s.

Darton and others (1915:117, 119) state that Havasupais were forced by other tribes to abandon permanent villages on the "Arizona" (Coconino) Plateau and along the Little Colorado River. The Havasupais sought refuge in the San Francisco Mountains [GCES-38], apparently before the mountains became the domain of the Apaches, who were in turn defeated by the U.S. Army in 1886. The Havasupais then retreated permanently into Cataract Canyon [GCES-37]. Bandelier (cited by Correll 1976:20) and Worcester (1951) maintain that it was the Apachean ancestors of Navajos who were at war with the Havasupais and, by 1686, the latter were defeated and retreated permanently into the Colorado River gorge. Euler (1961:7) argues that the Apaches with whom the Havasupais had a hostile relationship were Yavapai, not ancestral Navajo. Havasupai stories told in 1776, however, relate that both Yavapais and Navajos were their traditional enemies, and the presence of both made Havasupai travel to the Hopi villages hazardous (Navajo Tribe 1963:49–50).

In any case, 63 tree-ring dates from hogans and other Navajo structures west of the Little Colorado River, including the Coconino Basin, Gray Mountain, and Red Butte areas, range from 1709+incG (Navajo Land Claims [NLC] site W-LLC-C-B, 2.5 miles south of Desert View Tower, GCES-46) to 1798incG (NLC site W-LLC-C-E, just south of W-LLC-C-B) (see Chapter 4 for a list of Navajo Land Claim sites in the vicinity of Grand Canyon; Maps 2 and 3 show locations of all pre–Fort Sumner and GCES sites identified in the study area). Euler (1961:1–11) visited some of these sites in the Coconino Basin and also assigns them a Navajo cultural affiliation but concludes that they were probably not

constructed before about 1891. Although at the time of his research the Tree-Ring Laboratory (now the Laboratory of Tree-Ring Research) at the University of Arizona had obtained only 29 dates from 71 samples submitted by the Navajo Nation, Euler believes the dates indicate the use of dead wood in construction, or that the dates are otherwise unreliable due to the poor quality of the samples and the problematic dating methods used by the Tree-Ring Laboratory. Ronald Towner, an archaeologist with the Laboratory of Tree-Ring Research who recently evaluated these dates, suggests that the 1709 date is an anomaly probably representing the reuse of old wood, but that tree-ring samples from NLC sites W-LLC-C-B, W-LLC-C-OO, W-LLC-C-MM, and possibly W-LLC-C-D are strong cases for 1780s to 1790s construction dates (personal communication 1993).

These tree-ring dates suggest that the area west of the Little Colorado River was available for settlement after 1686, and Navajos began to settle on the eastern side of the Colorado River and west of the Little Colorado River during the 1700s (Navajo Tribe 1963:28–37, 47; Correll 1976:20–24; Stokes and Smiley 1964:15–17). David Brugge (1983:490, personal communication 1993) agrees that by 1800 Navajo settlement was clearly established along the Colorado River, and west of the Little Colorado River on Gray Mountain and within the Little Colorado River drainage.

Brugge's research for the Navajo Land Claims suggested to him that Navajo settlement *west* of Gray Mountain did not occur until after the late 1850s or early 1860s. He believes that earlier, less intensive Navajo use of land west of Gray Mountain shows that Navajos were well established east of Gray Mountain and west of the Little Colorado River, so that they readily traveled west of Gray Mountain but did not settle there. The Indian Claims Commission held a similar opinion, stating that

> In the eastern Havasupai claim area Navajo presence during the 19th century is so well established in certain locations, around Gray Mountain and parts of the Upper Coconino Basin, that we cannot say that the Havasupai had maintained their exclusive use of the area as of the date of taking [1880]. On the other hand, sparse or uncertain evidence of Navajo presence in other parts of the overlap does not convince us that as of the date of taking the Havasupai should not be considered still the exclusive aboriginal owners of that area, even though individual or transient Navajos may also have been found there (Indian Claims Commission 1968:219–220).

This pattern of early nineteenth century land use is described in the testimony of dozens of Navajo witnesses for the Navajo Land Claims (Navajo Tribe 1963:54–82). Before Fort Sumner, Navajo families were farming and grazing livestock throughout the area east of the Colorado River, along the Little Colorado River and its eastern and western tributaries, and on Gray Mountain as far as the present site of Grand Canyon Village [GCES-49]. As pointed out by Brugge and the Indian Claims Commission, Navajos also traveled beyond their areas of settlement for hunting and gathering plants and minerals.

> Naalnishi's parents both were born by or before 1850. His mother, Asdzaa Ts'oosi, "Slim Woman," was born at a place called Bidaa Haazt'ii [GCES-49], east of Grand Canyon Village [where the railroad reaches the rim]. Asdzaa Ts'oosi herded her family's sheep before Fort Sumner over the Grand Canyon country, toward the Ashfork-Williams area, between Kendrick Peak and Red Butte, and around O'Leary Peak and Long Mountain. Many Navajo families herded their sheep, goats, horses and donkeys over these same areas before Fort Sumner. With other Navajos, she gathered pinyon nuts, yucca fruit, prickly pears and other foods before Fort Sumner along the south rim of the Grand Canyon, between Kendrick Peak and Red Butte, around Williams and on Gray Mountain (Navajo Tribe 1963:75).

Elk, deer, antelope, wild horses, and mountain sheep were hunted in the San Francisco Mountains and on the Coconino Plateau as far as Havasu Canyon [GCES-37], the Kaiparowits Plateau and the Kaibab Plateau [GCES-39] on the Grand Canyon's north rim; hunters crossed the Colorado River near the Crossing of the Fathers [GCES-6] (Van Valkenburgh 1941:68). Pinyon nuts, berries, seeds, wild wheat, wild rice, wild spinach, and other foods were collected in the mountains and along the Grand Canyon's south rim as far as Havasu Canyon [GCES-37]. Plants, salt, and red ocher were collected in Marble and Grand canyons from Lees Ferry [GCES-14] to the confluence with the Little Colorado River [GCES-33] and in the Little Colorado River gorge [GCES-35] (Navajo Tribe 1963:63–64; NLC site form W-LLC-C-O; Begay and Roberts, field notes, 1992).

The ethnohistorical accounts of early nineteenth century Navajo settlement along the Grand Canyon are corroborated by Navajo birth records and tree-ring dates from Navajo archaeological sites. In addition to records for Navajos whose specific birth locations are known, records exist for 91 Navajos born within the general "western Navajo area" (west and northwest of the 1882 Executive Order Reservation surrounding the Hopi villages) between 1809 and 1868 (Navajo Tribe 1963:52). Some of these births, as noted above, occurred as far west as Grand Canyon Village [GCES-49], and even in Pasture Canyon (a tributary to Havasu Canyon [GCES-37]) where the father of well-known leader *Hastiin Nat'aani* was born in 1855 (Navajo Tribe 1963:79). Forty tree-ring dates from Navajo archaeological sites dating between 1803+G and 1867inc further attest to pre–Fort Sumner settlement west of the Little Colorado River in the upper and lower Coconino Basin, within the contemporary boundaries of Grand Canyon National Park, on Gray Mountain, and in the Kaibab National Forest (Correll 1976:73; Navajo Tribe 1963:53–95; Stokes and Smiley 1964:15–17).

Thus, by the 1860s, Navajos were firmly settled along the east side of the Colorado River from Glen Canyon [GCES-42] to the Coconino Plateau [GCES-45] as far as present-day Grand Canyon Village [GCES-49] and throughout the lower Little Colorado River drainage, and they were intermittently using resources beyond their area of settlement as far as west as Havasu Canyon [GCES-37], south to present-day Williams and Winslow, north to the Kaiparowits and Kaibab plateaus [GCES-39], and in the Grand Canyon.

Immediately before the incarceration of Navajos at Fort Sumner, Navajos moved into the Grand Canyon year-round.

> In the fall of 1863 and the winter of 1864 great numbers of Navajos, fleeing before Kit Carson's New Mexico Volunteers and Utes, fled west to hide in the fastness of the [Grand] canyon. One group went down the Tanner Trail [GCES-1] from the canyon rim near the present Hopi Tower [GCES-46, Desert View Tower] some 30 miles east of El Tovar. When the refugees got half way down the sheer walls of the canyon they stopped to rest and camp on a wide shelf, where they were attacked by a band of Navajo renegades. After considerable fighting the renegades were ambushed and killed.
>
> The Navajos then moved deeper into the canyon and stayed there until Round Moccasin, a Navajo emissary of Carson's, followed their trail and offered them food and protection. This offer was acceptable to most of the Navajos and they left the canyon to go to Fort Sumner. A few others decided not to surrender and stayed in the canyon, returning eventually up what is now the Bright Angel Trail, where they had to hoist their sheep up over steep places with yucca fiber ropes (Van Valkenburgh 1941:68).

The families who did not leave the canyon to begin the journey to Fort Sumner were those of *Sǫ'ii* (Star Gazer), *Hastiin Tsoh* (Mr. Big), *Bikee'ii* (His Foot), *Hastiin Áshii̯hí* (Mr. Salt), and *Bi'ííghánii* (Big

Backbone). These five Navajo families farmed and lived with Havasupai families for two years at the present-day site of Indian Garden below Grand Canyon Village on the upper river terraces (GCES-22, NLC site W-HC-LH-KK; Brewer 1937; Van Valkenburgh 1941:68). Members of some of these families were the parents of Clyde Peshlakai, who recalls:

> My mother and father traveled . . . down into the Colorado River in Grand Canyon. This was the beginning of their travel on the way to Fort Sumner. They stayed in the Grand Canyon for a year then came back on top where the Richardson Ranch is now. That is in the upper basin. Then they went back to the Colorado River and followed the benches and breakers into a place now known by White men as Indian Farms in the Grand Canyon [GCES-22], which is at the foot of the El Tovar Trail into the river from the El Tovar Hotel [GCES-49]. [Apparently they stayed there for almost two years and planted two crops.] From there they came back to the mountain, up to where El Tovar is now. They had to use a yucca rope to hoist their goats to move their goats up on top to where they would go south towards Red Butte (Peshlakai 1961:2–3).

A short time later, some of the families moved to Supai (Cataract) Canyon [GCES-37] (Navajo Tribe 1963:89) and "stayed in that canyon for one summer and the following winter and the following summer until late fall. When they came out of Supai canyon they met up with a group of Navajos who were living at the top of the canyon" (Peshlakai 1961:3). Clyde Peshlakai's sister, Ethyl Robbins, relates that "My [maternal] grandmother, 'White Woman,' told me that they lived with the Supai people on top of Supai Canyon and part of the time in Supai Canyon before Fort Sumner. The Supais were friendly at that time so they lived with them for quite a number of seasons" (Robbins 1961:3–4).

Oral history collected during the GCES-NCRP, as cited earlier, documents Navajo families during the same period living upriver from Indian Garden [GCES-22], in the Little Colorado River gorge [GCES-24], and along the beaches and terraces of Marble Canyon [GCES-23]. Stories told by several elderly members of the Cameron and Gap/Bodaway communities relate that this time was called *Łíí' dibáá' dabtíghá yęędąą'* (When Horses Died of Thirst), referring to a period of major drought. This may have been the drought of 1863–1864 described by Ellis (1974:425–427).

As quoted earlier, one woman in her early seventies describes her grandfather as the leader of a group of families living in Marble Canyon. Other interviewees recall that some of their ancestors were members of the families living in Marble Canyon. With their livestock—donkeys, horses, sheep, and goats—they moved into the canyon and planted corn during the spring [GCES-23]. After planting, they moved back up to the rim. Early Navajo archaeological sites along the rim of Marble Canyon recorded during the Navajo Land Claims investigations (NLC sites W-LLC-B-A, -C, -E, -H, -I, -L, -M, and -N) may include homesites occupied during this time. In the summer, the families descended the canyon again to harvest their crops. Subsisting on corn and wild plants, they remained in Marble Canyon through the winter. One possible cornfield location was identified in Marble Canyon by a Navajo consultant during the GCES-NCRP [GCES-23]. Fort Sumner–era trails between the river and the Marble Canyon rim identified during the GCES-NCRP are *Tó hojisho'* trail leading into Twentynine Mile Canyon [GCES-7] and *Adahjíłná* trail [GCES-8] near Eminence Break at *Bidáá' hátsaa* Point [GCES-51]. Similar stories are told about families living in the Little Colorado River gorge [GCES-24] which was accessed, according to GCES-NCRP consultants, by *Áshįįh deez'á* trail [GCES-2], *Dá'ák'ǫǫzh tah* trail [GCES-11], the Little Colorado River Crossing trail [GCES-13], the Shadow Mountain Crossing trail [GCES-15] (specific location unidentified), and *Ada' atiin* near Peshlakai Point [GCES-16] (specific location unidentified).

Clyde Peshlakai's father, who was born in the 1850s (Brewer n.d.; Ellis 1974:462; Johnston 1939:21), described his family's movement in and out of the Grand Canyon about 1864:

> A long time ago we used to live in the bottom of the Grand Canyon—I was about 14—because Apaches raided us. We took our horses and sheep down with us on a trail [GCES-1] about four miles upriver from Kin Nez (Hopi Tower) [GCES-46, Desert View Tower]. We stayed all summer and came out in the fall. There was lots of grass and water down there. In the winter we lived near the Canyon. This was before Huelde (Fort Sumner). There were many people in the Canyon (Peshlakai Etsidi, quoted in Brewer n.d.).

Also ranging from the vicinity of what is now Lees Ferry far south and west at this time was *Bi'ígháanii*. A person we interviewed, quoted in the first part of this chapter, described him as a headman who settled near Tuba City and pioneered the Gray Mountain and Bodaway country. Navajo Land Claim archaeologists identified him with an undated archaeological site (W-NM-NC-X) above Echo Cliffs northeast of Bitter Springs. According to the site form, he spent most of his life in this area before Fort Sumner. Henderson (1985:20–21) says that during Fort Sumner times he hid in the country between Black Mesa and Echo Cliffs with wives of Salt and Manygoats clans and a band that included Utes and Paiutes. We have already mentioned his stay with the Havasupais at Indian Gardens during these same years. Sources consistently identify him as a member of the *Kinyaa'áanii* clan. He evidently also had some connection with the Hopis before and during Fort Sumner times. Another of his wives was a woman of the Navajo Tobacco *Táchii'nii* clan, whose forebears may have come from Awatovi, a Hopi settlement destroyed by other Hopis in 1700, some of whose survivors evidently joined nearby Navajos and become Navajos. Bi'iighaanii and his wife evidently also stayed with the Hopis during Fort Sumner times, and some of his descendants apparently are Hopis (Kelley, Scott, and Francis 1991:36–37). By 1865, he was also harassing Mormons south of the crossing at what is now Lees Ferry (Creer 1958:18–19).

Chapter 4 describes the nineteenth-century Navajo archaeological sites recorded during the Navajo Land Claims investigations on the Coconino Plateau along the south rim of the Canyon, in the vicinity of *Kin Nééz* [GCES-46, Desert View Tower]. In addition, nineteenth-century Navajo ceramics collected at various places in the Grand Canyon attest to some of the Navajo occupation along the river and its terraces. The National Park Service (NPS) recently recovered a whole nineteenth-century Navajo vessel from Hance Creek [GCES-83], about 10 miles upriver from Indian Garden [GCES-22] (Jan Balsom, Grand Canyon National Park Archaeologist, personal communication 1992), and David Brugge (retired NPS and Navajo Nation anthropologist) recalls identifying sherds of Pinon Grayware from the Grand Canyon between 1968 and 1973 (personal communication 1993). Pinon Grayware sherds were also found in 1992 and 1993 during this project at the Palisades Complex (NPS site AZ:C:13:99, GCES-82), about 65 miles downriver from Lees Ferry [GCES-14], and at NPS site AZ:C:2:60 [GCES-84], immediately upriver from Lees Ferry.

Architectural evidence on at least one site also strongly suggests a pre–Fort Sumner Navajo occupation. NPS site AZ:B:16:3 [GCES-81] is 98 miles downriver from Lees Ferry on a terrace at the confluence of the Colorado River and Crystal Creek. The site was originally recorded by Euler (1969:17) as a Pueblo III Anasazi site and re-recorded during the NPS survey as a Pueblo II Anasazi site; it consists of four masonry structures and a scattering of prehistoric sherds and lithics. Navajo Nation anthropologists and Navajo consultants identified the site as very possibly early Navajo (Figure 9).

The main structure is circular, constructed of several courses of dry-laid tabular schist, and measures slightly more than 4 m in diameter; it has an east-facing entryway defined by upright slabs (it therefore conforms in detail to architectural descriptions of Navajo dwellings by Brugge 1968:18–19; Hurt 1942:90; Jett and Spencer 1981:60; Keur 1941:21–22, 1944:76; Riley 1954:53–54, and others). The three other masonry features are small, discontiguous circular or semicircular enclosures spaced along the base of

Figure 9. An early Navajo hogan [GCES-81] near Crystal Rapid.

a schist ridge. They are similar to the small animal pens commonly found on other Navajo archaeological sites. Although no evidence of an ash pile remains on the highly deflated ground surface, limited test excavations outside the main structure could reveal the location of the ash pile to the east-northeast of the entryway, a hearth inside the structure just west of the entryway, or both. If this site is Navajo, as we strongly suspect, its implications are far-reaching.

First, on one hand, it may antedate Fort Sumner. During his 1869 exploration of the Grand Canyon, John Wesley Powell noted "old Indian camps" in the Crystal Creek drainage. Euler (1969:17) believes AZ:B:16:3 is the site to which Powell referred. Euler and Walter W. Taylor (Euler 1969:17) found only nine potsherds on the site when they recorded it in 1965, all of which suggested an early Pueblo III Anasazi occupation dating between AD 1100 and 1150. Anasazi ceramics frequently dominate the ceramic assemblages on early Navajo archaeological sites (Kelley 1992:7; NLC site forms W-LLC-C-CC, W-LLC-C-A, W-LLC-C-D, W-LLC-C-G; David Brugge, personal communication 1992), however, and an assemblage of nine sherds is extremely small. If AZ:B:16:3 is the site noted by Powell, it already appeared "old" when he saw it in 1869, suggesting Navajo occupation well before the Fort Sumner incarceration. On the other hand, Powell may have been referring to sites more than three miles up the Crystal Creek drainage. His diary states that he walked up the creek three miles, but Euler (1969:17) notes that the other sites along Crystal Creek are more than three miles from the confluence. If Powell was referring to sites more than three miles up Crystal Creek, AZ:B:16:3 probably did not yet exist in 1869 because it is right at the confluence of Crystal Creek and the Colorado River and would be difficult to miss. If this is the case, it eliminates the possibility that the site is Anasazi and reinforces the site's potential Navajo affiliation, although not necessarily a pre-Fort Sumner period occupation.

Second, the site is located 98 miles downriver from Lees Ferry, and far west of the area conventionally recognized as within Navajo customary use areas. It is, however, well within the area of Navajo use identified through Navajo oral history, especially regarding relationships with the Havasupais.

Third, the site is located on the right (north) bank of the Colorado River, contradicting the assumption that Navajo territory has always been restricted to the south side of the Grand Canyon and that the Colorado River was historically a barrier to Navajo access to the north side. Navajo oral history is specific regarding customary uses of *Ná'toh Dziil* [GCES-39], the Kaibab Plateau, and is supported by evidence from AZ:B:16:3 [GCES-81].

Excavation may ultimately provide additional compelling clues to the cultural affiliation of the Crystal Creek site. If it is Navajo, this site will provide the strongest known archaeological testimony to the oral and recorded ethnohistory of pre-Fort Sumner Navajo life along the Colorado River in the Grand Canyon.

Post-Fort Sumner Period

Those Navajos who did not seek refuge from the U.S. Army in the Grand Canyon and other customary lands during the 1860s either died or surrendered to several years of captivity at Fort Sumner in east-central New Mexico. The walk from the Grand Canyon to Fort Sumner took 34 days (according to Peshlakai Etsidi quoted in Brewer 1937:60). When they were finally released in 1868, Navajo families began the journey back to their customary homes, not aware that they no longer had the legal right to live there. The treaty that representatives of the United States government and the Navajo Tribe signed at Fort Sumner in 1868 established a small reservation more or less in the middle of Navajo customary territory. This reservation encompassed only a fraction of the pre-Fort Sumner Navajo land base. Navajo lands outside the newly created reservation, including those bordering the Colorado and Little Colorado rivers, became objects of competition between Navajos and Anglos (see Roberts 1992 for discussion).

Among the first Anglos to come in contact with Navajos in the Grand Canyon region just before, during, and after the Fort Sumner incarceration were Mormons, who were colonizing their way into Arizona from Utah via the Colorado and Little Colorado river valleys. Although intermittent Mormon exploratory expeditions and early Indian missionary efforts penetrated northern Arizona in the late 1850s, not until after the U.S. Army subjugated the Navajos in the late 1860s could the Mormons begin full-scale colonization in northern Arizona south of the Colorado River (Peterson 1973:2–4). John D. Lee's establishment of a homestead and a ferry crossing near the confluence of Paria Wash and the Colorado River in 1872 (Creer 1958:19–24; Rusho and Crampton 1992:31–35) not only provided Lee a hideout (he was accused of killing migrant settlers in the Mountain Meadow Massacre) but also created a conduit through which Mormons irreversibly penetrated the Navajo world.

The ferry developed one of the river crossings that Navajos had already been using to access the Arizona strip and southern Utah for hunting and trading. Prior to the ferry, crossing had been risky and success depended on the flow of the river. A legendary crossing into Utah about 1800 to escape Mexican raiders was described by an elderly Navajo man around 1935:

> The Navajos came to the river to cross it straight north of Tuba—not at Lees Ferry but way above. It was just northeast of the place where the San Juan and Colorado come together. So they cross the river on their horses and move into Utah to be safe from Mexicans. The Navajos had found much game so they were well fed and had lots of skins for clothing for one year. When spring came and the snow melted the river was getting high. They wanted to come back to their country because of the Mexicans leaving and there would be no trouble there. The Navajos came to the river to cross back. When they were all together at the Colorado the women were afraid to cross. One old woman began to get tough (she wanted to show the younger women they were silly to be afraid);

> she started into the water with one child in front of her on the horse and one child behind. They watch her going on; when she is about half way across the water covered the horse of the brave woman; the two children were washed off the horse, then she also was washed off. When the three began floating downstream the people were about three yards behind them in the water, to save them if they could. The men began crowding into the water as fast as they could to save the three floating brave ones. The two children were caught by two or three men; the woman was grabbed by her hair two or three seconds after the children; one man just dragged her across by her hair. Her horse swam across; so all crossed the big river and no person was drowned. The place of crossing that big river is called "Na hon'dzo" *[sic]* (the saving crossing) (Peshlakai Etsidi to Albert Cody, recorded by Sally Brewer [n.d.] in 1935).

With the installation of a ferry boat, Navajos were quick to take advantage of its convenience. In fact, Lee's first recorded ferry passengers were an unexpected party of Navajos wishing to cross the river to trade at Kanab on January 19, 1872:

> So I with Samuel and James and my wife Andora commenced to cork an old flat boat and by noon we were ready to cross. When we launched the boat, my two sons, Samuel and James, faltered, (and) feared to venture with such a craft. My wife Rachael Andora said she would go over with me and steer. When we reached the opposite side, the natives met us with open arms and friendship. They were heavily loaded with blankets full of cloth, calico, domestics, madeup clothing, linseys, and handkerchiefs. After much difficulty we succeeded in getting them and their baggage over safe. Next were the horses which we failed to swim over, and after two trials and nearly upsetting the boat, a council was held and six of their number were to cross back and take the horses and cross at the Ute crossing and the remaining nine were to follow the trail on foot by way of the Pahreah settlement. When we recrossed the six, nightfall closed the scene. For the last three hours I worked through fever and ague and when I reached the fire on shore I was so near exhausted that I staggered. One of the natives caught me in his arms and another threw his blankets over me and four of them helped me home (Clelland and Brooks, cited in Creer 1958:21).

The experience was evidently a harrowing one for Lee, but for Navajos who had been crossing the river for decades without aid, the ferry was undoubtedly a luxury. While the ferry may have made life a little easier for Navajos crossing to the north side of the river, it would ultimately make their lives more difficult due to the territoriality of the Mormon colonists who would soon be crossing to the south bank.

Lees Ferry soon became part of a Mormon colonial highway connecting Utah and northern Arizona. Hostilities between white settlers and Navajos began almost immediately with the killing of several Navajos in the "Grass Valley Affair" in January 1874, resulting in the construction of a trading post and "fort" at Lees Ferry by the end of the year. Lees Ferry was designated as the only official point of friendly Navajo-Mormon contact; Navajos crossing the river into Utah above Lees Ferry (at the Crossing of the Fathers [GCES-6] or elsewhere) would be considered hostile (see Rusho and Crampton 1992:37–40 for discussion). Two masonry hogan foundations recorded as part of NPS site AZ:C:2:11 [GCES-85], the Lees Ferry Historic District, may be remains from this period of initial Mormon-Navajo contact at Lees Ferry (Figure 10). Despite the hostile atmosphere, colonists continued to make their way into Arizona. By 1880 most of the Mormon settlements in the Little Colorado River basin had been founded, although colonization continued well into the 1890s (Peterson 1973:16).

Figure 10. Hogan rings [GCES-85, AZ:C:2:11] at Lees Ferry Historic District.

From 1873 to 1878 Mormon settlers crossed Lees Ferry and proceeded into Arizona via "the terrible piece of road known as Lee's Backbone, a one-half mile route through [which] . . . a road of sorts was dug, picked and blasted into what still looks like giant rock stairs. Veteran wagon drivers, well-acquainted with frontier roads called Lee's Backbone the worst road they had ever traveled" (Rusho and Crampton 1992:46). Although Lee's Backbone may have been one of the worst routes across the Echo Cliffs, it was certainly not the first, since Navajos had been traversing Echo Cliffs to reach the Colorado River for many years.

Pattison (1980), Pattison and Potter (1977), Crampton (1960, 1988), and others discuss the numerous historic Navajo trails to the river above what is now Glen Canyon Dam, and Navajo trails to the river between Glen Canyon Dam and Lees Ferry were identified by several GCES-NCRP consultants. One of these trails across the Echo Cliffs is *Tsé ninájihí* trail [GCES-19]; part of which was crossed by miners in 1910 and referred to as "Buzzard's Highline Trail" (Rusho and Crampton 1992:143; Glendening and Shyrock 1979) and part of which was improved by the Civilian Conservation Corps during the 1930s so Navajos could more easily bring livestock to the river at Lees Ferry (Rusho and Crampton 1992:143–144; Glendening and Shryock 1979). Navajo livestock still access the river via the Big Sand Dune [GCES-47] just above Lees Ferry.

In 1878 the Mormon Church began construction of a new dugway designed to reach Lees Ferry without having to cross the treacherous Lee's Backbone. Under construction until 1898, the road became the major artery between the Arizona settlements and Utah, especially the Mormon temple completed in St. George in 1877 to which newly married couples frequently traveled (Rusho and Crampton 1992:48–49, 141). The "Honeymoon Trail," as it became popularly known, was constructed largely with Navajo labor and used by Navajos as well as Mormons for the next thirty years. It was identified by GCES consultants as an important Navajo site [GCES-14].

Although the Honeymoon Trail provided convenience to both Mormons and Navajos traveling to and from Lees Ferry, it also facilitated a continuing influx of white settlers and their livestock into customary Navajo territory. The deserts surrounding the Little Colorado River valley along which the Mormons traveled and established settlements contained barely enough water to support Navajos and their livestock, much less the sheep and cattle brought in by non-Navajo colonists. By 1886, missionary Lot Smith held 1,200 head of cattle, 2,400 sheep, and 175 horses (Peterson 1973:118) with which he attempted to dominate the public domain land between Sunset (near present-day Winslow) and the fertile area around Moenkopi and Tuba City. In the mid-1870s Moenkopi became the center of Mormon missionary work among the Hopis, and the Mormons had established communities at Moenave and Tuba City. When Lot Smith started to overrun the range with his livestock, the mission program was failing and conflicts over water were increasing between Mormons and Navajos. Finally, having encroached too far on Navajo resources, Lot Smith was killed by a Navajo near Moenkopi in 1892.

Mormons were not the only white people competing for customary Navajo land and water in the Grand Canyon region during the last decades of the nineteenth century. The arrival of the Atlantic and Pacific Railroad in Flagstaff in 1882 detonated decades of land conflicts between Navajos and Anglo ranchers that eventually caused the federal government to extend the Navajo Indian Reservation boundaries as far west as the Colorado River.

The Atlantic and Pacific Railroad (later the Atchison, Topeka and Santa Fe) was given a land grant totaling 14 million acres (odd-numbered sections for fifty miles on either side of the track) in the Arizona and New Mexico territories through which to build portions of a transcontinental railroad (see Bryant 1974:94; Greever 1954:37). To finance railroad construction, the railroad company could sell its alternate sections or, failing that, could take public domain land elsewhere "in lieu" of these sections (which reverted to the federal government) and then sell the "lieu" lands. Between 1883 and 1904, this disposition of railroad lands resulted in the sale of millions of acres to private interests. The AT&SF became second only to the federal General Land Office as a seller of land in the New Mexico and Arizona territories (Baker et al. 1988:18).

Ranchers and speculators purchased former public domain lands east of the Grand Canyon at an alarming rate, for literally pennies an acre. In 1884 the Aztec Land and Cattle Company bought a million acres at 50 cents per acre (Bryant 1974:94) and brought in 40,000 head of cattle (Greever 1954:43). Three years later, a sheep rancher bought 258,000 acres at 70 cents per acre. Within a few years, the Aztec Land and Cattle Company, the Arizona Cattle Company, Lot Smith, the Babbitt Brothers, the Kellam Land and Cattle Company, and numerous small ranchers claimed, divided, bought, sold, and controlled the land upon which Navajos had been well established. *The Western Range* estimates that, whereas in 1870 about 30,000 cattle grazed on Arizona ranges, by 1886 more than 502,000 head were on the range (Baker et al. 1988:91). After 1896, there were also huge numbers of sheep. In the Arizona Strip and along the Utah border, Mormon settlements had been established at Short Creek, Pipe Springs and Kanab and by the 1880s, about 200,000 sheep and 20,000 were being grazed in the Kaibab Plateau and surrounding areas (United States Department of Agriculture 1994:4). Competing ranchers concentrated on control of scarce water sources.

> Those who owned the private lands controlled the use of much of the adjoining public lands by their presence and their actions. . . . For example, in northern Arizona, the exclusive possession of small scattered parcels of land with springs and wells on them effectually provided control of large tracts of adjacent dry land. Efforts by the Arizona Cattle Company . . . to perfect title to *one watered tract on the Colorado River* would have given them "monopolistic control of vast areas of public grazing lands, and thus

> destroy the possible use and sale value of adjoining public lands of the United States" (Baker et al. 1988:33, emphasis added).

It was not only ranchers who took advantage of the railroad land grant, however. Through the railroad's "lieu land" exchange process, the Grand Canyon Forest Reserve was created on February 20, 1893 (27 Stat. 1064). These lands later became the Tusayan National Forest (from which Grand Canyon National Park was carved) and eventually the contemporary Kaibab and Coconino National Forests. Pressure from Anglo ranchers, who also happened to be taxpayers, led to evictions of Navajos from the forest reserve within a few years after it was established (McPherson 1992). By the middle of 1897, the Secretary of the Interior issued a regulation prohibiting sheep grazing on all forest reserves outside Oregon and Washington. The decision did not sit well with influential organizations such as the Arizona Sheep Breeders and Wool Growers Association, however, which lobbied for a suspension of the order and an on-site study of the situation. The regulation was reversed in 1902, but when the Forest Service was established in 1905, livestock grazing on the forests in general was regulated. Although 20,000 sheep and 9,000 cattle were still permitted on the Kaibab Plateau (United States Department of Agriculture 1994:4), free use of the forests for livestock grazing had come to an end by 1906 (Baker et al. 1988:92–94). When the Forest Service created the Kaibab National Forest within the next two years, it forcibly excluded Navajos (Van Valkenburgh 1954).

Thus, between their return from captivity at Fort Sumner about 1870 and the turn of the century, Navajos trying to survive on their customary lands east and south of the Colorado River were caught between Mormon settlers controlling Lees Ferry, Tuba City, and settlements along the Little Colorado River, federally controlled forest lands on the west, the railroad on the south, and non-Navajo cattle and sheep ranchers everywhere in between. Perhaps during this time, Navajos concentrated on using some of the side canyons to both the Grand Canyon and the Little Colorado River gorge [GCES-7, GCES-9, GCES-10, GCES-20, and others] because they were the only remaining accessible sources of domestic and livestock water. Even though Navajos could not keep control of the good water sources and did not constitute a threat to available water, non-Navajos' efforts to eliminate any remaining Navajos from the area became violent in the winter of 1896–1897. The Board of Supervisors of Coconino County, members of which were local ranchers, ordered a twenty-man posse to "assess the property" of Navajos in Coconino County. Demanding an immediate five dollar tax per 100 head of sheep, and knowing that the Navajos could not pay, the posse drove sixteen Navajo families from Coconino Point across the freezing waters of the Little Colorado River.

> The Indians pleaded for a reasonable time within which to remove, but were denied. Their houses and corrals were burned and they and their flocks were rounded up and pushed toward the Little Colorado River with a relentless haste, the posse keeping women, children and animals in a fright by an intermittent fire from rifles and revolvers. When the river was reached it was found to be so deep to require the sheep to swim. The posse surrounded the flocks and pushed them into the water, and nearly all the lambs, with many grown sheep, went down the stream or chilled to death after crossing. . . . The loss to the Indians was equivalent to several thousand dollars (U.S. Commissioner of Indian Affairs 1897).

Continued assaults on Navajos throughout the 1890s finally prompted federal action. Indian agents and an outspoken Protestant missionary finally helped get the federal government to extend the Navajo Indian Reservation westward (see Roberts 1992; United States Department of the Interior 1961:258). President McKinley's Executive Order of January 8, 1900, extended the Navajo reservation from the boundaries of the Hopi and Navajo reservations in the Arizona Territory west to the Little Colorado River, down the Little Colorado River to the Grand Canyon Forest Reserve, then north and westward to the Colorado

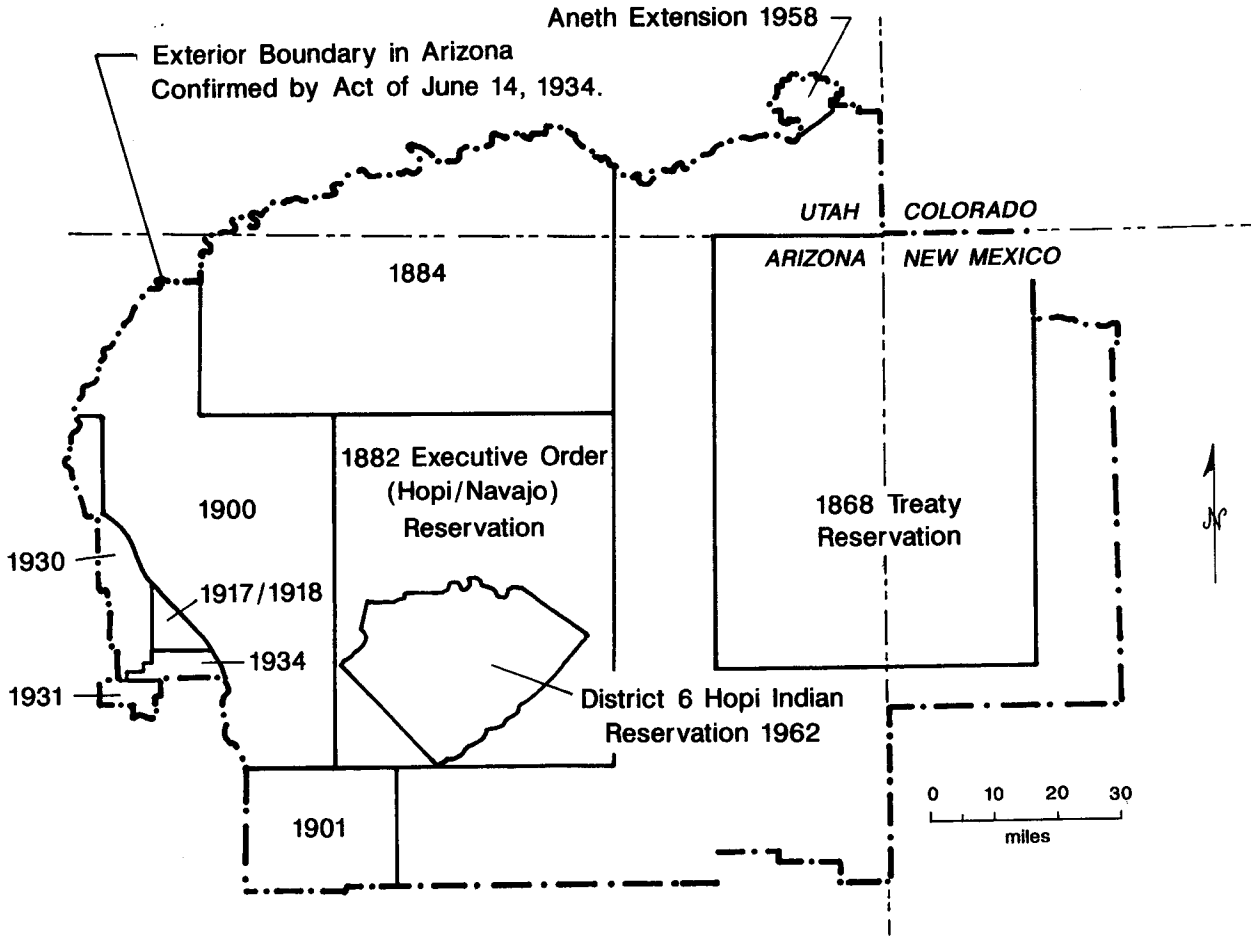

Figure 11. Growth of the Navajo Indian Reservation (after Correll and Dehiya 1978).

River and up the river to the former Navajo Reservation line (Figure 11). In 1901 the federal government bought Mormon holdings in Tuba City for $40,000. It became the Western Navajo Agency headquarters the following year (Bailey and Bailey 1986:107; United States Department of the Interior 1961:258). Other Executive Orders and Congressional Acts added the Leupp Extension to the reservation in 1901, lands west of the Little Colorado River in 1917 and 1918, and parts of the Tusayan National Forest (formerly Grand Canyon Forest Reserve) in 1930, 1931, and 1934 (see Correll and Dehiya 1978).

The 1934 Act (June 14, 1934, ch. 521, 48 Stat. 960-962) also confirmed that the exterior boundary of the Navajo Indian Reservation in Arizona encompasses the south bank of the Colorado River from the Utah-Arizona state line to its confluence with the Little Colorado River, then along the north bank of the Little Colorado River to a point opposite the east boundary of Grand Canyon National Park. The Act, however, excluded from the reservation "all lands heretofore designated by the Secretary of the Interior pursuant to section 28 of the Arizona Enabling Act of June 20, 1910 . . . as being valuable for water-power purposes and all lands withdrawn or classified as power-site lands."

On February 9, 1917, five days short of the time limit for making such withdrawals, the Secretary of the Interior issued Water Power Designation No. 7, Arizona No. 4, encompassing lands in Marble Canyon

within one-quarter mile of the Colorado River that were considered "actually or prospectively valuable for the development of water powers or power for hydroelectric use or transmission" (United States Department of the Interior 1969:4).

Federal withdrawals for water-power purposes in Marble Canyon were the first signs of burgeoning interest in damming the Colorado River in Arizona. Dam site feasibility studies were conducted up and down the Colorado River throughout the 1920s, until the first site was selected and the Boulder Canyon Project Act was signed into law in December 1928 (see Duncan and Sudman 1991 and Martin 1989 for discussion). Construction of Boulder Dam (later Hoover Dam)—the Bureau of Reclamation's first major project on the Colorado River for hydroelectric purposes—began in 1931. Nationally acclaimed as the largest construction of its type ever attempted, it marked a turning point in the Bureau of Reclamation's purpose from providing irrigation water to providing electricity. More important, the sale of electricity could more than reimburse the reclamation fund that had required a $20,000,000 loan from the federal government in 1910 to keep it from going bankrupt (Martin 1989:30–31). The success of Boulder Dam was essential.

Part of the envisioned success of Boulder Dam operations involved a seemingly unrelated federal program taking place on the Navajo Indian Reservation at the same time the dam was under construction. In 1929, the United States Geological Survey concluded that the San Juan and Little Colorado Rivers contributed almost all of the silt carried into the mainstem Colorado River, silt which would back up behind Boulder Dam and threaten its successful operation. The results of ongoing federally sponsored analyses of erosion on Navajo rangeland were interpreted by federal officials as a direct result of overgrazing: too much livestock on the Navajo Reservation was directly responsible for severe gullying, causing top soil to wash into the tributaries of the San Juan and Little Colorado Rivers and from there into the Colorado River. By the 1930s, the Navajo Reservation was called "Public Enemy No. 1 in causing the Colorado River silt problem" (White 1983:251n), and the Soil Conservation Service reported that if this erosion problem were not controlled "the entire alluvial fill of most of the Navajo reservation will be deposited behind the dam, thus threatening the enormous Federal, State, municipal, and private investments involved in, or directly or indirectly dependent on, the maintenance of the storage capacity of the reservoir" (White 1983:251n). The federal response was to implement a forced livestock reduction program on the Navajo Reservation.

Two reductions came in 1934, one concentrating on sheep and the second on goats. The first reduction was voluntary; the federal government asked people to sell their sheep at prices ranging from one to three dollars apiece. Ninety percent of the 100,000-head quota was met, but these were primarily the non-productive animals that owners willingly eliminated from their herds. The second reduction was mandatory and concentrated on goats, which range experts considered more destructive than sheep. This time, the federal government set rules for eliminating the productive animals from every owner's herd and quotas were set for each jurisdiction. Funds were secured for purchasing 150,000 goats and 50,000 sheep at a dollar a head. Most were supposed to be slaughtered, canned, and redistributed, but the federal government could not feed and water the number of animals removed from the herds while they were awaiting shipment. Federal agents therefore killed many animals and left them to rot. In the western area alone, 20,000 goats and 8,000 sheep were killed in the second reduction of 1934 (U.S. Department of Agriculture 1934).

> The dam was the catalyst that prompted drastic stock reduction. The government saw itself not only as saving the Navajos from themselves but also as saving much of California and indeed the entire Southwest, from Navajo herds. The Dine [Navajo people] were, in spite of themselves, drafted into the huge scheme for economic growth

> which Boulder Dam represented. Unfortunately, while others reaped the benefits, the Navajos were called on to make the sacrifices (White 1983:252).

Once again, the Grand Canyon provided refuge to Navajos and their livestock, which were hidden there during the livestock reduction program in an effort to protect them from slaughter (Begay and Roberts, field notes, 1992). Ironically, Navajos hid their livestock in the very canyon the federal government was trying to protect from them. It is also ironic that after removing the foundation of the Navajo economy to prevent silt from threatening the operation of Boulder Dam, the federal government constructed Glen Canyon Dam, which has effectively, and detrimentally, removed almost all of the silt from the mainstem Colorado River below it. As pointed out by one GCES-NCRP consultant, "they implemented stock reduction to prevent too much silt from going into the Colorado River, and now they're trying to figure out how to put it all back" (BH in Begay and Roberts, field notes, 1992). Soil eroding from the Navajo Reservation into the Little Colorado River today is the most significant source of sediment into the Colorado River between Glen Canyon and Hoover dams—soil on which the health of the entire Colorado River ecosystem depends, and the maintenance of which is driving decisions about the long-term operation of Glen Canyon Dam.

Federal manipulation of Navajos in Colorado River matters in the 1920s and 1930s, as destructive as it may have been, did not attract the attention of the American public. The completion of the railroad just prior to the turn of the century opened the Southwest to the outside. With the railroad came a tourist industry that included marketing Indian art, architecture, and culture for outside consumption. Shortly after the railroad reached Albuquerque in 1880, the company hired Fred Harvey to build and manage restaurant and other facilities for travelers along the railroad line. Not only did he develop elegant accommodations that transformed the experience of railroad travel during the early twentieth century, but he helped develop and promote tourism throughout the Southwest on a massive scale, including the renowned "Indian Detour," which reached its peak in the 1920s. Fred Harvey and the Santa Fe Railroad capitalized on the growing American interest in collection of Indian arts, engendered in part by large-scale archaeological investigations and the opening of the west by the railroad (Roberts 1980). The Santa Fe Railway launched a massive and highly successful advertising campaign, creating as a result a manufactured and extremely popular American Indian image:

> Since the primary concern of the Santa Fe Railway was to attract passengers and freight, one would not expect its advertising department to address the complexities of the people and the land the railroad was promoting. However, in assuming the cultural legacy of the American Indian, the admen gave the impression that they were a knowledgeable "ethnographic authority," confidently imposing themselves on another culture by encapsulating it both in image and aphorism. Though the Santa Fe knew little about the meaning and function of the cultures it was portraying, it was able to create emblematic and striking images of Southwest Indian life. The railroad found a way of successfully integrating these images into its own designs for corporate self-enhancement and growth for the selling of the West to tourists and settlers (McCluhan 1986:6).

Tourism at the Grand Canyon was developing during the first decades of the twentieth century as part of the Fred Harvey/Santa Fe Railway tradition, a tradition that packaged and sold the popular romanticism of the Southwest. The Santa Fe railroad completed construction of the Grand Canyon Railway in 1901, connecting the Santa Fe Railway to nearly the head of the Bright Angel trail and, in a larger sense, connecting the Grand Canyon to the East. Four years later, Fred Harvey and the Santa Fe Railway opened El Tovar Hotel, initiating a period of elegant tourist development (Thomas 1978:13–20). Throughout the 1920s and 1930s, tourist accommodations were added to the South Rim, much of it emphasizing Fred Harvey's marketing of the Indian image. The Bright Angel lodge and the

Desert View Tower were built in the Pueblo Revival style, decorated with Navajo rugs and Puebloan motifs. The Hopi House, a replica of a Hopi building, was built to house the Navajos and Hopis who sold arts and crafts and performed dances for tourists (Chappell 1976:98).

By the 1920s, Fred Harvey automobile tours to the Navajo reservation and the Hopi village of Moenkopi were added to the Grand Canyon's attractions. The "Navahopi Road" brought thousands of tourists from El Tovar Hotel and Bright Angel cottages via the Desert View Road

> through the Coconino Basin to a point overlooking the canyon of the Little Colorado. The road then follows the Little Colorado due east and the first stop is made at a newly discovered petrified forest, where some 30 or 40 trees, some larger than any living tree in Arizona, may be seen. Next stop is at the Navajo Indian trading post at Cameron. This is the western outpost of the Navajo Reservation and is 75 miles from the nearest railroad. The Little Colorado River is crossed at this point by way of the steel suspension bridge 660 feet long, and the route follows the main road across the Painted Desert to Tuba City, where the headquarters of the Navajo Indian agent are located. Some 400 Indian children are seen at well-equipped Government schools here. The Hopi village of Moenkopi is next visited, where the visitor has a glimpse of Indian life almost untouched by white civilization (United States Department of the Interior 1926:52).

Thus, the development of the Grand Canyon as part of the Santa Fe railroad–Fred Harvey tourist system opened the western Navajo Reservation to the outside world and made Navajos a tourist commodity—part of the scenic and natural wonder of the Grand Canyon.

The scenic wonders of northern Arizona and southern Utah became even more accessible with the completion of the Grand Canyon Bridge (now Navajo Bridge) just downstream from Lees Ferry in 1929 (Figure 12). Billed as the "biggest news feature in the history of the southwest" (*Coconino Sun,* June 21, 1929), the dedication of the bridge attracted more than 7,000 visitors, between 1,000 and 2,000 Indians, and the governors of four states. Archaeological remains of the construction camps and the camps from attenders of the dedication ceremonies were recorded in 1988 as site AZ:C:2:1 (ARS) (Stone 1988). The bridge created a link between Utah and Arizona, which, according to the *Saturday Evening Post,*

> will constitute a practically new route for automobiles . . . between the north rim of the Grand Canyon, the Kaibab Forest, the Bryce National Park, and Zion National Park on the one hand, and the south rim of the Grand Canyon, on the other side.
>
> The bridge brings closer together for the traveller these points as well as the Navajo and Hopi Indian country, in addition to the fascinations of the Spanish and Pueblos cultures of New Mexico. True it connects two of the most thinly populated parts of two of the most thinly populated states, but magnificent distances as well as density of human beings have no mean values. One abutment of the bridge and sixty miles of one approach road rest upon land belonging to the Navajo Indian reservation. . . .
>
> A much debated feature in the building of this bridge was a provision that part of the cost should be reimbursable against tribal funds of the Navajos. Those opposed said the Navajos did not want the bridge and would not use it; those in favor said a market would be opened up for their pottery and silverware, and that other bridges on the reservation in the same way had benefitted the Indians.

Figure 12. Navajo Bridge [GCES-41].

> Into this controversy we need not enter. In the long run however, we suspect that communication between whites and Indians must and will be facilitated. The traveller will benefit from contact with the superb open spaces; the Indian should gain from the intercourse of trade (*Saturday Evening Post,* June 15, 1929, reprinted in *Coconino Sun,* June 21, 1929).

Indeed, Navajos did benefit from the presence of the bridge in some ways, if not from the intercourse of trade. Perhaps it was not so much a matter of the bridge providing a benefit as it was a matter of Navajos turning an intrusion into something useful for themselves. The dances and blessings performed by Navajos during the two days of dedication ceremonies in 1929 sanctified the bridge, which has retained a ceremonial importance ever since. Since its construction, the bridge has provided a place over the river from which prayers are offered into the water below. The bridge was an especially important prayer offering place during World War II, the Korean War, the Vietnam War, and Desert Storm (Begay and Roberts, field notes, 1992), conflicts in which Navajos gave their service and some their lives. The continuing importance of Navajo Bridge as a prayer offering place is evidenced by the incorporation of a small, secluded platform into the Arizona Department of Transportation's current redesign of the bridge as a pedestrianway (Pauline Wilson, Tribal Liaison, Glen Canyon National Recreation Area, personal communication 1994).

World War II understandably diverted national attention from the Colorado River, its power-producing potential, and its dam-threatening silt. But downriver in California, the pool of demand for electric power was rising even faster, fed by the war industry and the immigrant population of dispossessed small ranchers and farmers from elsewhere in the Southwest. By the 1950s, this pool of demand was encroaching on the shores of Navajoland in the form of the proposed Glen Canyon Dam and Lake Powell.

Thus, thirty years after the dedication of Navajo Bridge, dedication ceremonies of equal magnitude were held for a second bridge across the Colorado River, only fifteen miles upriver from Navajo Bridge. The new bridge also joined Navajo land with the Arizona Strip and southern Utah, but this time for a different purpose: to facilitate construction of Glen Canyon Dam. Once again, thousands of spectators, government officials, the governors of the surrounding states, Navajo tribal officials, and the Navajo Tribal Band came from Phoenix to Salt Lake City to celebrate the completion of the bridge and initiate the construction of Glen Canyon Dam (Martin 1989:100), a project also fully endorsed by the Navajo Nation.

A week after President Eisenhower finalized the federal government's decision to build Glen Canyon Dam, on April 18, 1956, the Commissioner of Reclamation received a telegram from Navajo Tribal Chairman Paul Jones that the Navajo Nation had found on its borders just south of the proposed dam site a suitable place for the establishment of a town (Martin 1989:82). The Navajo Nation needed the electrical power the dam would provide to Navajo households on the reservation, not to mention the employment that construction of the dam and its roads and townsite would provide for Navajos and the revenues to the tribe that tourism at the newly created Lake Powell would generate (United States Department of the Interior 1961:196, 269–270).

Construction on Glen Canyon Dam offered bright prospects for the Navajo Nation. As roads developed and the promise of tourism grew, the Navajo Nation created the Navajo Tribal Parks Commission in 1957. A few years later the Bureau of Indian Affairs reported that "this active Tribal group has taken the initiative in the promotion of the tourist potential of the Reservation area—a potential that has increased enormously in recent years as the expanding Reservation road system has opened up new areas of the scenic hinterland to travel, and as developments such as Glen Canyon Dam promise the creation of new recreational areas on the Reservation" (United States Department of the Interior 1961:194). New recreational areas were created to take advantage of Glen Canyon Dam's tourism potential, including Little Colorado River Navajo Tribal Park (formally established by ACMA-36-62), Grand Canyon Navajo Tribal Park, and Lake Powell Navajo Tribal Park.

The following year, 1958, the Navajo Nation exchanged 53,000 acres of Navajo land that would become the town of Page for about the same amount of land in southeastern Utah (Aneth), settlement on which had been a source of conflict between Navajos and Mormons for a long time (United States Department of the Interior 1961:262; Kelley 1985:20). Around the same time, the Navajo Nation was negotiating with the Arizona Public Service Company for construction of a 350,000 kw power generating plant in the Four Corners region of New Mexico, which would provide electricity to the reservation and, together with Glen Canyon Dam, revenues to the tribe from coal and land leases:

> Since 1950, a number of developments aside from oil, gas and uranium have entered the Reservation scene. Of these, one of the most important is the Glen Canyon Dam. . . . A new town, named Page, has grown up where there was nothing in previous years, and about 1,000 workers have been employed since at the damsite on a construction project that will require about 10 years for completion. . . . Generators at the dam will produce 1,200,000 kw of electricity for industrial use, and the newly formed lake, extending for a distance of 186 miles behind the dam, will become a major recreational area. Since the area will be partly located within the Navajo Reservation, it will contribute to the economy of the Tribe, while, at the same time, the Tribe through its Tribal Utility Authority will take advantage of power available from the generators at Glen Canyon Dam for industrial and domestic use on the Reservation (Department of the Interior 1961:269–270).

> The long range plans developed by the Navajo Tribe for electrification of the Reservation area cover a 10-year period extending from 1960–1970, and will require the investment of about $6.6 million. Power will be supplied by the Arizona Public Service plant and Glen Canyon Dam after 1963 and 1964 respectively. With completion of the Reservation System, all communities will be served (Department of the Interior 1961:196).

With prospects for reservationwide electrification, increased tourism to new tribal parks, and increased general revenues looking so good in 1961, it is no surprise that the Navajo Tribal Council passed a resolution (CMY-28-61) in the same year urging the Bureau of Reclamation to construct a new dam in Marble Canyon, about 55 miles downstream from Glen Canyon Dam.

Construction of dams in Marble Canyon and in Granite Gorge at the mouth of Bridge Canyon on the Hualapai Indian Reservation about 250 miles downstream from Glen Canyon Dam had been part of the Bureau of Reclamation's plans from the beginning. Completion of Hoover and Glen Canyon Dams hadn't changed those plans. Exploration of the proposed Marble Canyon Dam site [GCES-53 and GCES-54] progressed even as plans for the construction of Glen Canyon Dam began to take shape up (Automobile Club of Southern California 1951:6; Martin 1989). In 1961, the Navajo Nation was anxious for Bureau of Reclamation oversight of the project "in order to forestall the construction of a dam at Marble Canyon then urged by the Arizona Power Authority before the Federal Power Commission, [because] the Navajo Tribe was led to believe that a Federal dam would be more to the advantage of the tribe than a privately constructed dam in affording to the Tribe preferential treatment of purchase of power" (*Navajo Times* 1966:9).

By 1963, the proposed Marble Canyon and Bridge Canyon hydroelectric dams became part of a phenomenally complex, multibillion-dollar federal water plan intended to implement a Supreme Court decision settling disputes between the states of Arizona and California about entitlements to Colorado River water (see Martin 1989:250–279 for extensive discussion). The Bridge Canyon Dam would have backed up about 95 miles of the Colorado River through the Grand Canyon, including 13 miles of river within the boundaries of Grand Canyon National Park. Marble Canyon Dam, although 12.5 miles outside of the (then) boundaries of Grand Canyon National Park, would have inundated 46 miles of Marble Canyon, upriver all the way to Glen Canyon Dam. By 1966, extensive nationwide advertising by the Sierra Club had generated public opposition to additional dams in Grand or Marble canyons (Crumbo 1981:18; Martin 1989:263–273). The same year, the Navajo Nation reversed its position and joined opponents of more dams in either Grand or Marble canyons (Hyde and Jett 1967).

The Navajo Tribal Council cited numerous sources of evidence in its resolution opposing any new dam construction in the canyons. One main reason for the Tribe's opposition was that coal-fired electrical generating plants at Mohave, Nevada, and Page could provide more economical sources for base or peak power, and these plants, not incidentally, buy Navajo coal. A second reason was that the federal government, like the Arizona Power Authority five years before, with a blatant disregard for the Navajo Nation's ownership of lands in Marble Canyon, did not consult the Tribe or offer compensation for losses of land. Yet another reason was that flooding Marble Canyon would make the Navajo Nation's relatively new Grand Canyon Navajo Tribal Park less attractive to tourists, not to mention spoiling Marble Canyon for the Navajo people. Instead of Marble Canyon Dam, the Navajo Nation endorsed H.R. 14176, which would enlarge the boundaries of Grand Canyon National Park to encompass Marble Canyon (excluding Grand Canyon Navajo Tribal Park, which the Navajo Nation and the National Park Service would administer jointly). The bill also implicitly endorsed coal-fired generating stations to replace the "needless waste of public funds" in constructing hydroelectric dams (*Navajo Times* 1966).

Two years later, in 1968, Congress passed P.L. 90-537, which prohibited further study or construction of hydroelectric dams in Grand Canyon without Congressional approval. By July of that year, the Bureau of Reclamation was authorized to participate in the construction of a coal-fired generating station near Page, which would replace the proposed Marble Canyon Dam in powering the Central Arizona Project (Crumbo 1981:18; Martin 1989:284).

The Navajo Nation seemingly won a small victory in opposing the Marble Canyon Dam by getting the Navajo Generating Station instead, which leases Navajo land (near Page) and buys Navajo coal (from Black Mesa). But the Navajo Nation was never able to realize the tourism potential of Grand Canyon Navajo Tribal Park along the rim of Marble Canyon. For in the same year that the Navajo Nation began opposing construction of Marble Canyon Dam, the federal government imposed a freeze on development in most of the western Navajo Reservation, including the Marble Canyon Tribal Park site (Figure 13).

The "Bennett Freeze," named after its perpetrator, Commissioner of Indian Affairs Robert Bennett, resulted from competition for control of the resources—water and coal—needed to generate power for burgeoning southern California and Arizona. In this competition the coal and power-generating giants and the federal agencies had an advantage over both Navajo and Hopi tribal governments, an advantage that was maintained by the division between the two tribes. This divide-and-rule pattern had developed in the 1930s when the federal government had set up the Hopi tribal government and established an exclusive Hopi use area in the middle of the much larger 1882 Executive Order reservation on and around Black Mesa, occupied then mostly by Navajos. Many Hopis considered this exclusive-use area, which was technically a grazing district originally established in connection with the stock reduction program, to be too small. With federal authorization, the Hopi tribal government sued the Navajo Nation government for half of the 1882 reservation and won the suit *(Healing v. Jones)* in 1962. Four years later, the lawyer who had handled the *Healing v. Jones* lawsuit, John Boyden, learned that Arizona Public Service Company wanted to build a high-voltage electrical transmission line across the Navajo Reservation west of the 1882 Executive Order reservation. Boyden, whose clients also included Peabody Coal Company, told Commissioner Bennett that the Hopi tribal government asserted an interest in that area, the major part of the reservation whose boundary Congress had confirmed in the 1934 Arizona Navajo Boundary Act, another area occupied mainly by Navajos but with a small Hopi enclave, Moenkopi village, in the middle. Therefore, Bennett declared a freeze on all potential income-producing projects within the area unless both tribal governments approved. Revenues were then to go into an escrow account, thus encouraging the two tribal governments to settle their differences in court. Congress authorized the Hopis to sue in 1974, in the same statute that authorized the infamous partitioning of the 1882 Executive Order reservation and required thousands of Navajos to abandon their homes. This statute thus coupled conflict resolution with an action that fanned the acrimony between the two tribes. Congress piled more fuel on the fire by confirming the administrative freeze by statute in 1980. The case did not go to trial until 1989, and the freeze remained in effect until the Arizona District Court judgment lifted it in 1992 (it is still in effect in parts of the area judged to have been under Navajo and Hopi joint use in 1934) (Redhouse 1985:26–27; *Masayesva v. Zah* 1992).

Throughout the 26 years of economic stagnation imposed by the Bennett Freeze, the Grand Canyon National Park, Glen Canyon Dam, Lake Powell, and the Navajo Generating Station directly or indirectly provided the greatest sources of wage income to Navajo communities in the western Reservation, especially Lechee, Coppermine, Gap/Bodaway, Cameron, and Tuba City. Some economic benefit comes from direct employment with the National Park Service, the Salt River Project (Navajo Generating Station), and ARA Leisure Services (Navajo Nation 1993); most comes indirectly from the huge amounts of tourism routed across the Navajo Reservation via Highways 264, 89, and 64 to the Grand Canyon and Lake Powell (Table 3). More than six million people visited Glen Canyon National Recreation Area and Grand Canyon National Park in 1987, and the Navajo Nation estimates that 435,000 people visit the

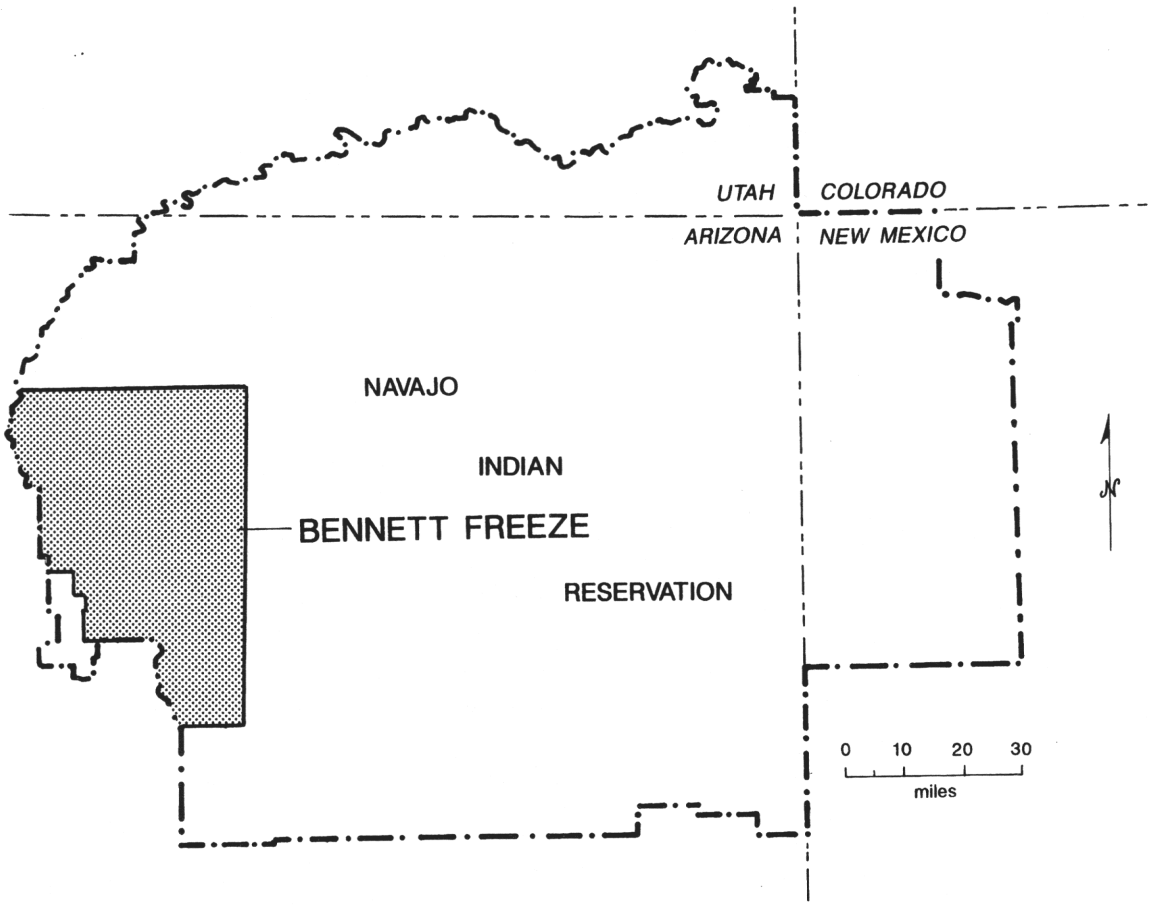

Figure 13. The area encompassed by the Bennett Freeze, which halted economic development in a large portion of the western Navajo Reservation.

Grand Canyon Tribal Recreation Area, Little Colorado River Gorge Navajo Tribal Park, and Lake Powell Tribal Recreation Area annually (Navajo Nation 1988:119).

The Navajo Nation provides services to these thousands of visitors at the four motels and eleven restaurants in Cameron and Tuba City, and a handful of gas stations and convenience stores scattered along the expanses of highway between Tuba City, Cameron, and Page (Navajo Nation 1993). Navajos work at these businesses, as well as off the reservation in Page and even Flagstaff. Many people benefit from the tourism by selling arts and crafts in family-owned roadside stands along the highways and in the Little Colorado River Gorge Navajo Tribal Park (see Indermill 1990 for extensive discussion), and to some extent at National Park Service concessions (see Cameron Chapter 1993; MacArthur 1988:22–27). Some residents make money by running unauthorized tours into the scenic backcountry along the south side of Lake Powell or elsewhere (Jon Dover, Navajo Nation Resources Enforcement Officer, personal communication 1992). Unemployment in the former Bennett Freeze area is 50–60%, and the per capita income is about $3,200 annually (Scott Russell, expert witness for the Navajo Nation in 1934 litigation, personal communication 1994). The income produced directly and indirectly by tourism at Grand and Glen canyons is therefore important to the Navajo communities on their borders. Some communities continue to push for additional tourist developments, such as a proposed community operated park at "The Corkscrew" in the Lechee Chapter; tribal development of the proposed Antelope Point Marina on the south shores of Lake Powell also in the Lechee Chapter; and Navajo Nation proposals for

Table 3. Navajo Nation Tribal Parks and Recreation Areas

Park	Acreage	Location	Estimated Annual Visitation
Monument Valley Navajo Tribal Park	29,816	25 miles north of Kayenta, near Utah-Arizona border	140,000
Lake Powell Tribal Recreation Area	2,218,112.8	northwestern part of Navajo Nation, southeastern part of Lake Powell; also includes Tsegi Canyon	210,000
Little Colorado River Gorge Navajo Tribal Park	360,992.23	west of U.S. Highway 89 to western Navajo Nation border from Cameron, Arizona, and north of State Highway 64	175,000
Tse Bonito Tribal Park	26.15	adjacent to State Highway 264 and Arizona-New Mexico state line; in Window Rock, Arizona	160,000
Window Rock Tribal Park	85.14	1.5 miles northeast of Arizona State Highway 264 and Navajo Route 12	80,000
Kinlichee Tribal Park	640	1 mile north of Cross Canyon Trading Post, 6.6 miles east of Ganado, Arizona, off State Highway 264	8,000
Asaayi Tribal Recreation Area	645,579	12 miles northeast of Navajo, New Mexico	40,000
Grand Canyon Tribal Recreation Area	303,667.2	west of U.S. Highway 89 to western Navajo Nation border from near Lechee to The Gap; eastern side of Colorado River	50,000

Source: Navajo Nation Parks and Recreation Department, June 7, 1988

resort development on the rim of Marble Canyon in the Gap/Bodaway Chapter (Navajo Nation Historic Preservation Department files, Window Rock, Arizona). Some communities, conversely, are reluctant to rush into development, wishing to ensure a balance between economic and preservation needs. Since the Bennett Freeze has been lifted, the Navajo Nation is actively pursuing economic development in the former Bennett Freeze communities, which will undoubtedly include more tourist services along the major routes to the Grand Canyon and Lake Powell (Stanley Robbins, Navajo Nation Council Delegate, personal communication 1994).

Besides its direct and indirect role as a source of wage income to many Navajo families, the Colorado River also provides water to livestock from which many Navajos make a living. It supplies electricity to Navajo households reservationwide through the Navajo Tribal Utility Authority's purchase of hydropower from Western Area Power Administration. Finally, the Colorado River is a source of spiritual renewal

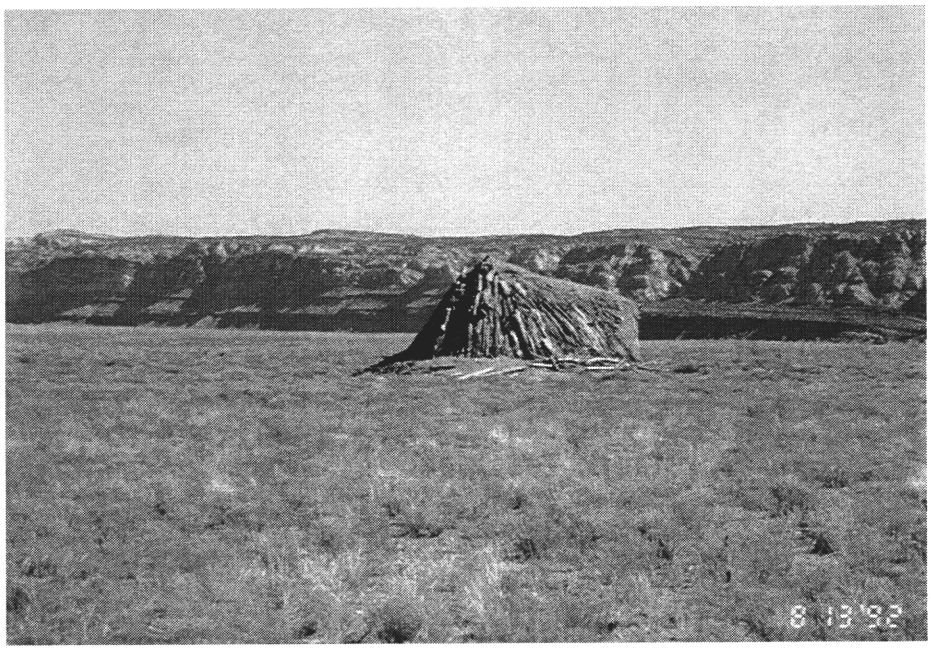

Figure 14. Navajo people have lived along the rims of the Grand Canyon for many generations.

for Navajo people who offer prayers or ritually journey into the canyon gorges, and for those who just like to go to Lake Powell and Lees Ferry to fish and camp along the beaches, or to hike into the Marble Canyon tributaries. Navajos have been depending on the Colorado River in Glen and Grand canyons throughout history as a source of physical and spiritual sustenance (Figure 14). As Navajo history reveals, the river takes care of the people, it bounds the Navajo world and protects its inhabitants. In this way, the Colorado River, the canyons through which it flows, and the plants and animals it supports are a "cultural resource" in the most holistic sense.

CONCLUSION

Considering the richness and depth of Navajo tradition about and physical presence in the Grand Canyon, most literature and interpretive programs are woefully silent on the importance of the Grand Canyon to the Navajo people. When we began researching Navajo history and cultural resources in the Grand Canyon for the Glen Canyon Dam EIS, we were shocked not only at the lack of recorded information about Navajo affiliation, but also at the seemingly pervasive attitude that we really didn't have much to research because Paiutes, Hopis, Havasupais, and Hualapais are the only tribes with any meaningful cultural and historical ties to the Grand Canyon.

Ironically, this misconception is a product of history, too. Some of it is an artifact of John Wesley Powell's influence in the telling and retelling of the anthropological story of the Grand Canyon over the past 125 years or so. Prior to his Green and Colorado River explorations beginning in 1869, Powell spent portions of 1867 and 1868 in the Rocky Mountain area conducting research sponsored by the Illinois State Normal University. During the winter he spent on the White River in 1868, Powell began ethnographic studies among the Utes, who were also wintering nearby. By the time he began his first exploration of the Green and Colorado rivers, Powell had attained workable knowledge of the Ute and Southern Paiute languages (Fowler and Fowler 1969:159). Between his first Colorado River exploration and his second

trip in 1871, Powell had established relationships with several Paiute groups and "recorded a number of myths and tales, miscellaneous data, and vocabulary items by the light of the campfire. He would draw on this collection and his later ones for his writings on North American mythology" (Fowler and Fowler 1969:162). By the time the second trip was organized in 1871, Powell's approach to the Colorado River was from Utah, camping and traveling with Paiutes:

> On July 10, Powell left the river party at the mouth of the Duschesne River to go to the Uintah Indian Agency for supplies. . . . Powell then accompanied them during August. . . . Along the way, Powell seized an opportunity to continue his ethnographic research. . . .
>
> Failing to find the mouth of the Dirty Devil, Powell rejoined the river party on August 29 at Gunnison's Crossing and remained with it until it reached the Crossing of the Fathers. He then returned to Salt Lake City via Kanab. The rest of the party continued to Lonely Dell (Lees Ferry) at the mouth of the Paria River where they stored the boats for the winter.
>
> With the river trip completed as far as Lonely Dell, Powell and his men established a winter camp at Kanab . . . [where] Powell intermittently gathered information from a band of Kaibab Paiute camped near Kanab.
>
> Powell was in Washington from late February until late July 1872. Then, with a party that included Indians, Powell made a brief trek across the Kaibab Plateau in early August, prior to starting on the last leg of the river trip through Marble and Grand Canyon.
>
> After completing the trip, Powell . . ., accompanied by Chuarumpeak and another Kaibab Paiute, explored the upper Kanab Canyon area. Powell had intermittent contact with members of the Kaibab, Uinkarets, and Shivwits Paiute throughout the fall of 1872 until he left for Washington in late November (Fowler and Fowler 1969:162–163).

By the time Powell completed his explorations of the Colorado River through the Grand Canyon and reported on his ethnographic observations, he was thoroughly immersed in Paiute traditions and ethnohistory. Imagine how different his conceptualization of the American Indian ethnohistory of Marble and Grand Canyons would have been had his approach to the river been through Arizona, spending much of the year camping on Gray Mountain or Cedar Ridge or Tuba City. Powell's observations laid the foundation upon which the anthropological story of the Grand Canyon has been based, and those observations were made from the perspective of the north side of the river.

Powell's influence in reconstructing the human history of the Colorado River through Glen and Marble canyons provides contemporary researchers with preconceived expectations about what their research will reveal. For example, Sweeney (1963:10) reported that "Early Glen Canyon Project surveys of the area encircling the mainstem of the Colorado River and the drainages lateral to it, had revealed several sites of Navajo affiliation, but few attributable to either Southern Paiute or Southern Ute. In an attempt to . . . understand Southern Paiute occupation and archeology more fully, three brief surveys were conducted during the 1962 field season." Conducting investigations specifically for the purposes of understanding of the Paiute occupation of the area is a perfectly legitimate goal. In fact, gaining an understanding of the Navajo occupation of the area is the specific purpose for which we conducted the GCES-NCRP. The point is, given that archaeological sites of Navajo affiliation were the ones found on the original surveys to which Sweeney refers, why does information on the extent of Navajo affiliation with the Colorado

River through Glen and Grand Canyons continue to be absent from most literature and public interpretive programs? Because data continue to be collected and interpreted, however unintentionally, in order to reconfirm rather than challenge received anthropological knowledge.

The Santa Fe Railroad's advertising and Mary Colter's architectural designs, perhaps less directly but just as importantly, had a similar influence on popular perceptions of Native American affiliation with the Grand Canyon. Colter, a student of architecture and archaeology, was hired by Fred Harvey in 1902 to design impressive, elegant hotels along the Santa Fe railroad system throughout the Southwest, including La Fonda in Santa Fe, the Alvarado in Albuquerque, and El Navajo in Gallup. During the early 1900s, she combined architecture with ethnology and shifted the entire Fred Harvey style from Spanish Revival to Indian Pueblo (Chappell 1976:97; Gratten 1980). At Grand Canyon, she built the Bright Angel Lodge in the pueblo style, the Desert View Watchtower in the style of a Puebloan tower kiva, and the Hopi House, a replica of a contemporary pueblo (which housed Navajo and Hopi artists and dancers). Most tourists traveled by train during the early part of the century, and by the time they reached Grand Canyon, traveling perhaps from Santa Fe or Albuquerque, had been thoroughly immersed in Pueblo-style architecture and Santa Fe Railway's popular images of the "Santa Fe Indian" throughout New Mexico and Arizona. These images pervaded American thinking, including that of anthropologists and the National Park Service. Surrounded by Puebloan imagery and names such as Hopi House, the idea of the predominantly Puebloan affiliation with Grand Canyon was passed from generation to generation of National Park Service employees, until it became the story of the Grand Canyon.

This problem of expert misrepresentation and its popular spinoffs is rooted in at least one assumption used as widely as it is denounced. All modern anthropologists and archaeologists have been taught that language, ethnicity, culture, and genealogy are all different, and one cannot assume either that they coincide in the present or that they can be projected backward through time. Yet most culture histories and studies of living Southwest Indian communities are saturated with just this (usually unacknowledged) assumption. Although it is much older, this assumption may also be partly the legacy of the Indian Claims Commission, which encouraged Indian communities (and especially the anthropological expert witnesses) to project their present distinctiveness into the past to justify claims of exclusive use to a land base. But that land may in fact have been shared with other communities only later made distinct by federally imposed treaties, relocation, and administration.

The Navajo oral histories that began this chapter show that Navajos recognize their own diverse origins back to prehistoric groups of different geographical, linguistic, cultural, and ethnic affiliation, including the prehistoric Anasazis of the Colorado Plateau. Documentary references to *Bi'ígháanii,* the Navajo headman of the mid 1800s with connections to both Hopi and Havasupai communities, and with Navajo, Ute, and Paiute followers, touch on a later manifestation of this diversity. From other parts of Navajoland come a fascinating array of archaeological, documentary, and oral historical pieces of evidence of the diverse roots of the modern Navajo people and their culture.

According to Navajo oral tradition, many Navajo clans originated in or absorbed people from Puebloan (including Hopi) communities and even, in the case of the *Táchii'nii,* absorbed remnants of prehistoric Anasazi groups that survived in Navajoland. The archaeological record in general tends to be ambiguous and subject to multiple conflicting interpretations, and documents often contradict each other, as do their interpretations. Nevertheless, archaeological and documentary evidence exists that is consistent with Navajo oral tradition (Brugge 1983; Forbes 1960, 1966; Hogan 1989; Kelley and Francis 1992; Worcester 1951).

If the experts and their popularizers have oversimplified Navajo culture history, they have inevitably done the same with the culture histories of the other modern Indian communities, even though the experts

acknowledge the connections of these groups to the Grand Canyon more clearly, for many modern members of all these communities have forebears in common. It is time for anthropologists and archaeologists to jettison the stories that assume these communities are inherently and historically divided and have potentially conflicting interests in reconstructing the past. By encouraging argument among modern Indian communities about the truthfulness of the experts' stories, those stories actually create the ethnic divisions whose previous existence they assert.

Chapter 4

RESOURCES IDENTIFIED

This chapter is an inventory of places in and near the river corridors that are significant in Navajo culture and history. In Chapter 3, we emphasized the story of the GCES study area and surroundings as told by the people themselves and by printed sources. We embedded references to specific places in the text. Here in Chapter 4, we put the individual places in the foreground by listing them as an inventory. We subsume references to their meaning and significance under the entry for each place.

Besides the conversations with Navajo residents and the printed sources used in Chapter 3, the information in this chapter comes from two other types of printed sources, both of which focus on Navajo sacred places:

1. Stories connected with Navajo ceremonies. These stories tell of the origins of the earth and sky, the natural world, the Navajos and other peoples and their customs, and most especially Navajo ceremonial practices. The places related to ceremonial stories are based on most of the published literature on Navajo ceremonies and the stories that go with them. Most of the stories in this body of literature were recorded forty years ago or more by chanters and other storytellers from all over Navajoland. We believe that ceremonialists from far western Navajoland are underrepresented in this literature, and so probably are places in the Grand Canyon/Little Colorado region. Many of the places in and near the GCES study area come from the stories of Frank Goldtooth, a chanter from near Tuba City, as recorded in 1951 by Fishler (1953). Although Goldtooth doesn't identify the ceremonies with which his stories are associated, we know the ceremonial associations from other versions of these stories. Sacred places recorded in connection with the Navajo Land Claim before the Indian Claims Commission are also included in this group, since their ceremonial associations are usually specified (Van Valkenburgh 1974; Watson 1964). The bibliography lists all the printed sources consulted about Navajo ceremonial stories, whether cited in the text or not, to indicate the extent of our search for published references to sacred places in the GCES study area. (Much of this material also appears in a report for the Navajo-Hopi Land Commission [Kelley and Francis 1994] and is used here with the commission's consent.)

2. Studies of specific localities within Navajoland based on interviews in which local residents identified sacred places. The reports often do not tell whether stories or ceremonial practices are associated with each place. We know of only two studies of this type for the GCES study area. One is an expert witness report based on fieldwork by Vannette and Tso (Vannette 1988) prepared on behalf of the Navajo Nation for the 1934 Arizona Navajo Boundary Act lawsuit filed by the Hopi Tribe. This study covers all of Land Management District 3 in the Navajo Reservation and neighboring areas. It therefore encompasses the GCES study area. The second study is a much less fine-grained report by Vannette and Feary (1981) on Navajo sacred places in the Coconino, Kaibab, and Sitgreaves National Forests in Arizona. All places identified by Vannette and Feary in or near the GCES study area are also listed by Vannette (1988).

The compilation of sacred places mentioned in the literature on ceremonial stories (Kelley and Francis 1994, supplemented by the authors' personal research files) and the two local inventories of sacred places based on interviews (Vannette 1988; Vannette and Feary 1981) all have reference numbers in these sources. Although we use our own numbering system designated by the prefix GCES, we also provide the number of each place from the other sources, with a prefix to show the source (KF94 for Kelley and Francis 1994, KFnd for Kelley's personal research files; and V88 for Vannette 1988, which also includes the relevant places listed in Vannette and Feary 1981).

In each entry below, the Navajo name for the place is given first, followed by a translation (in parentheses) and the English name [in brackets] as it appears on the USGS topographic maps. Numbers assigned by other studies, if any, are given, along with any other published references. Finally, cross-references to the other chapters are provided. Locations of these places are plotted on Map 1, which shows modern political and geographic features; Map 2, showing pre-Fort Sumner sites identified by other researchers; and Map 3, showing all GCES locations.

THE RIVERS

In addition to the stories local people told about the Colorado and Little Colorado rivers in Chapter 3 are previously recorded stories connected with Navajo ceremonies and sacred places.

Tooh (River) [Colorado River] (Also KF94-343, V88(3)-15) (Chapters 3 and 5)

The people who talked with us during this project emphasized that the Colorado River, as a living being, is a protector of the Navajo people. But like all Holy People, it will be offended and can cause injury or death when it does not receive proper offerings. Offerings are presented where it is most convenient. Many prayer offering places are located along the Colorado River and along the canyon rims. Ideally, offerings should be made into the river, but time and travel restrictions often necessitate offerings to the river being made from the rim. Many times, only corn pollen, *tádídtín,* is used. Precious stone offerings are given when it becomes part of a formal ritual event.

The Colorado River is associated with Nightway and Plumeway by chanters of the 1880s around Fort Wingate (Matthews 1897, 1902); with Windway by Black Mustache of Chinle in 1919 (Wyman 1962); with Upward Reaching Way by Gishin Biye' of Keams Canyon in 1908 (Haile 1981); with Waterway by Long Moustache of Crystal in 1933 and Son of Mr. Coal near Hopi in 1937 (Wheelwright 1946b); with Hailway by Tł'ahii (Hosteen Klah) of Newcomb in 1937 (Wheelwright 1946a:45); with Gameway by local people in the 1980s (Vannette 1988:36); and with Mountaintop Way (Watson 1964:17). The river also figured in Tuba City resident Frank Goldtooth's stories in 1951 (Fishler 1953), although he did not specify ceremonial links.

Frank Goldtooth's version of the creation of the Colorado River, which differs from the version we heard, tells how First Man, First Woman, Salt Woman, and Coyote emerged from the lower world and put the present earth's surface and celestial world in order. The Colorado River is one of the natural boundaries of the Navajos. The implication is that First Man placed it when he was ordering the earth's surface. According to Navajo Blessingway stories (Wyman 1970), Asdzą́ą́ Nádleehí (Changing Woman) was miraculously born and grew up to take over the creation from First Man after this first ordering. Her twin sons, children of the sun, killed the monsters that plagued the earth. She passed by here on her way west to her home in the western ocean. She traveled with an entourage of animals that she penned east of Echo Cliffs while she went to the junction of the Colorado and the Little Colorado (see Tooh Ahidiilíní, GCES-33, below). The animals escaped, but the Colorado River checked their wandering.

In the Upward Reaching Way story, Asdzą́ą́ Nádleehí creates the originators of what will be several Navajo clans (the Western Water Clans) and sends them back north and east to what will be the Navajos' homeland. The story refers to "waters in the west and north," probably the Colorado, as a source of waters collected for ceremonial use. In the Nightway, Waterway, Plumeway, and Windway stories, the young man who is putting the ceremonial repertoire together floats down the river to learn ceremonial procedures. (These stories are much like the one told by HL and reproduced in Chapter 3, pp. 26–28.)

In the story of the prototype Hailway ceremony, incense comes from here. According to Watson (1964:17), the hero of Mountaintop Way, Male Branch, crossed back and forth over the river.

In the 1980s, local people told Vannette and Tso,

> This river is designated as the Male River or Long Spirit River by the Navajo. Holy People visited this river as evidenced by the trail that exists, and they are still believed to reside there. Talking God's pets, Barking Dogs, are said to be present and the Wind's home is also found nearby. This place is mentioned in the stories of the people, and it is associated with Huntersway [Gameway]. Prayers for rain and stone offerings are made to this place.

People interviewed by Vannette and Feary (1981:18) named the Colorado as a sacred place.

***Tooh* (River) [Little Colorado River]** (KF94-342, V88(3)-16) (Chapters 3 and 5)

The Little Colorado River is mentioned in connection with stories of Blessingway by Frank Mitchell of Chinle in 1932 (Wyman 1970), Navajo Windway by Black Mustache of Chinle in 1929 (Wyman 1962), and Shootingway (Male) by Red Point of Ganado in 1924 (Reichard 1977). Frank Goldtooth of Tuba City also mentioned it in his 1951 stories of the Emergence and Changing Woman's trip to the west (Fishler 1953).

Frank Goldtooth's Emergence story mentions the Little Colorado as one of the natural boundaries of Navajoland, implying its placement by First Man. Goldtooth says that later, when Changing Woman was traveling westward, the Little Colorado, like the Colorado, restricted the movement of the animals that Changing Woman brought with her. Frank Mitchell's Blessingway story is that of the Western Water Clan people. They had to cross this river on their way north and east. Similarly, in Red Point's story of the Shootingway (Male), the immortal buffalo people who lead the hero northeastward from the San Francisco Peaks and teach him the ceremonial repertoire cross this river. In the Windway story the hero visits the river to learn various parts of the Windway repertoire.

In the 1980s, local people interviewed by Vannette and Tso confirmed the Blessingway and Windway associations and also mentioned an association with Gameway, without specifying the story (Vannette 1988:36). They identified it as a place for ceremonial procedures to counter bad dreams, and as a prayer place, as well as a wind home. Vannette and Feary (1981:18) also record it as a sacred place.

***Tooh Bikooh* (River Gorge) [Little Colorado River Gorge]** (Chapters 3 and 5)

According to Frank Goldtooth's 1951 story (Fishler 1953) of Asdzą́ą́ Nádleehí's (Changing Woman's) travel westward, after she and Áshįįh Asdą́ą́ (Salt Woman) met at Tooh Ahidiilíní, the Confluence [GCES-33], they separated. Asdzą́ą́ Nádleehí went south along the Colorado (see Áshįįh Ha'atiin, GCES-1, below) and then westward along the south rim of the Grand Canyon (probably Gohniinii Atiin, GCES-25). Áshįįh Asdą́ą́ went up the Little Colorado River Gorge (KF94-691; V88(3)-55).

> There is a jackass hoof print made by some of the Salt Woman's animals as she drove them out of the hole to the west side of Shadow Mountain [122]. She became warm and threw the sweat from her forehead, and it made the soil salty there. She continued up the Little Colorado Canyon and left a finger mark there upon the wall. When everything is

> good upon the earth, the mark is new, if it is old, then things are evil in the world (Fishler 1953:85–88).

In the 1980s, local people told Vannette and Tso (Vannette 1988:41) that there are offering places along the Little Colorado.

TRAILS

There are many recorded and unrecorded trails into the Grand Canyon and the Little Colorado River canyon. Those identified by GCES-NCRP consultants are listed below.

GCES-1: *Áshiłh ha'atiin* (Salt Trail out of Canyon) [portions are identified as Tanner Trail and Beamer Trail] (KF94-513; V88(3)-63 and V88(3)-167) (NLC Site W-LLC-C-O, Navajo Tribe 1963:64, 71, 94; also historical site 52, Correll 1968; Butchart 1962:50) (Chapters 3 and 5, Figure 15)

This trail begins east of Desert View Tower and joins what is now called Tanner Trail. According to previously recorded oral tradition, Peshlakai Etsidi's family descended the trail "just east of Kin Nez" [Desert View Tower, GCES-46] "the summer after the Fire Dance" (probably 1864).

> The trail is still there; it goes up a canyon on the other side of the river into the Ute country; we did not cross the river; we did not go into the lower canyon which has very steep sides. We stayed on level places above it where there was lots of grass. In the fall we came out of the canyon about where the town of Grand Canyon is now, I think. There was no trail there then. We made ropes of yucca and pulled the sheep up small cliffs by them (Etsidi in Brewer 1937:57).

> This is the trail that the old people who lived in the Upper Coconino Basin used when they went to the Salt. . . . This was used long before the Navajo went to Fort Sumner. At the head of this trail there is supposed to be a black rock which is called *Tsé jóózh si'ání* [GCES-31, below]. This was a rounded rock. Before going down the Salt Trail the Navajo had to offer corn pollen to the rock because it was laid down there by the Salt Woman. They also carried some of this cornmeal and water in sacred antelope and deer hides—also at times in the old-style carrying baskets. . . . This trail went down the canyon for some ways and then cut along the upper benches under Desert View. . . . Turning north across a narrow ridge the trail worked down into the lower canyon benches over a slanting ridge. Once at the bottom of the canyon the old Navajo started following the trail that went up the south side of the river until they came to a place called Trap Trail, *Tsétát'ah ha'atiin* [Palisades Creek, GCES-3]. This was a perfect wall which could only be passed over by use of hand and foot holds. They always stopped there going down. On the next day they had to go to the Salt and return to the Trap Trail before evening. While at the Salt Cave [GCES-35, below], located at approximately T32N R6E, Section 6, (from which salt has dropped to the floor) which they reached by turning up the Little Colorado River and crossing over to the north side to the cave *[sic]*. At the cave each made his own prayers and laid down his meal. Then they chewed a little and rubbed themselves while they prayed. When they went back to Trap Trail they only carried a little bit of salt. Some say that the salt changes color at different seasons. When they reached the head of the Salt Trail on the way back to their camps in the Upper Basin the old people had to pray and make offerings of salt at *Tsé jóózh si'ání,* the black rock

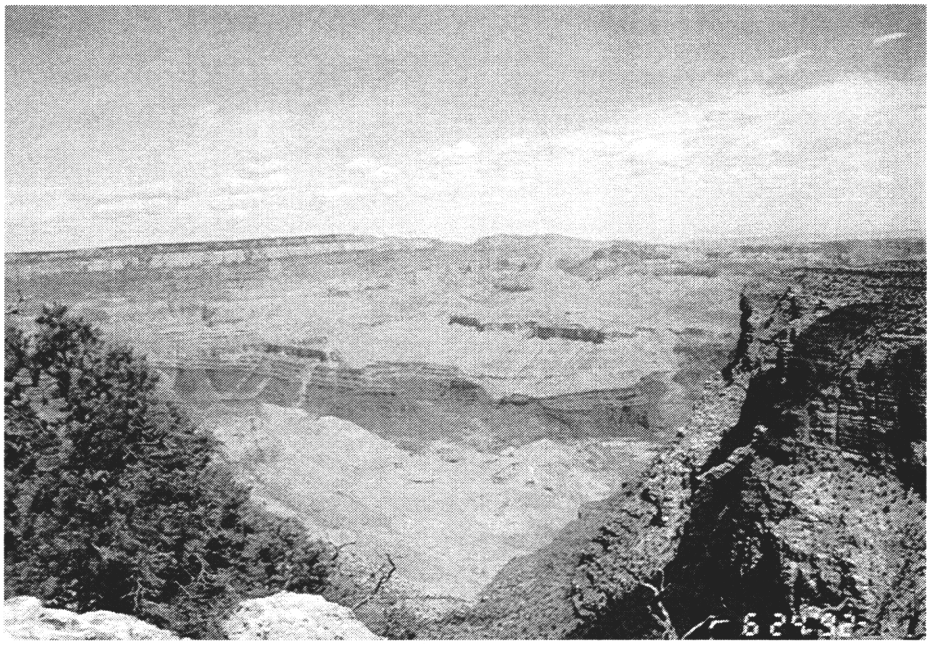

Figure 15. The head of Áshiłh ha'atiin [GCES-1], which begins east of Desert View Tower.

at the head of the trail—these were to the Salt Woman (Van Valkenburgh, NLC site W-LLC-C-O form 1953; see also Van Valkenburgh 1974:106, 113).

Navajos continue to use this trail, as described in one GCES consultant's story about his trip into the canyon with his father in the 1930s (Chapter 3). Butchart (1962:51) mentions the death of an elderly Navajo man who had gone down the trail in the late 1950s to gather herbs.

Frank Goldtooth's 1951 story of Changing Woman going to the west (Fishler 1953) tells of the emergence place of Salt Woman. He refers to the salt deposits [Áshiłh Deez'á, GCES-35, below] and also to the Hajíínáí, emergence place, at Tooh Ahidiilíní [GCES-33], as well as another trail from the northeast into the Little Colorado [Áshiłh Deez'á/Áshiłh Haasdzis, GCES-2].

There is another salt cave along the Colorado below the mouth of the Little Colorado [Áshiłh, GCES-34, below]. In the 1980s people told Vannette and Tso (Vannette 1988:43) that this other salt cave was another meeting place of Changing Woman and Salt Woman.

In Frank Goldtooth's 1951 story of Changing Woman's travel westward, Changing Woman emerged from the Grand Canyon at the head of Áshiłh Ha'atiin after her encounter with Water Horse (see Tooh Ahidiilíní, GCES-33, and Tó bihooyéé', GCES-10) and then continued westward (possibly over Gohniinii Atiin, GCES-25). A symbol for a trail shrine (possibly Tsé jóózh si'ání) on the Grand Canyon's south rim at the head of the old Tanner Trail (east fork of upper Tanner Trail Canyon—Desert View Tower is in the west fork) is shown on a map of archaeological sites recorded for the Navajo Aboriginal Land Claim before the Indian Claims Commission (Site W-LLC-C-O in Navajo Nation n.d.; KF94-664). One of the consultants to the GCES-NCRP told us he had heard about this shrine but never saw it. This shrine, if there is one, would probably mark the head of the south rim salt trail. Local people in the 1980s told Vannette and Tso about ceremonial sites near Cedar Mountain and Desert View, respectively,

for Blessingway and protection prayers (V88(3)-258 and V88(3)-261). One of them might correspond to this location.

The point (or shrine) at the head of Áshiłh Ha'atiin is aligned with a series of places where either cairns or rocks with sun-and-moon images are found (KFnd). The alignment runs due east-west and therefore may be associated with the equinox. It starts in the Jemez Mountains (Valle Grande?) east of the continental divide and passes Johonaa'ei Si'ani near Narbona Pass (sun-and-moon image) and then runs south of Canyon de Chelly (cairn and sun-and-moon images) to a cairn near Blue Gap Junction. At this point the east-west alignment seems to cross an old route from Canyon de Chelly, Diyinii Bitiin (Holy People's Trail), which goes from here southwestward to Awatobi, west to Oraibi, then westward and northwestward (cairns at Hotevilla and on east side of Howell Mesa) until it rejoins the east-west line at a trail shrine on the rim of Coal Mine Canyon, possibly the shrine that people told Vannette is related to the "Sunway" (Shootingway, Male?) ceremonial repertoire (V88(3)-3, V88(3)-72; Vannette 1988). The head of Áshiłh Ha'atiin is due west of the shrine at Coal Mine Canyon.

The east-west line is also linked to Enemy Way. The line is implicit in the Enemy Way stories told by Slim Curley in 1930 (Hailey 1938). While slaying the monsters, Monster Slayer travels westward past Shadow Mountain [Dził Diłhił, GCES-76], finds the monster Traveling Rock, and chases it back eastward (possibly leaving chips—trail shrines or flint or obsidian?) at certain places, all of which happen to be on the east-west line. In the ca. 1930 monster slaying stories of Tł'ahii of Newcomb (Klah 1942:101–106), the Traveling Rock bounds westward from the Jemez Mountains (Valle Grande?) until it plunges into the Grand Canyon, where one can still see its remains. The western end of this line may also intersect the trails Gohniinii Ha'atiin [GCES-25] and Adah ootą [GCES-69]. The latter trail, which is probably the same as Vannette's (1988) Enemyway Ceremonial Trail (V88(3)-237), seems to descend from the Coconino Rim into the upper Coconino Basin. The trail has been used in connection with Enemy Way ceremonies since before Fort Sumner times.

The emergence stories of Tł'ahii of Newcomb, New Mexico, recorded around 1930 (Klah 1942), also refer to this east-west line. These stories tell how the monsters were killed off and the earth restored. Of the people who originally emerged into the present world, a few survived by hiding in a cave at Gray Mountain [GCES-45]. (The cave might actually be the emergence place at Tooh Ahidiilíní [GCES-33].) They renamed (recreated) places on the earth surface, beginning with preexisting mountains, then naming a series of places on the east-west line from Narbona Pass through Canyon de Chelly and eastern Black Mesa to Nát'oh Dziil [GCES-39]. The western end of this line may also be the area north of present-day Moenkopi where, according to this same source, Asdzą́ą́ Nádleehí and her companions, traveling westward to the ocean, left flint and eagles for future earth-surface people (see Tsé dinilzhinii, GCES-50).

This east-west line is also reportedly where pre-Columbian Mayan astronomers determined the northern edge of the zone of the earth where the sun appears seasonally at the true zenith (John Stein, Navajo Nation Historic Preservation Office, personal communication 1994). Navajo stories link the line to seasonal alternation by means of the sun-and-moon images mentioned above, and also by identifying the line with the route of the monster Traveling Rock. Throughout the western hemisphere, indigenous (presumably pre-Columbian) stories identify bounding rocks with ballgames and the alternation of seasons across the "line" of the equinox (Gillespie 1991).

See also Jadi Habitiin [GCES-4] and Gohniinii Ha'atiin [GCES-25].

GCES-2: *Áshiłh deez'á* (Salt Icicles Trail) or *Áshiłh Haasdzis* (Salt Gully) [Salt Trail] (Also KF94-513, V88(3)-73, V88(3)-272) (see Bartlett 1940:40; Colton 1964:91) (Chapter 3)

This trail descends into the Salt Trail Canyon, a tributary of Little Colorado River. Statements of people we interviewed are given in Chapter 3. The long-time use of this trail by Navajos, Hopis, and Paiutes was mentioned as early as the turn of the century (James 1900:239). Frank Goldtooth mentions this place in his 1951 story (Fishler 1953) of Changing Woman's travel westward, when she leaves her animal entourage on the plateau east of Echo Cliffs and goes down to the junction of the Colorado and Little Colorado (Tooh Ahidiilíní, GCES-33), where she meets Salt Woman. In this canyon is a trail to the salt cave in lower Little Colorado canyon (Áshįįh Deez'á, GCES-35) near the place where Salt Woman emerged onto the earth's surface (Tooh Ahidiilíní, GCES-33). There is a marker to show the trail. Local people in the 1980s told Vannette and Tso that a white rock here at the salt trail "is shaped like a woman and menstruates like a woman" (Vannette 1988:44).

GCES-3: *Tsétát'ah ha'atiin* (Trap Trail or Rock Ledge Trail or Pocket-in-rock Trail?) [no English name] (see Áshįįh Ha'atiin [GCES-1] and Chapter 3)

This location is undoubtedly where Palisades Creek crosses Áshįįh Ha'atiin before emptying into the river. At this point, one must leave Áshįįh Ha'atiin and go a little way up Palisades Creek and get up on top of the Tapeats to proceed on to the Salt Caves. From this point on, the trail is rough and the hike to the Little Colorado River is considerably slower than the first part of the trail (Chris Geanious, Colorado River guide, personal communication 1994). This description matches those in the oral histories of Áshįįh Ha'atiin [GCES-1] collected during Navajo Land Claims investigations.

GCES-4: *Jádí Habitiin* (Antelope Trail) [Antelope Pass] (Navajo Tribe 1963:90, 158; historical site 38, Correll 1968) (Chapters 3 and 5)

Jádí Habitiin begins east of Bitter Springs and parallels Highway 89 over Echo Cliffs to the top of Coalmine Mesa. It possibly connects with Diyinii Bitiin (see Áshįįh Ha'atiin, GCES-1, above) at the trail shrine at the head of Coal Mine Canyon (KF94-665; V88(3)-3, V88(3)-72). Jádí Habitiin is also a very old hunting trail.

Frank Goldtooth mentions this area (KF94-688, Echo Cliffs) in his 1951 story of Changing Woman's travel to the west. She corraled her animal entourage on the plateau east of Echo Cliffs, and they wore down the ridge of "the mountain by The Gap, Arizona" by passing back and forth. The game animals go to Red Mountain [GCES-43] and Nát'oh Dziil [GCES-39]. This seems to imply the origin of known game trails at such low places, and therefore Gameway associations. See also Crossing of the Fathers [GCES-6].

Vannette and Tso (Vannette 1988:54) recorded what may be a related place, Bidáá' Hátsaa (Big Rimmed Canyon, GCES-51; V88(3)-161). "Songs to the sacred Antelope are sung at this holy place. Prayers and offerings are also made here." This peninsula on the east rim of Marble Gorge joins the main plateau by a narrow neck and seems like a good place to drive antelope, with hunters perhaps coming from the east-northeast, Echo Cliffs–Bitter Springs end of the north-south route of Jádí Habitiin. See also Crossing of the Fathers [GCES-6], Nát'oh Dziil [GCES-39], Shinumo Altar [GCES-43], and Dził Łibáhí [GCES-45] for possibly interrelated ceremonial hunting areas and trails.

GCES-5: *Tsélkáá diilíní* (Rock Crossing) [Crossing of the Fathers? see GCES-6 below] (Navajo Tribe 1963:93)

This river crossing was mentioned in interviews, but it is not clear whether it is the same as Crossing of the Fathers.

GCES-6: *Tsédáá' N'deetiin* (Trail along the rimrock) [Crossing of the Fathers] (Chapters 3 and 5)

Located 25 miles above the dam, under Lake Powell, this crossing has been used by the Navajos since before Fort Sumner to hunt deer and horses in Shivwits Paiute country along the north rim around Na'toh Dziil (Tobacco Mountain, Kaibab Plateau, GCES-39, KF94-233).

In 1928 Sandoval of Shiprock (O'Bryan 1956) told how returning Western Water Clan people traveled north until they encountered "Arrow People" here, then moved on to Navajo Mountain. In the early 1970s, Floyd Laughter of Navajo Mountain (Luckert 1977:58) also told that the Western Water Clan people encountered Arrow People along the river somewhere upstream from Page (Crossing of the Fathers is the nearest crossing) and moved south to Kaibito and White Mesa rather than cross. (These routes are much like that of HL's forebears reported in Chapter 3, pp. 26–28.)

In the 1929 Windway story of Black Mustache of Chinle (Wyman 1962), the young man who first assembles the ceremonial repertoire floats down the San Juan (and Colorado?) River to a crossing (*na'ní'á,* KFnd-231), Big Falls, below Navajo Mountain, where the log sticks temporarily until the boy's pet turkey, who has been following on foot along the shore, helps it get unstuck again. This may refer to Crossing of the Fathers.

In the ca. 1970 Gameway stories that Claus Chee Sani told Luckert (1975:46–47), the immortal Deer People travel around Navajoland leaving plants and other ceremonial materials (and trails for subsequent ceremonial hunting) at various places and go from the mountains near Lukachukai by Tséyi' Hats'ósí Canyon (north of Kayenta) to Navajo Mountain and then across to Nát'oh Dziil. This is the most plausible crossing. Also worth noting is that the deer continue on to Gray Mountain (Dził Łibáhí, GCES-45), a possible route to which would be down Áshįįh Deez'á Trail [GCES-2] and then up Áshįįh Ha'atiin [GCES-1].

Frank Goldtooth's stories of 1951 also tell of this landscape. In his emergence story, First Man placed Nát'oh Dziil [GCES-39] as part of an earth figure (which also includes Dził Łibáhí, Gray Mountain, GCES-45). In the story of Changing Woman's travel to the west, her entourage of animals escaped from her corral around Preston Mesa (KF94-685) and Echo Cliffs (KF94-688) and went to Shinumo Altar (Dził Łichíí', GCES-43, KF94-694) and Nát'oh Dziil [GCES-39]. In the story of the boy who floats down the river in the hollow log, the boy's pet turkey follows him along the shore. When the boy goes under water at a crossing (at the confluence of the San Juan and the Colorado), the turkey rushes from here to help him. (This latter crossing is the scene of the near disaster of ca. 1800 described in Chapter 3, p. 41.)

GCES-7: Tó hajisho' (Pulling Up Water) [Shinumo Wash] (Trail into Twentynine Mile Canyon) (Chapters 3 and 5)

According to RB (Begay and Roberts, field notes, 1992),

> Up on top [along the rim] sometimes there would be no water available and one of the only places to get water was from a place called Tohidisho. When I was small we would get water from there, or use it to water our livestock. I remember using goat skins (small goats were carefully butchered so there were no holes and [the skin] was then sewn

> together to hold water) to carry water out. Sometime earlier also a trail was made from Tohidisho to the river. Now there is a trail near there that some Bilagaanas have built. During the Fort Sumner days, the trail was used as a refugee route into the canyon.

PW (Begay and Roberts, field notes, 1992) also states:

> We use Tohidisho to water our livestock. Tohidisho got its name because of the way people got water there. There are several pools, each lower than the other. The livestock would be able to drink from the first pool, but when it went dry, you would have to transfer water from the lower pools to the upper pool. Many people used goatskins bags to do this, and would literally drag the water from one pool to the next. That is why it got its name, Tohijisho, "dragging up water."

Tó hajisho' trail may be related to the Gameway landscape described in connection with Jádí Habitiin [GCES-4] and Crossing of the Fathers [GCES-6].

GCES-8: *Adahjííná* (Trail Where People Moved Down) [Eminence Break, near Bidaa Hatsaa Point] (Chapter 3)

The name of this trail comes from its use by Navajos evading the U.S. Army in the 1860s by taking their livestock and hiding in the Grand Canyon. This trail and the Tohidisho trail [GCES-7] are associated with the cornfields that were planted just downriver from the mouth of Twentynine Mile Canyon [GCES-23]. RB (Begay and Roberts, field notes, 1992) was told that the trail was made by carving steps into the rocks and building retaining walls. The trail was marked by rock cairns, which may still be present but were not relocated during the GCES-NCRP research.

GCES-9: *Tó bichi'o'ooldon* (Trail Blasted to Watering Hole) [no English name] (tributary of the Little Colorado River) (Chapter 3)

This trail was constructed by local community people to water their livestock and has been in use for a long time. It may have been constructed at the end of the 1800s when Anglos began controlling all accessible springs and water sources.

GCES-10: *Tó bíhooyéé'* (Difficult Place to Get Water) [no English name] (spring and trail in tributary of Little Colorado River) (Chapter 3)

During a field visit to Tó bíhooyéé', SD (Begay and Roberts, field notes, 1992) said:

> I have never been down into the watering hole. I have always just looked from the rim. You can see the trail into the canyon over there. The watering hole is in that side canyon that extends north. There is another trail there. To get to that trail you go to the head of the side canyon and follow it down to the watering hole. When there is water running through the canyon, when it rains, there is a water fall in the side canyon, not too far from where the side canyon enters this canyon. Under that water fall there are pools. It is these pools that the sheep used to drink. I don't know if the trails and the watering hole are still used. Maybe the people that live around here still use the watering hole.

Also on a field visit (Begay and Roberts, field notes, 1992), JS explains:

> When water was scarce, many of the people would come to this water source. I remember seeing long lines of sheep and goats going up and down this trail. It was always hard to get them to the water the first time, because they do not know the trail, but after the first time they would run down to the water and come back up on their own. In my young days, people would make offerings for rain at the pools down there. Perhaps it is still done by the people around here. The trail was constructed so that livestock can have access to water.

There is also a trail from Tó bíhooyéé' to the Salt Mine in the Little Colorado River.

> My Father used the Tobohoyee trail all the time to get salt. The salt hangs off the canyon wall like icicles and a small bag is heavy. I have never been down that trail (BH in Begay and Roberts, field notes, 1992).

This trail is also listed under "Places Associated with Holy People" because of the Water Monster who resided here.

GCES-11: *Dá'ák'ǫǫzhi kǫ'* (Saltbush Fire) [no English name] (trail into tributary of Little Colorado River) (Chapter 3)

> A trail near a place called Da'akoozhi ko was used by the Navajos during Fort Sumner times. The families lived and farmed in the Little Colorado and in the Grand Canyon [GCES-24]. Of course, people were afraid of strangers, even other Navajos. Few people on the rims knew of the people living in the canyons. These families were living in the canyons when Washington and the Navajos signed a treaty and the Navajos were allowed to return to their country [1868]. Word spread fast and many people gathered to discuss this, and word was sent to every group that was hiding out. Two people were sent to the families living in the Little Colorado. To get to these families they used this trail to notify the families. Like I said, everyone was afraid and suspicious, so when the two messengers descended down the trail, they were ambushed, until they pleaded for their lives. The messengers told the men who had attacked them that they came to tell that that the "good relations had been established" with Washington, and that they no longer had to hide out. Immediately, the men notified their families and moved back on the rim shortly thereafter (JS in Begay and Roberts, field notes, 1992).

The local people say that a man by the name of Hastiin Dá'ák'ǫǫzh kǫ' lived near this trail. He used dried saltbush for fuel wood, and that is how this place got its name.

GCES-12: *Télii adah bitiin* (Donkey Trail) [no English name] (Chapter 3; Figure 16)

This trail enters Twentynine Mile Canyon from the south and follows the bottom of the canyon along the route of the Tó hajisho' Trail [GCES-7] as far as a terrace about 2200 ft below the rim. The trail then turns south onto the terrace and goes a couple of miles to a Bureau of Reclamation campsite used during the 1940s explorations for the proposed Marble Canyon Dam (see Automobile Club of Southern California 1951). GCES-53, an elevator shaft on the rim of the canyon above the campsite, was used to lower Bureau of Reclamation workers to the campsite on the terrace. Early in the 1950s the Bureau of

Figure 16. The head of Télii adah bitiin, Donkey Trail [GCES-12], heading into Shinumo Wash/Twentynine Mile Canyon.

Reclamation moved their exploratory efforts 15 miles downriver and the campsite on the river terrace was abandoned. According to GCES-NCRP consultants, after this time local Navajos would take donkeys down Télii adah bitiin trail to go to the campsite to collect ropes, barrels, and other items left by the Bureau of Reclamation.

Frank Goldtooth's 1951 story (Fishler 1953) about Dził Łichíí' (Shinumo Altar, GCES-43) also suggests the possibility that this trail might have been a hunting trail.

GCES-13: *Tsé'naahi'deetiin* (The Crossing) [?] (Chapter 3; see Map 3 for general vicinity)

On a field visit to identify trails, J&BS (Begay and Roberts, field notes, 1992) said of this trail:

> This trail is a difficult one. You must use ropes in several places. Once you get down to the river, you must cross the river and then hike up the steep trail to get to the south rim of the Little Colorado. In the old days, people would use this trail when they visited each other. Now there are cables in those places where ropes and yucca ropes were once used.

GCES-14: Lees Ferry and Honeymoon Trail (also called The Dugway) (NPS site AZ:B:2:12, Rusho and Crampton's site 17) (Crampton 1959; Rusho and Crampton 1992; Navajo Tribe 1963:88) (Chapters 3 and 5)

As discussed in Chapter 3, Navajos had been crossing the Colorado River in the vicinity of Lees Ferry long before a ferry was established. The Navajos would cross the river on horseback, or when the river was frozen they would spread sand on the ice so their horses could walk across. One GCES-NCRP

consultant identified three separate crossing places close to where the ferry ultimately crossed (Rusho and Crampton's site 1), one of which may have been the place where the ferry crossed a little downstream from the main ferry crossing site (Rusho and Crampton's site 18) after the establishment of the Utah-Arizona Road (The Honeymoon Trail or Dugway) (see Rusho and Crampton 1992:47). This trail was constructed by the Mormon church in 1878 using a lot of Navajo labor, and it was identified as an important historical place by GCES-NCRP consultants.

This trail seems to have followed Jádí Habitiin [GCES-4] from Bitter Springs to Coalmine Mesa, then presumably over Diyinii Bitiin (see Áshįįh Ha'atiin, GCES-1) to Oraibi and the other Hopi villages.

According to people interviewed for this project, Lees Ferry has become a popular place to make offerings to the river. The offerings should be done before crossing the river, but with the convenience of Navajo Bridge [GCES-41], the offerings are often presented after crossing the river and driving to the parking lot near the river that is not inundated with tourists [GCES-29]. Vannette and Tso (Vannette 1988) recorded this area as a sacred place. According to them, Navajo Bridge (V88(3)-173) is a prayer offering place. The shore by the rapids in the river (V88(3)-177) is a prayer and sacred stone offering place that was also identified by consultants to the GCES-NCRP (see GCES-29, below). A blessing ceremony for the Colorado River was held here in 1992 during the GCES-NCRP (see Chapter 5 for discussion).

GCES-15: *Dził diłhił biyaa ha'naa' na'nítiin* (Crossing of the Little Colorado River South of Shadow Mountain) [no English name] (junction of Moenkopi Wash and Little Colorado River? KF94-747) (Chapter 3)

MH (Begay and Roberts, field notes, 1992) identified this place as a crossing, but no location was given.

In Frank Goldtooth's 1951 story (Fishler 1953), on their migration north and east, the Western Water Clan people stopped at "Tuba Wash, near the Colorado River" and made a crossing in view of Lava Rock (KF94-748) and Black Spring (KF94-749) on their way from the San Francisco Peaks [GCES-38] by way of Sunset Crater and Shadow Mountain [Dził Diłhił, GCES-76]. "Tuba Wash" must be Moenkopi Wash, which flows into the Little Colorado, not the Colorado (KF94-747). The "lava rock" may be Black Knob northwest of the confluence of Moenkopi Wash and the Little Colorado (KF94-747) on a line due north of Sunset Crater (Dził Bílátah Łitsoi) to Shadow Mountain [GCES-76, KF94-122]. Or the lava rock may be south of the confluence. It seems possible (but unlikely) that it refers to Black Butte west of Shadow Mountain, which local people in the 1980s told Vannette and Tso was made by the Holy People, and is a home of Great Snake, place of mirage stone, and offering place for prayers. This place may be the same as V88(3)-129. Goldtooth's Black Spring (KF94-749) was somewhere on the "other side of Cameron," possibly south of Cameron, since Mr. Goldtooth was telling the story at his home northeast of Cameron near Tuba City. Tappan Springs seems a likely candidate. In the 1980s, local people told Vannette and Tso (Vannette 1988) that Tappan Springs (V88(3)-128) is a place visited by Holy People, and a place where medicinal plants are gathered.

According to Frank Goldtooth, the Western Water Clan people's route continues (by way of Coalmine Mesa? see Jádí Habitiin, GCES-4) northeastward to Wildcat Butte, then to the Kayenta vicinity and on eastward. Frank Goldtooth also says some of the Western Water Clan people followed a more southerly route but doesn't describe it; other versions suggest a crossing of the Little Colorado at Black Point, then northeastward through Hopiland and on (by Diyinii Bitiin?) to Canyon de Chelly and further northeastward.

Local people in the 1980s told Vannette and Tso of a flat rock area (V88(3)-134) at or near the crossing where they offer prayers with sacred stones.

GCES-16: *Adah atiin* (Trail Down to the Bottom) [no English name] (unidentified trail into the Grand Canyon near Comanche Point, GCES-64) (Chapter 3)

MH (Begay and Roberts, field notes, 1992) identified the south side of Comanche Point as an ancient route to the inner canyon. Yucca ropes were used in several places.

GCES-17: Jackass Canyon (Chapter 5)

HL and PW (Begay and Roberts, field notes, 1992) identified this as a currently used recreational trail for Navajo and non-Navajo hikers to access the Colorado River.

GCES-18: CCC Trail (Rusho and Crampton 1992; Glendening and Shyrock 1979; and others) (Chapter 3)

PW and JS (Begay and Roberts, field notes, 1992) identified this trail as an old Navajo trail that was improved by the Civilian Conservation Corps in the 1930s.

GCES-19: Trail with *Tsé ninájihí* (Rusho and Crampton [1992:143] call it Buzzards Highline Trail, Site 20; also Glendening and Shyrock 1979) (Chapter 3)

JS and PW (Begay and Roberts, field notes, 1992) identify this as an old Navajo livestock trail that was part of the trail system improved by the CCC. Rusho and Crampton report that miner Charles H. Spencer and his party were guided over the trail by a Navajo man in 1910, and the trail was probably in use long before that. According to Rusho and Crampton the "tse naahjihi" is a rock cairn commemorating a battle between Navajos and Utes. Navajos continue to add rocks to the cairn.

GCES-20: *Jiłhazhí* (hackberry—literally, to bite it, the fruit of a tree) [no English name] (Chapter 3)

This trail leads to a water source in a tributary of Little Colorado River, near Pillow Mountain (HL, BH, SD in Begay and Roberts, field notes, 1992).

GCES-21: *Ńdíschíí adaał'i'í* (A Vein of Pine Trees Coming Down a Ridge) [no English name] (Chapter 3)

Identified as a trading route that led to Havasupai (MH in Begay and Roberts, field notes, 1992) southeast of Desert View Tower, the trail was named for a stand of pine trees in this area. This trail is possibly a part of Vannette's (1988) "Navajo Trail" (V88(3)-137), just south of V88(3)-259 (plant gathering area), probably north of Coconino Rim in the upper basin. People who lived in the area east of Palisades of the Desert [GCES-71] used this trail to get to the rim south of Desert View Tower [GCES-46], where it connected with Gohniinii Atiin, to get to Havasupai Canyon [GCES-37].

This trail may be part of Changing Woman's travels. According to Frank Goldtooth's 1951 story (Fishler 1953), after meeting Salt Woman and coming out of the Grand Canyon near Desert View Point (Kin Nééz, GCES-46) (therefore up Áshįįh Ha'atiin, GCES-1), Changing Woman continued westward along the canyon rim. In the early 1970s Floyd Laughter of Navajo Mountain told that the Western Water Clan people traveled eastward along the south canyon rim (Luckert 1977:58). Navajos interviewed by Vannette and Feary (1981:19) identified this as a sacred place.

GCES-25: *Gohniinii Ha'atiin* (Havasupai Trail) [no English name] (Chapter 3)

This trail went all the way from the lower Coconino Basin around Gold Hill, along the south rim to Havasupai Canyon, following the same trail that people use today to get down to Supai village. As discussed in Chapter 3, Navajos traded rugs and beef for the Havasupais' figs and horses.

GCES-62: *Adah dzoogaii* (The White Slide) [no English name]

HL mentioned an old Navajo trail going down into the canyon from the south rim opposite Kwagunt Creek (about river mile 56) (Begay and Roberts, field notes 1992). This trail was mentioned as an old access route to the river but was not specifically identified.

GCES-69: *Adah ootą́* (Place Where the Ceremonial Stick Was Carried Down) [no English name] (Same as V(88)-237; general vicinity shown on Map 3)

This trail has associations with the Navajo Enemyway ceremony and GCES-70. It also may link up with Áshįįh Ha'atiin (GCES-1) and the east-west line implicit in Enemyway stories.

Subsistence Areas

This category of places includes cornfields, grazing areas, livestock corrals, former homesites, sweathouses, or other areas in the Grand Canyon where people lived.

GCES-22: Farms at Indian Gardens (NLC Site W-HC-LH-KK) (David M. Brugge, NLC site form 1959; Peshlakai 1961) (Chapter 3)

According to the Navajo Land Claims documents, "Just prior to the Fort Sumner period, five Navajo families lived and *farmed for two years in Grand Canyon at Indian Gardens* with the Havasupais" (Navajo Tribe 1963:89). Clyde Peshlakai told land claims researcher David Brugge that his mother and her parents and four other Navajo families lived there for a while in the 1860s. A Havasupai family joined them after they had settled. They planted crops and had their stock there. The Navajo families had fled the Black Mesa area ca. 1860 to escape Ute depredations and entered Grand Canyon near the location of present-day Desert View Tower, following a bench along the south side of the canyon to Indian Gardens. They stayed at Indian Gardens almost two years and planted two crops there. The Havasupai family saw them from the rim near the top of the present Bright Angel Trail and came down there, using yucca fiber ropes for parts of the descent. Both the Navajos and the Havasupais left at the same time, going up near Bright Angel Trail and using ropes for both people and animals (sheep and goats) in some difficult places. From there they all went to Havasu Canyon where the Navajos lived with the Havasupais

until some Havasupai men killed a Navajo boy to steal his mule and jewelry. The Navajos living at Indian Gardens were Sǫ'ii (Star Gazer) [Tódích'íi'nii clan], Hastiin Tso (Mr. Big) [Tł'ízí łání clan], Bikee'ii (His Foot), Hastiin Áshiinii (Mr. Salt) [Áshiinii clan], and Bíighánii (Big Backbone) [Kiyaa'áanii clan]. Navajos working at Indian Gardens around 1900 told Clyde Peshlakai that they had seen stone and wood hogans there under the cottonwoods. [Note: Bi'íighináanii is undoubtedly the same as Peokan in the 1858–1864 diaries of settler Jacob Hamblin, whom Mormons encountered along the "Honeymoon Trail," GCES-14, around Echo Cliffs. Navajo Land Claim site forms identify him with sites around Bitter Springs, and a 1981 transcript of clan history by Peggy Scott indicates that Bi'íighináanii may have been part Hopi; see Táchii'nii clan history below. His name may be a pun on his reputed strength and the backbone-like Echo Cliffs.]

A Cameron Chapter resident told us (Chapter meeting 2/16/92): "In the 1920s, my grandmother had cornfields and sheep in the Grand Canyon," which may refer to this place or GCES-23, below.

GCES-23: Cornfields on beaches near RM 29 (Chapters 3 and 5)

HL, BH, RB, and SA (Begay and Roberts, field notes, 1992) all have stories of their ancestors retreating to the canyon and planting small gardens down along the river banks. Most of these stories were discussed in Chapter 3. Although specific beaches were not identified, we believe that the crops were probably planted on the sediment accumulated where Fence Fault meets the river just below Twentynine Mile Canyon. See also related trail descriptions for Adahjííná Trail [GCES-8] and Tó hajisho' Trail [GCES-7].

GCES-24: People living near the confluence (Chapter 3)

Navajos also lived in the Grand Canyon near the confluence of the Colorado and Little Colorado rivers. See related description for Dá'ákǫǫzh kǫ Trail [GCES-11].

GCES-26: Sheep corral near Tanner Rapids (Chapters 3 and 5; Figure 17)

A consultant to the GCES-NCRP who is now about 74 years old hiked into the Canyon on Áshiih ha'atiin trial [GCES-1] when he was 11, about 1931. They camped along the river in the vicinity of Tanner Rapids, and at that time there was a sheep corral on the beach that was partially washed away. There is nothing left of the corral today. During his second trip down the Colorado River in 1872, John Wesley Powell saw the remains of a mesquite log hut at the end of the Tanner Trail, but "whether [it was] the remains of an Indian's or white man's shelter cannot be stated" (Kolb 1989:205). This structure may have been in the same vicinity as the corral seen by the GCES consultant around 1931.

GCES-27: Hideout Shelter along *Áshiih Ha'atiin* (GCES-1)

M&BH and NJ (Begay and Roberts, field notes, 1992) identified a small cave just below the head of Áshiih Ha'atiin, east of Desert View Tower. M&BH describe it as a place of evil, where a man or several men made their home. These men were engaged in some witchcraft activities. The cave may contain the remains of a structure.

Figure 17. One of the GCES consultants saw the remains of a sheep corral on this beach [GCES-26] in about 1931.

GCES-28: Garden right above Blue Springs on Little Colorado River Gorge Rim

This garden belongs to one of the consultants to the GCES-NCRP (MH). He reported that some of his cows were washed away during a flood at this place at one time. See also below under "Places Associated with Holy People."

GCES-29: Sweathouses near Lees Ferry (also see GCES-14) (Chapter 5)

HL (Begay and Roberts, River Trip Log 1992) identified the area west of the Lees Ferry boat launching area as a place for sweatlodges in the early part of the century. Before men would cross back into Navajoland from hunting and trading expeditions to the north side of the river they would have sweatlodges (to pray) and bathe in the river. There is no trace of these sweathouses today, but prayers are still offered at the banks of the river below the parking lot here.

CLAN MIGRATION PLACES

GCES-15: *Dził diłhił biyaa ha'naa na'nítiin* (Crossing in the Vicinity of Shadow Mountain)

See above under "Trails." The Western Water Clan people migrated through this area en route from the western ocean (where Asdzą́ą́ Nádleehí had created them) and the San Francisco Peaks to Kayenta and eastward. See also Dził Łibáhí (Gray Mountain, GCES-45), Abąąh tó (Willow Springs, GCES-59), and Dził Diłhił (Shadow Mountain, GCES-76).

GCES-30 (NPS AZ:B:10:4) (rockshelter at RM 136) (Chapters 3 and 5)

One GCES-NCRP consultant told the story of a branch of the Táchii'nii clan, the Anaa'sází Táchii'nii people, who survived the destruction of the rest of the Anasazis elsewhere by hiding in this cave in the Grand Canyon. Eventually they migrated to Canyon de Chelly where they continue to live today.

These stories of today relate to previously recorded stories, such as the story of the trip of the young man, the Visionary, who put the Nightway ceremonial repertoire together (see section above on rivers). Perhaps these stories have something to do with the preponderance of Táchii'nii clan members among the Nightway chanters in the last couple of centuries (Faris 1990).

The transcribed oral history of Táchii'nii clan origins from a meeting of clan members in 1991 (KFnd) mentions a subdivision of Táchii'nii called Yé'ii Dine'é ("God" or Immortal People) living in Canyon de Chelly and associated, as is Canyon de Chelly itself, with the origins of the Nightway ceremony. The Tobacco branch of the Táchii'nii clan, according to the people at this meeting, originated at the San Francisco Peaks. Relationships with the Hopi Tobacco clan (First Mesa) are also discussed, and one of the women of this clan was married to Bi'ígháanii or Íghâani Díil (Big Backbone), a headman from the Grand Canyon area who seems to have been part Hopi, in pre-Fort Sumner times.

Slim Curley, an encyclopedically knowledgeable chanter from Crystal, New Mexico, telling the Nightway origin stories, said

> Now this one at Blanca Peak [eastern sacred mountain], he to whom they had come first, the Red God Talking God, he is the one (who) created the Visionary's grandmother. [Note 119: "This refers to the *origin legend of the Tachii'nii clan.* "Grandmother" probably refers to the clan ancestress."] He made the red corn and the striped corn into a woman. For that reason he was very generous to (the Visionary). Now, this *Night Chant* and that being according to the *game corral [niidziik'ehgo]* [note 120: "This is a legend connected with the *origin of the corral method of hunting game, which belongs to the Tachii'nii clan.*"], these are both derived from her, they say (Sapir 1942:197; emphasis added).

Slim Curley's statement also interrelates the Táchii'nii clan, antelope or deer hunting ceremonies, and the Colorado River region, which calls to mind the deer and antelope hunting in the discussions above about the rivers and Jádí Habitiin [GCES-4], Crossing of the Fathers [GCES-6], Tooh Ahidiilíní [GCES-33], Nát'oh Dziil [GCES-39], Shinumo Altar [GCES-43], and Gray Mountain [GCES-45].

Going still farther back, another particularly interesting context for the association of the Táchii'nii clan with the Anasazi; the God, Immortal, or Holy People; and the Colorado River is the clan history given by Tall Chanter to Matthews in the 1880s (Matthews 1897:145). The Táchii'nii clan people

> joined Navajos on San Juan River, having come from a place called *Tachii'* to the west.
>
> From their traditions it appeared that they were not a newly created people; they had escaped in some way from the alien gods, and were for these reasons regarded as dine diyini, or holy people. They were divided into two gentes, Tachii'nii and K'ai' Dine'e, or Willow People [Havasupai], and for a while they formed two gentes among the Navahoes; but in these days all traces of this division have been lost (Matthews 1897:145-146).

According to Matthews's 1897 account, the clans linked to Táchii'nii are Naneesht'ezhi (Zuni) and Dilzhehi (Mohave). The Franciscan Friars (1910:430) identify Táchii'nii as "the people of the red soil, or country" and say that the linked clans are Naneesht'ezhi and Kinlichii'nii, which they identify with San Juan Pueblo.

Tuba City resident Scott Preston (1954:25) stated that Táchii'nii people

> come from the *vicinity of San Francisco mountain* [cf. Nát'oh Dine'e Táchii'nii]. And as they migrated they moved in here into the Navajo country. As they migrated some of them were left behind, scattered along the route. They started to search for one another (i.e., they looked for the relatives they knew they had, and their relatives looked for them), and in the course of the search one group moved into a place called *Red water (Tąchíí')*. There they were called Red water people by their neighbors. Some continued to look for their relatives, and in *Canyon de Chelly someplace where there was a place called Dark cave under the rock (Tséyaa hodiłhił)* they stopped to live. The neighbors called them Red water people who streak charcoal (Naneesht'ezhi Táchii'nii). Some others continued to move in search of relatives and they moved to *White ashes Extend (Łeshch'ih deesgai), a place on Lukachukai Mountain* [north of Buffalo Pass on a ceremonial route from the San Francisco Peaks to Mount Hesperus—KFnd]. One of them put on a female deer's head and they were therefore called Sticking-up Ears (Jaa' yaaloolii). Some more of this group moved to another place called Water flows out *(Tó Ch'ínílini)*. They were called the Hunger people (Dichin dine'é) [possibly misinterpretation of Diyinii Dine'é, Ye'ii Dine'é Táchii'nii] there. It is difficult to tell just how they lived to earn this name. Another group of this same clan (the Táchii'nii), moved *across the river (Tooh, the San Juan) and up onto La Plata Mountain (Dibe Ntsaa)*. They were called Ute people tachii'nii (Nooda'i Dine'é táchii'nii). There is much about the Red water people (táchii'nii) that is not known. Some of this clan are called the Have-fits People (Iich'ąh Dine'é), and some the Rabbit People Tachii'nii (Gah dine'é táchii'nii). There is also a group called something like Squash People (Naahízí dine'é). The interrelationship of these people, who originally came from the Táchii'nii, but who are divided up into small bands with distinctive local designations, is not well known (emphasis added).

Táchii'nii seems to be the largest of all Navajo clans (Reichard 1928:24) and therefore links a large number of Navajos all over Navajoland to the Grand Canyon.

Places Associated with Holy People

GCES-10: *Tó bihooyéé'* (Difficult Place to Get Water) [no English name] (Chapter 3)

Before earth surface people used the trail to the water source at *Tó bihooyéé'* (see above under "Trails") there were only Holy People living here. It was inhabited by a *tééh łíí'* (water horse). According to GCES-NCRP consultant SD, whenever anything would get near it the "water horse" would make loud noises and make the water explode. One day it rained so hard that the *tééh łíí'* got washed into the Little Colorado River gorge and then into the Colorado River. It lives there now at the bottom of the river.

Figure 18. Black Marks on Red Walls (Tsélchi' kooh, GCES-32) illustrate the story of when Black God set the river on fire.

GCES-28: *Tó dootł'izh* (Blue Water) [Blue Spring] (Chapter 3)

In the Coyoteway stories of Tséyi'nii of Chinle (1934) (Luckert and Cooke 1979), the Holy People had a home at Blue Spring (KF94-313), which the recorder of the story (Laura Adams Armer) interprets as somewhere on Black Mesa. This was the westernmost of two origin places, the other one being "Tsedah hastoso" (Tsédáá' Hwiidzó'ó, peak on east rim of Black Mesa). The reference might be to this place, or possibly to Hajíínáí (Emergence Place) at Tooh Ahidiilíní [GCES-33]. People told Vannette and Tso (Vannette 1988) in the 1980s that Navajos gather ceremonial water at Blue Spring (V88(3)-308).

GCES-31: *Tsé jóózhí si'áni* (Vagina Rock) [no English name] (Part of NLC site W-LLC-C-O and GCES-1)

Offerings are made to Salt Woman at a black rock at the head of Áshįįh ha'atiin [GCES-1]. See discussion of GCES-1 under "Trails," above.

GCES-32: *Tsélchíí' bikooh* (Red Rock Canyon) [Grand Canyon] Place of residence for Black God (black marks on canyon wall; Figure 18), Holy People, Salt Woman, Water Monsters, Water Horses, Plant People, and Humpback, as discussed in Chapter 3.

One of the chanters who worked with Matthews around Fort Wingate in the 1880s mentioned a place called Tó Nehelíįh in the Nightway story of the boy who floats down the San Juan and Colorado rivers in a hollow log. This is where he ends his float. (HL tells the same story about Tó Nehelíįh in Chapter 3, pp. 26–28.) The name identifies a sandpainting image, which could attach to a number of possible geographical locations. (It is therefore an ideal or prototypical place.) After stopping at what may be the

mouth of the Little Colorado (see Tooh Ahidiilíní, GCES-33), the young man goes down the river to the southwest and finds himself at the whirling water surrounded by high cliffs, where the log comes to rest and he gets out. He finds himself in a "dark, narrow ravine where the sun did not shine" (Matthews 1902:184) (a good description of Granite Gorge [KF94-326]).

The 1951 stories of Frank Goldtooth (Fishler 1953) also include one about this remarkable voyage. The hero of this story floats down to here and on to the Hoover Dam area (KF94-743) and the Gulf of California (KF94-744), where he encounters the immortal Game Raiser, who was mentioned in Chapter 3 (as Łóó' neinił'íní or Biįh yiniłt'ánii, p. 27).

According to the 1937 Hailway stories of Tł'ahii of Newcomb (Wheelwright 1946a), the Grand Canyon (A'aan Naachii') is a source of "red powder" for ceremonial use.

In the 1980s, Vannette and Tso (Vannette 1988) recorded statements by local people about the Grand Canyon (V88(3)-142) that apply to both the rim and the inner canyon; see section on rivers above.

GCES-33: *Tooh Ahidiilíní* (River Junction) [Confluence of the Colorado and Little Colorado rivers] (Chapters 3 and 5)

Some people, at least, use this name for a zone around the junction of the rivers, including a portion of the lower Little Colorado River.

The junction of the Colorado and the Little Colorado rivers (KF94-15) is mentioned in connection with Nightway by one of the chanters around Fort Wingate who worked with Matthews in the 1880s (Matthews 1902), and in connection with Beautyway (Hoozhónee) by Singer Man of Deer Spring in 1932 and Willeto Wilson of Mariano Lake, New Mexico, in 1944 (Wyman 1957). The area also figures in several collections of emergence stories.

In the Nightway story, the Visionary floats down the river in a log and passes a series of crossings, then gets to where the river narrows (into the canyon). Eventually he comes to a place described as a lake surrounded by high cliffs, where the log gets caught in an eddy and ends up on the south side. He visits some holy people on this side and learns some things, then gets back in the log and the eddy carries him to the north side, where he learns more from other holy people there. Matthews's translation describes the place further:

> The lake had two outlets; one to the northwest flowed to other rivers and to the ocean in the west; one to the southwest, flowed into the whirling lake . . . which had no outlet and no bottom (Matthews 1902:183).

In the Beautyway (Hoozhónee, not to be confused with Hózhǫǫjí, Blessingway) stories, the young woman who first assembles the ceremonial repertoire visits this place on her travels. The story ends when she finds a permanent home with the Great Snake in Canyon de Chelly.

In his Emergence story of 1923–1924, Sandoval of Shiprock (Goddard 1933) mentioned a place called Tó ałnáozlí, Where the Rivers Cross Each Other. It is beyond (west of) Halgai Dinílé (probably Antelope Prairie) and therefore may be this place.

In the ca. 1950 emergence story of Hastiin Daghaa' Bitsoí (Young and Morgan 1954:10–18, 88–93), the locust, leading the way up the reed onto the present earth's surface, emerges into a lake impounded by

Nát'oh Dziil [GCES-39] and Dził Łibáhí [Gray Mountain, GCES-45]. This statement probably refers specifically to the emergence place in the lower Little Colorado (see also Áshįįh Deez'á, GCES-35). Later, the mountain sheep uses his horn to cut between Nát'oh Dziil and Dził Łibáhí to drain off the water. His horn, a rock called Dibédee' (Sheephorn), one can still see in this part of the Grand Canyon. The mountain sheep, espcially in humpback form, seems to symbolize northward trails (among other things), so this story may also refer to Áshįįh Ha'atin (see above). Another possible reference to this area, and perhaps to the lower Little Colorado emergence place, is in 1928 by Sandoval of Shiprock (O'Bryan 1956:9, n. 32) to the home of White Shell Girl, a place along the Colorado River where giant male reeds grow.

In Frank Goldtooth's 1951 story (Fishler 1953) about Changing Woman going west, Changing Woman and Salt Woman met at this place. Salt Woman had emerged near here long before (see Áshįįh Deez'á, GCES-35). She went up the Little Colorado Canyon (KF94-691; see section on rivers above) and eventually to Zuni Salt Lake in New Mexico. Changing Woman spent the night with Téeh Łíí' (Water Horse) here, began to menstruate, and therefore had to leave behind the game animals that had accompanied her. She went on to near Desert View Tower (probably a reference to Tsé jóózhí si'áni, GCES-31, above; see also Áshįįh Ha'atiin, GCES-1, and Kin Nééz, GCES-46) and westward.

Local people in the 1980s also told Vannette and Tso (Vannette 1988) about the meeting of Changing Woman and Salt Woman at this place (V88(3)-50). Again in 1993, local people stressed the cultural importance to the Navajo of the river junction zone, including the emergence place, which they called Tooh Ahidiilínígi Hajíínáí (Kelley and Francis 1993). Also worth noting is the Cibecue Apache place called "House beneath water," north of the Little Colorado River, where all the Western Apache people emerged (Forbes 1966:343).

During his visit in 1994 (see Chapter 7), Alfred Yazzie stated that this is the junction of "two main rivers which surround Navajo land, holding spiritual values of protection against evil and its aggressions. The site is considered a very sacred place."

GCES-34: *Áshįįh* (Salt) [Salt Mine] (NPS Site AZ:C:13:3; Chapters 3 and 5)

See Áshįįh Atiin [GCES-1] for description. In 1994 (see Chapter 7) Alfred Yazzie added that this place is part of the travels of the ancient Salt Woman, who came from the north, crossed the Colorado River, and tried to settle here until she got to Little Salt Lake, New Mexico.

GCES-35: *Áshįįh Deez'á* (Salt Icicles) [no English name] No figure, location not specified (but see Bartlett 1940:40); See *Áshįįh Deez'á/Áshįįh Haasdzis* (GCES-2) and Chapter 3

In his 1951 telling of Changing Woman's travel westward, Frank Goldtooth said,

> There is a story about Salt Woman at the junction of the Colorado Rivers where she was created. Near there is a hill which is of rocks shaped like a hogan. In the center of this is a hole which has water inside. This water never overflows the hole and two ladders reach up from this water to within three feet of the top. If this hole looks black there will be lots of rain. There were gods that came up with Salt Woman in a cane like the other gods in New Mexico. There is a salt trail which has a marker to show where it is. Here is the hole which the Hopi claim as theirs (Fishler 1953:85–88).

Other possible references to this place of emergence are discussed in connection with Tooh Ahidiilíní, GCES-33.

GCES-87: Natural rock feature

A seemingly natural swirl in a rock upriver from Lees Ferry on the right bank (north side) was created supernaturally and represents the traditional Navajo way of planting with a planting cane, or basketweaving, or the "Big Way" sandpainting.

GCES-88: Natural rock feature

The marks ("dots") on the sandstone wall surrounding the petroglyph panel at AZ:C:2:108, upstream from Lees Ferry on the left bank (south side), are not the work of mortal men; they are placed there by Holy People and seem to duplicate varoius parts of the constellations.

OTHER PLACES

Some of the places identified during the GCES-NCRP and described below are traditionally signficant places that did not easily fit into other categories. Others are specific archaeological sites in the river corridor, which are discussed at length in Chapter 6. But many of the places mentioned by GCES consultants have no particular historic or spiritual significance; rather they are landmarks to which people refer when describing the landscape. They are no less important or significant than the places described in the preceding sections. They serve to orient the storyteller and the listener to the places on the landscape as a narrative progresses, and they tie the landscape together to form an integrated whole. While perhaps not considered "traditional cultural properties" as defined by federal guidelines, the interviewees considered these "other places" as important in describing the Grand Canyon landscape and its history as the various sacred places described above, since Navajos do not divide the landscape into "types" of places or place more importance on one type than on another.

GCES-36: Where Ashídígish Was Killed (not mentioned in previous text; no figure)

Around Fort Sumner times, an outlaw named Ashídígish (Sparker) was killed in a canyon in Grand Canyon (Naalnishii NLC deposition). M&BH (Begay and Roberts, field notes, 1992) place the site of the Ahiidigish murder south of Desert View Tower, perhaps in the canyon. HL and SD place the site of the murder in the Little Colorado Canyon. The incident is also mentioned in depositions from knowledgeable people collected for Navajo Land Claims litigation in the 1950s. The three GCES-NCRP consultants were reluctant to discuss the incident in detail. Basically, a Navajo family became involved in a dispute over ownership of a particular horse or donkey. A nephew of the victim was the one to murder the Navajo man.

Vannette and Tso (Vannette 1988) also recorded this place, Where Ahidigish Was Killed (V88(3)-233). They identify the victim as a Navajo man. They also report old Navajo cornfields near the river, as well as a Fire Dance location and a trail leading to the Colorado River that people used at the time of the Long Walk. The reference to the fields is probably Indian Gardens [GCES-22]. The trail could be Áshiłh Ha'atiin [GCES-1].

GCES-37: Havasupai Canyon (also Supai, Havasu, and Cataract) (Navajo Tribe 1963) (Chapter 3)

The Navajos often traded with Havasupais for figs and horses in exchange for rugs and beef. HL, MH, and NJ (Begay and Roberts, field notes, 1992) all mention trails leading to Havasupai territory, including Pine Trees Trail [GCES-21] and Gohniinii Atiin [GCES-25], and trading with the Havasupais. As discussed in Chapter 3, Navajos and Havasupais had alternating hostile and friendly relations during the late nineteenth and early twentieth centuries. Just before the U.S. Army captured Navajo families in the Grand Canyon and took them to Fort Sumner, Navajos and Havasupais were living together at Indian Garden [GCES-22]. From there, some of the Navajo families went to live with the Havasupais in Havasupai Canyon. Hastiin Nat'aani's grandfather was born in Pasture Wash, a tributary of Havasupai Canyon, in 1855.

GCES-38: *Dook'o'oosłííd* [San Francisco Peaks]

This is the westernmost sacred mountain defining "Dine bikeyah," the traditional Navajo homeland. People always mention this place in the course of telling stories about the landscape, and it is so well documented in the literature that it needs no further explanation here.

GCES-39: *Nát'oh Dziil* (Tobacco Mountain) [Kaibab Plateau] (Navajo Tribe 1963:58, 82; Brewer 1937:61, 62) (also V88(3)-66) (Chapter 3)

Local residents identified this as a place to collect many types of tobaccos and other plants for ceremonial use (BH, MH, HL, SA, PW in Begay and Roberts 1992). Navajos still collect oak from a specific location in the northern Kaibab National Forest for ceremonial purposes (Larry Lesko and John Hanson, Kaibab National Forest, personal communication 1994). Navajos also historically bought or took Paiute slaves from the Paiute country north and west of the Colorado River throughout the 1800s and early 1900s and had alternately friendly and hostile relations with them, depending on alliances created or interrupted by fluctuations in Mormon settlement after the 1850s (see Altschul and Fairley 1989:159–169). Many of the descendants of these slaves now identify themselves as members of the San Juan Southern Paiute tribe. Navajos also hunted deer and bighorn sheep on the Kaibab Plateau and wild horses on the Kaiparowits Plateau, using the Navajo Trail and others.

In Frank Goldtooth's 1951 Emergence story (Fishler 1953), Nát'oh Dziil (KF94-233) is part of an earth figure that also incorporates Gray Mountain (Dził Łibáhí, GCES-45) and was placed by First Man in ordering the present earth's surface. In the Gameway stories that Claus Chee Sonny of Tsaile told in the 1970s (Luckert 1975, 1978), Nát'oh Dziil is the farthest point on the migration route of the Deer People as they indicated places in Navajoland for use in future ceremonies; then the Deer People went on to see Gray Mountain. See Jádí Habitiin [GCES-4] and Crossing of the Fathers [GCES-6] under "Trails" (above) for a discussion of the ceremonial hunting landscape of which this place seems to be a part.

According to the 1933 Male Shootingway (Evilchasing version) stories of Dine Łibáhí (Haile 1950), the sorcerer birds chased the equally unsavory Coyote around the edge of Navajoland. The route passed from the San Francisco Peaks up the spine of Gray Mountain and over Nát'oh Dziil to Bears Ears, Utah, implying a crossing (by "supernatural" means, if none other) of the Colorado in the vicinity of Áshįįh Ha'atiin [GCES-1]. Nát'oh Dziil is also the western end of the east-west line of places mentioned above (see Áshįįh Ha'atiin, above) that holy people named after the monster slaying, according to Tł'ahii of Newcomb (Klah 1942).

People interviewed in the 1980s have also mentioned this as a sacred place, according to Vannette and Feary (1981) and Vannette and Tso (Vannette 1988), who identify it (V88(3)-66) as a place for gathering fir trees for ceremonial use, and a landscape encompassing prayer offering places as well as homes of Holy People.

GCES-40: Glen Canyon Dam (Chapters 3 and 5)

CT, a traditional chanter, worked on the construction of Glen Canyon Dam. He told us,

> I worked on the early stages of the construction of the dam. Our crew was one of the first groups to begin working on the dam. We moved rocks and began pouring concrete. Our crew was small. There were several Navajos and white people. No Paiutes or Hopis that I know of worked on that dam. I also worked on the construction of the road that leads up to Coalmine Mesa [Highway 89]. We also constructed a water line from the river to the rim of the canyon. We used that water to build the highway (CT in Begay and Roberts, field notes, 1992).

NJ also recalls the building of the dam.

> When the dam was being built, I was a Navajo Tribal Councilman. President Eisenhower was to do the groundbreaking by setting off the first explosion, and the people gathered on the north rim, just up the stream from the dam site. We flew out there with Scott Preston, from Window Rock. We watched from the south rim. There was nothing but the canyon. It didn't take long to construct the dam and in a few short years, there were a lot of people living around there (NJ in Begay and Roberts, field notes, 1992).

GCES-41: Navajo Bridge (also V88(3)-173) (Rusho and Crampton 1992; *Saturday Evening Post* 1929; Stone 1988; Vanette 1988) (Chapter 3)

HL (Begay and Roberts, field notes, 1992) was at the dedication of the bridge. C&EK (Begay and Roberts, field notes, 1992) recall that many local people gathered together and offered prayers before and during the construction of the bridge. Prayers were also offered when the bridge was completed and dedicated, and they continue to be offered from it today (Vanette 1988). A special place from which prayers can be offered is being incorporated into the bridge, which the Arizona Department of Transportation is currently transforming into a pedestrian bridge (Pauline Wilson, personal communication 1994). See also GCES-14 and GCES-42.

GCES-42: Lake Powell/Glen Canyon National Recreation Area (Chapter 3)

Lake Powell, once part of the river, is another place where offerings are presented. There seems to be some disagreement about this. While some people say that offerings should not be presented here, others present the offerings although they are aware of the restriction. The reasoning behind this was not revealed to us. There are many places of Navajo historical and ceremonial significance under Lake Powell. Some of these places were recorded during archaeological and anthropological research for the construction of Glen Canyon Dam (for discussions and summaries of this research, see Crampton 1963; Jennings 1961, 1966; Jennings and Sharrock 1965; Lister 1963). Although some GCES-NCRP consultants mentioned Lake Powell during the course of interviews, we focused specifically on the Grand Canyon

below Glen Canyon Dam and did not attempt to record stories about Lake Powell or document places now inundated by the lake.

GCES-43: *Dził Łichí'í* (Red Mountain) [Shinumo Altar]

Almost all of the people we talked to in the Gap/Bodaway area mentioned that the top of Dził Łichí'í was good for grazing horses.

In his 1951 telling of Changing Woman's travel westward, Frank Goldtooth (Fishler 1953) said that one of Changing Woman's animals (a sheep) escaped from where the animals were impounded around Preston Mesa (KF94-685) and Echo Cliffs (KF94-688) and turned into Shinumo Altar (KF94-694, V88(3)-152), while the others went to the Kaibab Plateau (Nát'oh Dziil, GCES-39). Because ceremonial stories are also maps of where to find things (including game) for ceremonies, this story suggests a possible hunting trail from Echo Cliffs (possibly The Gap) to the Kaibab Plateau sighted on this mountain, then going down Shinumo Wash, where the USGS 1:100,000 map shows a trail (Télii Adah atiin, GCES-12), then perhaps across near Stanton's Cave and Vasey's Paradise and up South Canyon (no trail on map). Local people in the 1980s told Vannette and Tso (Vannette 1988) that Shinumo Altar is a Wind Home, a prayer offering place, and a place for gathering medicines for colds. See also the "Trails" section, Jádí Habitiin [GCES-4], and Crossing of the Fathers [GCES-6] for discussion of the larger Gameway landscape.

GCES-44: *Náshdóí jiilts'ání* (Sighting of the Tiger) [Tiger Wash]

Long ago a man was searching for livestock, when he came upon this wash and found a "striped tiger" lying in the shade, and that is how the place got its name (PW and JS in Begay and Roberts, field notes, 1992) [see also Dził Diłhił, GCES-76].

GCES-45: *Dził Łibáhí* (Gray Mountain) [Gray Mountain] (also KF94-130, V88(3)-243)

The mountain is so named for its grayish appearance. Many people moved to the summit of this mountain in winter for its wood source and vegetation for livestock. Navajo settlement west of the Little Colorado River before the Fort Sumner incarceration was concentrated in and around Gray Mountain (Navajo Tribe 1963).

Gray Mountain is also mentioned in connection with Beautyway (Hoozhónee) by Singer Man of Deer Spring in 1932 (Wyman 1957), with Coyoteway by Yoo'ii Hataałii of Ganado in 1931 (Luckert and Cooke 1979), with Gameway by Claus Chee Sani of Tsaile in the 1970s (Luckert 1975, 1978), with Male Shootingway (Evilchasing version) by Diné Łibáhí in 1933, and with Mountaintop Way by local people who talked with Vannette and Tso in the 1980s (Vannette 1988:38). Frank Goldtooth's (1951) stories (Fishler 1953) about the Emergence from earlier worlds onto the surface of the present world and Changing Woman's trip to the west also mention this place, as do the ca. 1930 Emergence stories of Tł'ahii (Klah 1942).

In connection with the Emergence story, a rock here shows marks of raindrops that fell after the people came up through the Emergence place. While First Man, First Woman, Salt Woman, and Coyote were still staying at the Emergence Place and arranging things on the earth's surface, in the atmosphere, and in the sky, they placed the six sacred mountains that symbolize the outer limits and the center of Navajoland. Then First Man placed Gray Mountain as part of a seventh sacred landform that also encompasses the Kaibab Plateau (Nát'oh Dziil, GCES-39) and Navajo Mountain. Later, Changing Woman

stopped here on her way to the western ocean after her encounter with Salt Woman (see Áshįįh Ha'atiin, GCES-1, and Tooh Ahidiilíní, GCES-35, and Shadow Mountain, GCES-76).

In Tł'ahii's Emergence story, the few original emergents to survive the monsters hid in a cave at Gray Mountain until after the monster slaying and cleansing of the earth. They then emerged, renamed landmarks (see Áshįįh Ha'atin, GCES-1), and traveled eastward to resettle the earth along with the later Western Water Clan people.

The Coyoteway story is that of the return of the Western Water Clans, who stopped here on their way north and eastward (see Dził Diłhił biyaa ha'naa' na'nítiin, GCES-15). In the Beautyway story, it is a stopping place of the young woman who first put together the ceremonial repertoire. In the Gameway story, it is a point on one of two sunwise circular travel routes of the Deer People as they indicated places in Navajoland for future Navajos to use in Gameway ceremonies. In the Shootingway story, Dził Łibáhí is a point on Coyote's flight around the outskirts of Navajoland (see Nát'oh Dziil, GCES-39). It was also the site of a Fire Dance on the last night of a prototype Mountaintop Way ceremony performed by the immortals during the period when that ceremonial repertoire originated (see also Dził Diłhił, Shadow Mountain, GCES-76).

GCES-46: *Kin nééz* (Tall house) [Desert View Tower; also Hopi House] (Chapter 3)

Desert View Tower has been mentioned repeatedly in this chapter and in Chapter 3 because it is located near the head of the Salt Trail (Áshįįh Ha'atiin, GCES-1).

Frank Goldtooth in 1951 (Fishler 1953) used this place (Ya'ii'áhí, KF94-724) to identify where Changing Woman came out of the Grand Canyon on her trip westward. According to Van Valkenburgh's (1974:118) research of the 1930s or early 1950s that was used during the Navajo Land Claim, this was the location in 1851 of a Fire Dance (the last night of a Mountaintop Way or Shooting Way ceremony). Local people in the 1980s who talked to Vannette and Tso (Vannette 1988) used this place to identify the location of a Blessingway and protection prayer site (V88(3)-261).

GCES-47: "The Big Sand Dune" (Chapter 3; Figure 19)

This large sand dune is on the south side of Glen Canyon immediately upstream from Lees Ferry. GCES-NCRP consultants identified it as a historically significant place for livestock to get to the river.

GCES-48: Crater Hole (no other reference in text)

One GCES-NCRP consultant pointed out this large sink hole as an interesting natural landmark that makes the Grand Canyon landscape unique.

GCES-49: *Bidáá' Ha'azt'i'í* (It [the railroad] Ends Up at the Rim) [Grand Canyon Village] (Chapter 3)

As discussed in Chapter 3, Navajos were grazing livestock and collecting plants and other resources in the vicinity of Grand Canyon Village (and as far as Havasu Canyon) before they were incarcerated by the U.S. Army at Fort Sumner in the 1860s. Naalnishi's mother, Asdzą́ą́ Ts'oosi (Slim Woman), was

Figure 19. The "Big Sand Dune" [GCES-47].

born at Bidáá' Ha'azt'i'í before 1850. Those families that did not surrender to the United States hid in the Grand Canyon. Some of them entered the canyon on Áshiḭh atiin [GCES-1], stayed at Indian Garden [GCES-22] to plant crops, and left the canyon on what is now the Bright Angel Trail. From there the families went to Havasupai Canyon to stay with the Havasupai.

GCES-50: *Tsé dinilzhinii* (Dark Brown Rock) [?] [Black Peak]

Black Peak (KF94-687) and Tuba Butte (KF94-686) figure in Frank Goldtooth's (1951) story (Fishler 1953) of Changing Woman traveling to the west—they are the posts of the corral that contained the game animals while she went to the river (see Tooh Ahidiilíní, GCES-33, and section on rivers, above). Local people told Vannette and Tso in the 1980s (Vannette 1988:46–47) that these places (V88(3)-96 and V88(3)-97) are medicinal plant gathering areas and prototypes of the old-style forked-stick hogan.

GCES-51: *Bidáá' hátsaa* (Big point) [Tatahatso] (See also V88(3)-161)

This area is part of a larger area called Big Belly Point, named after the customary land user of the area, Hastiin Chaan Tso. Bidáá' hátsaa was used as a prominant reference point by most of the GCES-NCRP consultants.

GCES-52: *Bidáá' hayázhí* (Small point) [Small Point] (See also V88(3)-160)

This area is also part of the "Big Belly Point" area. Bidáá' hayázhí was also used as a reference point by many of the people we talked to.

Figure 20. "Henry Lane's elevator" [GCES-53], the remains of a Bureau of Reclamation cable car used for the exploration of the proposed Marble Canyon Dam.

GCES-53: Elevator shaft (Figure 20)

This site is a shaft on the rim of the canyon above Redwall Cavern that was the control room for a cable car that lowered Bureau of Reclamation workers to the construction camp on a river terrace 2200 ft below the rim and from there to the river (see Automobile Club of Southern California 1951). Henry Lane, a GCES-NCRP consultant who lives nearby, pointed out the location to us, and we call it "Henry Lane's Elevator." The camp on the terrace above Redwall Cavern was used by the Bureau of Reclamation during its 1940s explorations for the proposed Marble Canyon Dam. The NPS recorded remains from these explorations along the river corridor (NPS site AZ:C:9:83; see Fairley et al. 1991:231–232). In the early 1950s, dam exploration activities moved about 15 miles downriver, and the camp on the terrace was abandoned. Navajos used Télii adahbitiin, the Donkey Trail [GCES-12] leading into Twentynine Mile Canyon, to access the abandoned camp to collect materials left behind.

GCES-54: Cement cable pad

After Marble Canyon Dam explorations moved downriver from the Redwall Cavern location in the early 1950s, another tramway was built from the rim to the river. This site is the remains of the ancher for the tramway on the south rim on Bidáá' Hátsaa Point [GCES-51]. Local residents pointed it out as a historically interesting site. See GCES-12, GCES-34, and NPS sites AZ:C:9:65, AZ:C:9:83, and AZ:C:9:88 for connections.

GCES-55: *Yaandee'nil* (Mountains Strung Out in a Row [descending]) [Yon Dot Mountains]

Vannette (1988) reports that "Bodaway Mountain" (V88(3)-143) contains many offering places. See also GCES-57, Deelk'id.

GCES-56: *Dził ninééz* (Long Mountain—eastern portion of Yon Dot Mountains) [Yon Dot Mountains]

Vannette (1988) refers to "Long Ridge Lying Down" (V88(3)-215) as a place for offering prayers and gathering ceremonial plants.

GCES-57: *Deelk'id* (The Ridge) [Cedar Ridge]

Possibly included in Vannette's (1988) characterization of "Bodaway Mountain" (V88(3)-143; see GCES-55, Yaandee'nil).

GCES-58: *Tsinaabąąs habitiin* (Wagon Trail) [Gap]

The old wagon trail that leads to the top of ridge east of the Gap/Bodaway chapter house gives this place its name. According to Vannette, The Gap (V88(3)-174) is a place visited by Holy People and an offering place. See also Jádí Habitiin [GCES-4] for related stories about Echo Cliffs in general (KF94-688).

GCES-59: *[A]Bąąh tó* (Spring on the Side of the Ridge) [Willow Springs] (Chapter 3)

Many springs run off the mesa in this general area. This particular spring was an early farming area for local Navajos and is still used by local residents.

In Frank Goldtooth's 1951 story (Fishler 1953) of the Western Water Clan people's migration north and eastward, Willow Springs (KF94-726) was one of the stopping places (see Dził Diłhił biyaa ha'naa' nanítiin, GCES-15, and Dził Diłhił, GCES-76). Local people in the 1980s told Vannette and Tso (Vannette 1988) that they gather ceremonial water and plants from here and leave offerings with prayers (V88(3)-61).

GCES-60: *Ha'naa na'ní'á sání* (or *Na'ní'á Hasání*) (The Old Bridge) [Cameron, Arizona]

This historic landmark is important in community history and mentioned frequently in the recounting of local events.

GCES-61: *Tsii'áát* (Pillow Mountain) [Pillow Mountain]

Vannette (1988) mentions this as an offering place (V88(3)-166). It is also commonly used as a reference point in stories.

GCES-63: *Łibátah* (Graylands) [no English name]

The area east of Palisades of the Desert [GCES-71] is also mentioned in the recounting of local events.

GCES-64: *Tsé tsoh k'id* (Big Rock Point) [Comanche Point]

Also see GCES-16 (above). This location is also mentioned in stories.

GCES-65: *Tsin dah shijaa' bidáá'* (Tree Grove Point) [Cape Solitude]

This place is named for the grove of juniper trees at this location. Vannette (1988) records this ceremonial site (V88(3)-257) southeast of the confluence of Colorado and Little Colorado, probably on or near Cape Solitude. Ceremonies performed here include protection prayers and Blessingway.

GCES-66: *Łǫ́' Łeeyáán* (Horse Alkalai) [?]

The alkalai that gathers here was a favored spot for horses to graze.

GCES-67: *Dził Łichíí' ditł'oii* (Fuzzy Red Mountain) [Cedar Mountain] (Chapter 3)

Local people in the 1980s told Vannette and Tso (Vannette 1988:50) that "Fuzzy Red Mountain" (V88(3)-131) is associated with Monsterway and Gameway. The mountain (KF94-675) is near Slim Curley's east-west alignment of chips from Traveling Rock (trail shrines, possibly related to Diyinii Bitiin) mentioned above (see Áshiłh ha'atiin, GCES-1). People told Vannette and Feary (1981:20) of a sacred Cedar Mountain called in Navajo "Ghanilts'iili" ("Perfect Top"? [Bighąą' niłts'ǫ́łí] possibly a reference to the flat top and symmetrical silhouette of this mountain). Although Vannette and Feary locate it in the Kaibab National Forest, that place is probably Cedar Mountain, just inside the Navajo Reservation.

GCES-68: *Dził Łichíí' dilkǫǫh* (Smooth Red Mountain) [Gold Hill]

Cameron Chapter residents noted that Turquoise Woman was born on top of Gold Hill and that Turquoise Man was born on top of Cedar Mountain. Both places are considered holy, and no one should go up on top of either one without preparing by saying the proper prayers. The landform between the two hills is also sacred, as together they all form part of a body. The meadow between Gold Hill and Blue Springs in the Little Colorado River [GCES-28] is also a sacred area, where winter residents have seen spirit or mirage people. They look like people but leave no footprints or other signs of their presence (Begay and Roberts, field notes, 1992).

Local people in the 1980s also told Vannette and Tso (Vannette 1988:50) that "Smooth Red Mountain" (V88(3)-130), like its partner Cedar Mountain [GCES-67], is associated with Monsterway. Gold Hill (KF94-676) is near the east-west alignment in Slim Curley's story.

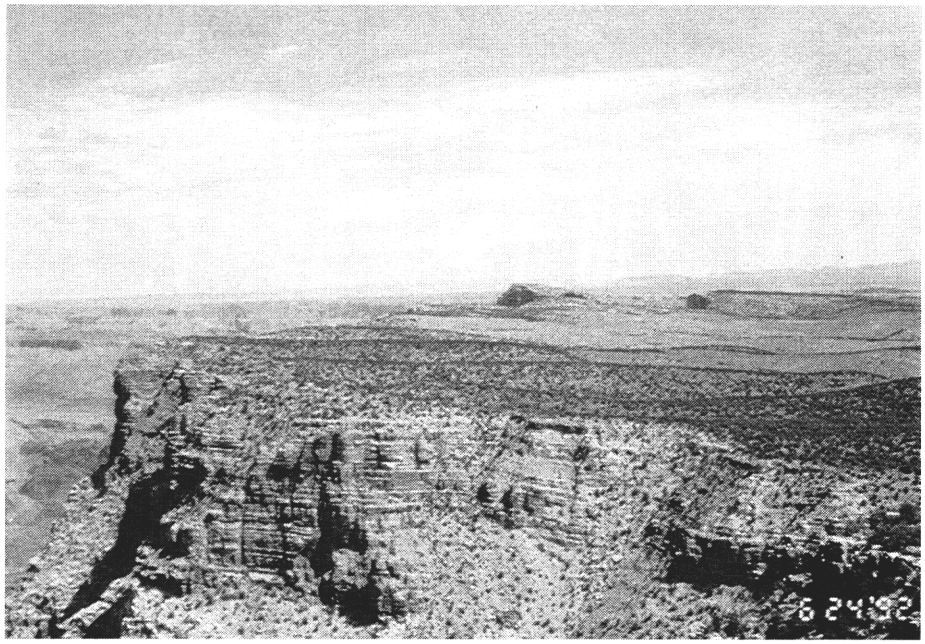

Figure 21. De'deez'ą (the uplift; GCES-71), with Dził Łichíí' (red mountain; GCES-43), in the background.

GCES-70: *Diné yázhí ba'íítą* (Where *Dine Yazhie,* Little Man, Received the Enemy Way Ceremonial Stick) [?]

The residence of Dine Yazhie, this place has associations with the Navajo ceremony the Enemy Way. This name has become a proper name for the valley east of the westernmost boundary of the Navajo Reservation along Highway 89.

GCES-71: *Dedeez'á* (Uplift) [Palisades of the Desert] (Figure 21)

People refer to this area to orient discussions of the local landscape. This area includes the customary land use areas of the families of several GCES-NCRP consultants.

GCES-73: *Tsé ch'iizh hooghan* (Rough Rock Home) [no English name] (no other discussion in text)

According to Vannette and Tso (Vannette 1988), there was a ceremonial site (V88(3)-260) near Rough Rock (presumably on the rim, northeast of Desert View Tower, GCES-46). Blessingway and protection prayers are done here. This may be the same place.

GCES-74: *Awéé ts'áál bił deesk'id* (Cliffrose Hill) [no English name] (no discussion in previous text)

This place name was mentioned in conversations about the general landscape.

GCES-75: *Be'ek'id łichíí'* (Red Lake) [no English name] (no discussion in previous text)

This is also a reference point on the landscape.

GCES-76: *Dził dilhił* (Black Mountain) [Shadow Mountain]

Shadow Mountain (KF94-122) is mentioned in connection with Coyoteway by Yoo'ee Hataałii of Ganado in 1931 (Luckert and Cooke 1979), with Enemy Way by Slim Curley of Crystal in 1930 (Haile 1938), and with the Mountaintop Way and possibly Gameway by Frank Goldtooth of Tuba City in 1951 (Fishler 1953). It also figures in Frank Goldtooth's stories of Changing Woman's trip to the west and of the migration of the Western Water Clan people.

In the Enemy Way story, Shadow Mountain was a point on Monster Slayer's route westward in search of the Traveling Rock (see Áshiłh ha'atiin, GCES-1). According to Frank Goldtooth, when Changing Woman later, on her way west, met Salt Woman at Tooh Ahidiilíní [GCES-33], Salt Woman took control of the animals that had come with Changing Woman and drove them up the Little Colorado and along the west side of Shadow Mountain (see Little Colorado River Gorge in the section on "Rivers," above). Evidence there consists of a jackass hoofprint and soil made salty by Salt Woman's sweat. After Changing Woman reached her home in the ocean, made the Western Water Clan people, and sent them back to what was to be Navajoland, the people traveled northward from the Sunset Crater area to here. The Coyoteway story of Yoo'ee Hataałii also says that the Western Water Clan people passed here on their way north and east, stopping to have prophetic visions, and that it was also a home of the lion and wildcat people [cf. GCES-44, above]. These stories taken together show that the mountain is at or near the intersection of two important routes in Navajo ceremonial knowledge, one due south-north (the clan route) and one due east-west (the Enemy Way–related trail and Diyinii Bitiin).

The story that seems to associate the place with Gameway is that this was a hunting camp of the immortals, whose dog can still be heard at night barking near a spring, and whose meat-drying area is evident at a flat rock on the mountain and trees on top. Their antelope hunting corral catch pen (with four openings, like a Fire Dance enclosure for the last night of Mountaintop Way) is here, as well, turned to stone. The Mountaintop Way story is that this was the place (probably the circle of rocks identified as the hunting corral) of the Fire Dance on the last night of the prototype Mountaintop Way ceremony performed by the immortals during the period when the repertoire for that ceremony was being put together.

According to Watson (1964:10), the mountain is the source of sulphur for use in Nightway and Enemy Way ceremonies and for powdered rock from a rock in the shape of a human for use in unspecified ceremonies. Local people also told Vannette and Tso (Vannette 1988:35) in the 1980s that the place (V88(3)-12, V88(3)-220) is associated with Mountaintop Way and Enemy Way.

GCES-77: *Bii' hóteel* (Wide Valley) [no English name] (no discussion in previous text)

This is the name of a large area that is used as a reference point on the landscape.

GCES-78: *Ts'ahtah* (Sage Range) [no English name] (no discussion in previous text)

References to this area (near GCES-52) are also used to tie together discussions of places on the landscape.

GCES-79: *Tsé awók'izí* (Missing Tooth Ridge) [Tooth Rock]

The row of rocks atop this ridge has a small part missing, which gives the appearance of a missing tooth. Vannette (1988) mentions this place (V88(3)-111) as an offering place. Local people refer to it in orienting discussions of other places on the landscape.

GCES-80: *Ch'ó* (Spruce, Evergreen) [no English name]

This area near Lipan Point was identified by many of the people we interviewed as a place to gather spruce, because the only other source would be the San Francisco Peaks, a great distance away. See Chapter 5 for discussion of the use of this plant. Local people in the 1980s also mentioned this place to Vannette and Tso (Vannette 1988, V88(3)-236).

GCES-81: Crystal Creek Site (NPS Site AZ:B:16:3) (Chapter 3)

This may be a pre–Fort Sumner Navajo campsite/homesite. See Chapter 3 for discussion.

GCES-82: Palisades Complex Site (NPS Site AZ:C:13:99) (Chapter 3)

A nineteenth-century Navajo ceramic sherd was found amid prehistoric ceramics on this site during a GCES cultural resources identification trip in September 1993. It is therefore among the sites showing archaeological evidence of early Navajo presence in the Grand Canyon. Early Navajo presence is also evidenced by this site and others because of the connection between Anasazi people and the Táchii'nii people of today. Alfred Yazzie stated that these sites are evidence of Navajo occupation before Columbus. See discussion in Chapter 3.

GCES-83: Location of Navajo pot in Hance Creek (Chapter 3)

A whole Navajo pot was found by the National Park Service eroding out from this location a few years ago, adding to the archaeological evidence of early Navajo use of the Grand Canyon. See Chapter 3 for discussion.

GCES-84 (NPS Site AZ:C:2:60) (Figure 22)

The National Park Service recorded Navajo "stock gates" at this site in 1991. These rows of sandstone rocks block off portions of Stanton's Road, presumably to prevent livestock from walking down the road to the river. A visit to the site by GCES-NCRP personnel in 1992 could neither confirm nor refute the Navajo cultural affiliation of the "stock gates," but a Navajo Pinyon Grayware sherd was found in association with Feature 1, a historic forge (see discussion in Chapter 3). GCES-NCRP personnel also

Figure 22. GCES consultant looking at the remains of a hogan near Lees Ferry [GCES-84; AZ:C:2:60, Feature 6].

identified the remains of a Navajo hogan and corral slightly downstream, which have been recorded by National Park Service personnel as Features 6 and 7 of AZ:C:2:60. These features are fairly recent and are not temporally associated with the other Navajo-affiliated features or artifacts on this site.

GCES-85: Hogans at Lees Ferry Historic District (NPS Site AZ:C:2:11, Feature 21)

The Lees Ferry Historic District was recorded by the National Park Service. Feature 21 consists of the foundations of two Navajo hogans near the post office (Feature 19, recorded by Rusho and Crampton in 1992 as Site 5), which was maintained at Lees Ferry from 1879 to 1923. They might be associated with the trading post built by the Mormon Church in 1874 (see Rusho and Crampton 1992:37–40, 132), but their dates of construction and use are unknown.

GCES-86 (NPS Site AZ:C:2:57, Rusho and Crampton's Site 14)

Both the National Park Service (1991:394) and Rusho and Crampton (1992:134) consider this site to have been used (or reused) by Navajos. Rusho and Crampton (1992:139) call the site a "rock house and Indian camp" and state that Navajos built "a number of small stone corrals nearby." National Park Service archeologists also considered the round masonry structure to be corrals or pens, possibly indicative of a Navajo reoccupation of an Anglo house dating to the erly nineteenth century. A visit to the site by GCES personnel in 1992 (Figure 23) could neither confirm nor reject the potential Navajo affiliation of the various features.

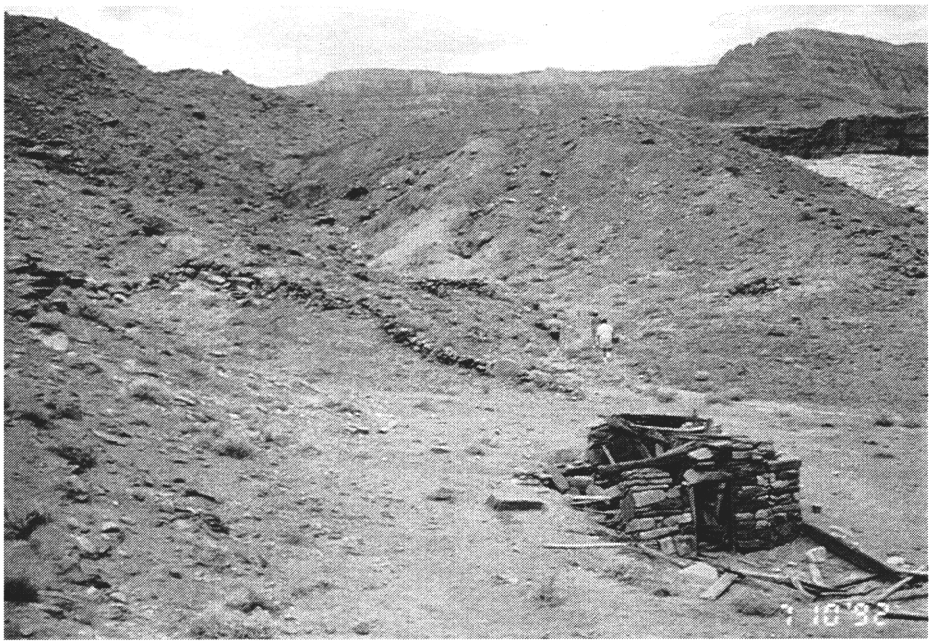

Figure 23. Historic site near Lees Ferry [GCES-86; AZ:C:2:57] with possible Navajo components.

Sites on the Rim

Six places on or near the rim within the GCES study area were documented by Vannette (1988) but not mentioned by GCES-NCRP consultants:

88(3)-159	Wind home
88(3)-149	Wind home west of river, vicinity of Nankoweap Mesa?
88(3)-258	Ceremonial site near Cedar Mountain
88(3)-259	Plant gathering location near Desert View (SSW), possibly in upper basin; medicine for sheep; people from Shiprock come here
88(3)-235	Plants for hoops for Na'at'ooyee biką'
88(3)-234	Fire Dance site

Archaeological Sites in GCES-NCRP Study Area Recorded in the 1950s for the Navajo Aboriginal Land Claim

Explanation of symbols used below with tree-ring dates: p—pith ring; nc—indicates that the pith was gone from the specimen, and that the inside dated ring is "near center"; fc—used when the pith is gone from the specimen and the inside dated ring is determined to be quite far out from the pith; ±—center portion is difficult to date and is based on ring count only; +—outermost rings are very small and a ring count only could be made to the outside; inc—indicates that the outside ring of a specimen is incomplete in growth; c—outermost ring is complete in growth; C—outermost ring is continuous around the circumference of the specimen, implying that the date is close to the cutting date; G—beetle galleries present; B—bark present on the specimen (Stokes and Smiley 1964).

W-LLC-B-A: Four forked-stick hogans, five sweathouses, one corral. About 2 miles from rim of Bodaway Mesa. Daaghaa' Sikaad [Navajo headman of Kaibito area] brought the first Paiutes here "from Bears Ears to Navajo Mountain." No tree-ring dates.

W-LLC-B-C: On Bodaway Mesa. Forked-stick hogan and corral used by Goma'a and his people before and during Fort Sumner times.

W-LLC-B-E: Three miles south of river, north of Shinumo Altar. Nine hogans, two corrals, one lamb pen. Hogan 1 has tree ring date of 1909. Camp of Hastiin Goma'a.

W-LLC-B-H: Opposite Nankoweap Canyon, western part of Bodaway Mesa. Two rock hogans, two sweathouses, one of which is recent. No tree-ring dates.

W-LLC-B-I: Three hogans, one old sweathouse, one new sweathouse. West slope of East Mesa of West Bodaway Mesa group. No tree-ring dates.

W-LLC-B-L: Hogan with possible grave, sweathouse, on Bodaway Mesa. No tree-ring dates.

W-LLC-B-M: Two rockshelters, tree-ring date of 1898G (but nothing distinctively Navajo), half a mile from west side of middle Bodaway Mesa.

W-LLC-B-N: Two forked-stick hogans, one cribbed-log hogan, one sweathouse. On Bodaway Mesa. Malcolm Farmer obtained tree-ring dates of 1876 and 1857 but his dates often don't corroborate those reported by Stokes and Smiley (1964).

W-LLC-C-A: Six hogans, one with 1833+ tree-ring date. Hopi and Anasazi sherds present. Four miles south of Desert View Tower on Coconino Plateau.

W-LLC-C-B: Two hogans, one corral, game rack, two mescal pits. Two and one-half miles south of Desert View. Hogan 2 produced tree-ring dates of 1787+G, 1772+G, 1790+G, and 1709+G; sweathouse had 1786+G date, and Hogan 1 yielded a date of 1793G. Navajos reportedly gathered mescal in the Grand Canyon.

W-LLC-C-C: Located 200 yards south of site W-LLC-C-B. Joined hogan and corral (common in sites of Upper Basin, Coconino Plateau, and Red Butte areas), and another hogan, possibly roofless. Hogan 1 produced tree-ring dates of 1788+, 1825+, and 1833 (suggesting later reuse of the site), and "Navajo plain ware" sherds also present.

W-LLC-C-D: Near sites W-LLC-C-B and W-LLC-C-C, above. Five hogans, one windbreak. Hogan 1 produced tree-ring dates of 1798+, 1794+, 1758+, 1745+, 1790+, and 1812+ (indicating repair of the structure). Hogan 2 yielded dates of 1763+ and 1782+G; Hogan 4 had a 1789+ date; and Hogan 5 produced tree-ring dates of 1766+, 1751+G, 1773+, and 1828+G (also indicating later repair). The windbreak produced a tree-ring date of 1789+.

W-LLC-C-E: Near site W-LLC-C-C, this site contains a hogan, lamb pen, and corral. The forked-stick frame of hogan 1 produced tree-ring dates of 1820G, 1798G, and 1809G; the other elements date to 1837+G, 1792+G, and 1826+G.

W-LLC-C-F: One mile south of Lipan Point near head of small canyon, this site contains four hogans, one shelter, and two corrals. Corral 1 produced tree-ring dates of 1809+ and 1807+. Corral 2 dates to 1779+G.

W-LLC-C-G: One mile south of W-LLC-C-F, this site contains three hogans, two corrals, and mescal pits. Hogan 1 yielded a tree-ring date of 1788+G.

W-LLC-C-H: This site with three hogans, three windbreaks, and one corral is located half a mile southeast of Bentonite Tank. Hogan 7 yielded a tree-ring date of 1735+G.

W-LLC-C-I: Five hogans, one sweathouse, one game rack, and one corral are at this location. Corral 8 dates to 1832+ (although Farmer gives a date of 1837). Hogan 2 has no tree-ring date (but Farmer says it dates to 1845), nor does Hogan 5 (but Farmer says 1848).

W-LLC-C-K: The site description is missing. Farmer dated on hogan at this site to 1859 (based on two samples). According to testimony by Charlie Yazzie, the area was occupied before Fort Sumner times. People were driven out of this area in 1897, and hogans were

burned in 1927 by stockmen [refers to sheriff's posse in 1897 and employees on Babbitt's CO Bar Ranch in 1927; see Roberts 1990, 1992].

W-LLC-C-L: Near Burro Canyon on the southeast slopes of Gray Mountain is an antelope corral incorporating canyon walls. No date.

W-LLC-C-M: The storage house at this location, near W-LLC-C-L, was reportedly used by Navajos before Fort Sumner.

W-LLC-C-N: This location is slightly more than one mile northeast of the main east entrance to Grand Canyon National Park. It contains two hogans, one corral.

W-LLC-C-O: This well-documented site is east of Cedar Mountain. See descriptions of GCES-1 and GCES-31, above.

W-LLC-C-Q. Half a mile from W-LLC-C-G, this site contains a well-preserved forked-stick hogan, possibly related to recent piñon gathering.

W-LLC-C-R: A quarter-mile southeast of sites W-LLC-C-B, C, and D, this site contains a hogan, corral, and lamb pen. One of the forked sticks from the hogan dates to 1865G. The corral dated to 1869G.

W-LLC-C-S: Six miles south of Wayside Museum are five hogans. No tree-ring dates are available but the cans present at the site indicate a relatively late date.

W-LLC-C-T: One mile northwest of W-LLC-C-S is a site with three hogans and mescal pits. Hogan 2 dates to 1823+G. The presence of cans indicate reuse of the site.

W-LLC-C-U: Near Lipan Point and Tusayan Ruins, 3.5 miles south of Wayside Museum, are four hogans, one big corral, mescal pits, and a game rack. No dates were obtained.

W-LLC-C-V: Two miles southwest of Wayside Museum is a site containing fifteen hogans.

W-LLC-C-W: One mile east of W-LLC-C-U is a forked-stick hogan; no date was obtained.

W-LLC-C-X: Four hogans are south of Grand View on the west side of a small canyon about one mile south of sites W-LLC-C-B, C, and D.

W-LLC-C-CC: On Gray Mountain, one mile south of Lewis Tank, are fourteen hogans, a corral, a sweathouse, and a shelter. Two "hogans" adjoin a sheep corral. The north fork of the frame of Hogan 10 yielded a date of 1828+G, and the south fork of Hogan 1 dated to 1795. The site also yielded a Pinyon Gray sherd, three Anasazi sherds, six historical "Walapai" sherds, and three unidentified sherds.

W-LLC-C-HH: The first page of the site description is missing, but the site does contain post–Fort Sumner mass-produced items. See *Pipeline Archaeology,* Site NA 6617.

W-LLC-C-II: Located southeast of Grand Canyon, 12.2 miles below Lockett Lake, this site contains three windbreaks, one corral, and one lean-to. Sheetmetal is present.

W-LLC-C-JJ: This site is about one-half mile from W-LLC-C-II and contains one hogan, four corrals, and two lamb pens.

W-LLC-C-KK: One mile east of W-LLC-C-JJ, near Grand Canyon Village, is a hogan and corral. The rear wall of the hogan has been removed. Clyde Peshlakai's mother's father's brother, Chilii, died in the hogan. From there they went to Fort Sumner.

W-LLC-C-LL: One mile east of W-LLC-C-KK, on the north side of Coconino Rim road, is a hogan that has yielded no date but is associated with Navajo and Pinyon Gray sherds (ca. 55).

W-LLC-C-MM: Half a mile south-southeast of W-LLC-C-H are four hogans and a corral. The side poles of Hogan 1 yielded tree-ring dates of 1746+G, 1771+G, and 1824+G. The side poles of Hogan 4 date to 1744+, 1792+, 1788+G, and 1788+G.

W-LLC-C-NN: Near Bentonite Dam and a modern piñon camp are two hogans.

W-LLC-C-OO: This site, near W-LLC-C-NN, contains four hogans and a sweathouse and produced numerous tree-ring dates (+Gs), mainly late 1700s and early 1800s (1775–1825). The site also contained around 33 Pinyon Gray sherds.

W-LLC-C-PP: Near Grand Canyon Village is a site with a hogan, windbreak, and corral. The windbreak dates to 1746.

W-LLC-C-QQ: Two windbreaks are located near Bentonite Tank.

W-HC-LH-B: Near the crossing of the old Williams–Grand Canyon Road and the Williams Road is one sweathouse, which did not yield dates.

W-HC-LH-G: South of Red Butte, near Forest Service fence, are five hogans, none of which have been dated. Both the architectural style and oral history indicate that this site antedates Fort Sumner. Star Gazer and Bi'ighannii used this area before Fort Sumner (see GCES-1 and GCES-22).

W-HC-LH-HH: Also in the Red Butte vicinity, this site contains four hogans, a sweathouse, and a corral. No tree-ring dates were recovered, but construction methods indicate the site dates to both pre– and post–Fort Sumner times.

W-HC-LH-II: About six miles south of North Point on the south rim of the Grand Canyon are three hogans, a sheep corral, a sweathouse, game racks, and mescal pits. Tree-ring samples date Hogan 1 to 1862+, the sweathouse to 1858+B, and the corral to 1844+.

W-HC-LH-JJ: In the vicinity of Red Butte is a site containing nine hogans and a sheep corral. Three-ring dates of 1866 and 1867 were obtained from Hogan 3 and the corral, respectively. A 1731+ date from Hogan 9 suggests either a lengthy occupation or repair and reuse of the site.

W-HC-LH-KK: Indian Garden in the Grand Canyon. See description of GCES-22.

Chapter 5

RESOURCES FROM THE CANYON LANDSCAPE

This chapter describes the plants, minerals, and animals GCES consultants told us have been and continue to be used in and around the Grand Canyon. Those that come from specific sites, such as salt, are also included in Chapter 4. Although most of these resources do not come from a specific site, they are nonetheless considered sacred living beings, inseparable from the landscape and human life as a whole.

PLANTS GATHERED AND THEIR USES

Listed below are the plants identified during field visits to the rim of the Grand Canyon. Most of the information provided to us concerning plants was unsolicited and completely voluntary. Each plant in the list is first identified by its Navajo name; a translation of its Navajo name is given in parentheses and the English name is in brackets. Following the identification of the plant is a brief explanation of its uses and preparation. Other information is also provided. Not all translations of the Navajo names are given, and not all English names are provided, for several reasons.

Although many of the Navajo plant names can be translated, some are only names and cannot be translated. For example, *Gad* is juniper, but as a term it has no translation, it is simply juniper. In these instances only the common or English name is provided. Among the plants listed below are a few without common or English names. People pointed these plants out to us in the field or gave us the information when in the field without seeing the plant itself. We have included these plants because the people who provided the information ascribed importance to them.

Two categories of plant use have been identified below: food and medicinal. In some cases these two categories overlap. Although the people who identified the plants made no distinction between the two, we distinguish between them here so we can provide general information about the different levels of knowledge that exist about plants. The first category consists mainly of the fruits, nuts, and berries of a specific plant (in some cases the roots or stalks of the plants were exploited for food). Most everyone is familiar with these food sources. Many of the interviewers recalled collecting them and often talked at length about the preparation, abundance, and taste of these plant foods. Many of these plants are still in use, especially during ceremonial occasions.

The second category of plants, medicinal, can be further divided into two subcategories: general and specialized. The General Medicinal subcategory covers relatively common plants, such as juniper. The tea made from juniper is a remedy for stomach aches and other ailments, and the knowledge of its use is not restricted or highly guarded.

In contrast, plants in the Specialized Medicinal subcategory require specialized knowledge and offerings, and they must be administered under the careful guidance of a practitioner. Knowledge of medicinal plants in the category is often handed from *Hataali* to apprentice, or among family members. The knowledge would include secret sacred names, places to collect these plants, who can collect them, what other plants can be used with them, when to collect them, and so forth. It is not surprising that plants in this category were not revealed to us.

Aside from all of this are the guiding principles, or the teachings about plants that explain why the plants were identified to us in the first place. Plants are people, and like people, they move around, they are

female and male species, and to collect them, you must know them and talk with them. Even the use of plants in the food category involves prayers and offerings, which are also essential with plants in the medicinal category. To know plants is to be familiar with the landscape, the seasons, the cosmology, the history of the area, and the movements and genealogy of your people. Plants are what kept people alive. In the old days, if the corn didn't grow or a drought occurred, or an enemy descended on you, knowledge of plants would guide you to water, provide nourishment, and indicate the time of the season. Like ceremonies, knowledge of plants encompasses all of these disciplines.

Anaa'jí ch'il (Enemyway plant) [creosote]. The plant is used in a variety of ceremonies, but its uses and preparation are not disclosed.

Ane'etsah azee' (acne medicine; aster). The leaves of this plant are gathered and rubbed on acne spots or dried and later mixed water and used much the same way. It can also be mixed with *chíłh* and applied for the same effect. (Elmore 1944:88 lists *ne'etsaha azee'* as purple, tansy, or viscid aster, which is used as pimple medicine.)

Awééts'áál (cradleboard) [cliffrose] (see also Mayes and Lacy 1989:27). The bark of this plant was once used for a lining in cradleboards and also as a "diaper." The bark did not fall apart easily when used in this manner and could be washed. Women also used this during menstrual periods and then discarded. The bark was gathered when needed, or stored for later use. The bark is no longer used for the purposes stated. (Elmore 1944:53 provides similar information and says that the plant was also used as a dye and to stuff "Navajo baseball.") (Brugge 1982:92 reports that cliffrose is also used as a medicine in ritual.)

Ayání (buffalo) [?]. The full name of this plant is *Ayání alizhgo hanítsą́ągíí* [the plant that grew up where the buffalo urinated]. The yellow flowers of this plant are rubbed on insect bites as an anesthetic. It is picked when needed. (Brugge mentions paperflower [1982:96] and rubber plant [1982:94] as plants known by their odor of bison urine.)

Ayayéts'óóz (unknown). This plant is known to stop scalp itching. It is gathered and dried and used in treating the scalp, much like washing your hair. (This may be the same plant as the unidentified herb *áyaa'áhí* mentioned in Elmore 1944:57, 80, 91.)

Azee'dlohłbáhí (Gray laughing medicine). Also mentioned as an enema, but other details not revealed.

Azee' ni'háálzid (medicine decaying from the ground) [groundsel; Mayes and Lacy 1989:48]. A powerful medicine and gathered only when the sacred names are invoked. The medicine is used on various types of skin wounds. Preparation of this plant and its specific uses were not disclosed. (According to Elmore 1944:42, *azee' ni'bikáádę́ę́*, wild buckwheat, is also called *Łé'ázee';* the root is eaten, the plant is used in keeshee *[Iináájí] hatáál* and other ceremonies, and it is used to stop pain from wounds. These plants may be the same. Also, Elmore 1944:63 lists three-lobed sagebrush or three-lobed wormwood, known as *Tó iikááh,* as the same plant as *Azee' háałdzid* or root rot medicine, so named because the plant holds moisture. See below.) (cf. Brugge 1982:98, and Hosh beeyildéhé, below)

Azee' nitł'inii (gummy medicine; Mayes and Lacy 1989:5) [globemallow]. A medicine for various illnesses, including stomach aches. The root of this plant is gathered as needed or stored for future use. (According to Elmore 1944:63, red falsemallow stops bleeding, and the root can be chewed to ease hunger; a tea from this plant is used to treat illness from *anł'tą́ą́h.*) (Brugge 1982:96 reports that *Sphaeralcea* spp. are also good forage.)

Azee' tso [big medicine; filaree). Identified as a medicine but its uses and preparation not disclosed. (Elmore 1944:49 identifies this plant as wallflower, prairie roche, or yellow phlox but gives no use.)

Chá'oł (piñon; Mayes and Lacy 1989:78). The piñon nut is discussed below under *Neeshch'íí'*. The branches are used in conjunction with other plants for *ooltáád* (unraveling) in various ceremonies. The branches are also forage for sheep in the winter. (Elmore 1944:21–23 adds various uses, such as pitch for covering water bottles, dyes, etc.) (Brugge 1982:95 reports that piñon wood is used for building hunting windbreaks and hogans, and prayers and offerings are made to young trees.)

Chiiłchin (aromatic ?) [sumac; Mayes and Lacy 1989:122]. Porridge made from the red berries of this plant is a popular food today and is used in ceremonies that call for traditional foods. The red berries are also used in conjunction with other red berries for *Chíídík'ǫǫzh,* prepared during a girl's puberty ceremony. The stems are used for tools or equipment in various ceremonies and have many utilitarian uses. (Elmore 1944:61 lists various uses including ceremonial paraphernalia and basketry and as a dye.) (Brugge 1982:96 also reports that the berries can be used to make a sweet drink.)

Ch'il diilyésii (?) [snakeweed; Mayes and Lacy 1989:115]. There are several different subspecies of this plant, and each has specific functions. The smaller version, the dodgeweed, has many ceremonial uses. It may be burned with other plants for *jint'eesh* or collected and used whole for *ooltáád.* The green leaves at the bottom portion of the plant are used in the preparation of reed offerings. (Elmore 1944:86 notes that the plant is used as a refuge by small animals and includes descriptions of a number of ceremonial uses, including those listed here.) (Brugge 1982:93 notes that the plant makes poor forage but is a home remedy for cuts.)

Ch'ilhósha'ii (plants that hooks you) [mesquite]. The beans of this plant are identified as food for other Indians.

Ch'ó (fir) [fir]. The branches of this plant are used in various ceremonies, and the plant's use has many restrictions. (Elmore 1944:20–21 discusses ceremonial paraphernalia of spruce. (Brugge 1982:95 reports that the name is a general term for *Pseudotsuga, Abies,* and *Picea*—Douglas fir, fir, and spruce.)

Ch'ó hojilyééh (datura; Figure 24). This plant is a very powerful medicine and can only be used with proper ceremonial preparations. People who have not been blessed or treated with this plant must not disturb it. It is picked when needed and is stored for later use. The plant has a sacred name that must be invoked before its picking (also see Elmore 1944:74). (Brugge 1982:92 lists the common name of datura as jimsonweed.)

Dá'ák'ǫǫzh (saltbush) [saltbush; Mayes and Lacy 1989:108]. The plant has many uses: it was used as a marginal food source by the Navajo, used today as a tobacco ingredient, and is considered to be excellent forage for livestock, especially sheep. As a tobacco, it has a sacred name that should be invoked before collection. (The only use mentioned by Elmore 1944:32 is as sheep forage.) (Brugge 1982:91 also mentions use of *Atriplex* spp. as forage.)

Dah yiitłhiidąą' (hummingbird food) [beardtongue; Mayes and Lacy 1989:11]. The plant has several medicinal uses. The flowers are sweet, and people pick them and lick the sweet taste off of them. (Elmore 1944 lists several bright red flowers. For example, Mexican campion is mentioned [1944:47] but no uses are given. The dried leaves of scarlet gilia/skyrocket are crushed and mixed with water for stomach trouble [1944:76]. Scarlet cap is listed but no function is described. Indian paintbrush is a sweet delicacy and it is also used for stomach trouble [1944:76]. Elmore [1944:77] identifies beardtongue as *Tł'iishagháát* or *Iináájí azee'* [Lifeway medicine], an antidote to rattlesnake bite and an antidiuretic.)

Figure 24. Ch'ó hodilyéé (datura) in the canyon.

(Brugge 1982:93, 95 identifies two plants called "hummingbird food," *Penstemon eatoni* and *Gilia aggregata.*)

Diinas (it rolls up). This plant is gathered, dried, and added to other tobaccos. It is hard to obtain and is a highly prized trade item. (Elmore 1944:59 lists this plant as unidentified but possibly related to mesquite.)

Díwózhii (saltbush) [saltbush, greasewood; Mayes and Lacy 1989:46, 109]. The term *díwózhii* is a generic name for several different subspecies of the bush, and each is identified by color of leaves or branches. Each subspecies has different functions: it can be made into cooking tools, or *t'dístsiin,* weaving tools, or the leaves can be burned and the ashes used to treat eye maladies in sheep, or other livestock, or added to blue corn dishes. *Díwózhii* can be good forage for sheep and goats. The plant has many other uses. (Elmore 1944:43 notes that greasewood is used to treat bee stings, as stock forage, and [1944:45] as firewood and to make various wooden articles.) (Brugge 1982:91 mentions use of the plant to relieve nasal congestion.)

Dohdéé (unknown). This plant was once widely used in the preparation of corn dishes. Its preparation and identity were not revealed.

Gad (juniper) [juniper; Mayes and Lacy 1989:55-57]. The branches are used with other plants in the *ooltáád* (unraveling) in certain ceremonies. The branches are burned and the gray ashes are used in cornmeal dishes. A tea made by boiling the branches is used for stomach aches. Other subspecies are used for other purposes, such as fence posts and for building materials. The bark has many uses: it may be used in the construction of hogans, as a filler between logs; as tinder for firestarting kits, *tł'éél;* or in the construction of ceremonial items. (Elmore 1944:17-19 provides details about these uses, especially in ceremonial paraphernalia.) (Brugge 1982:94 mentions use in the sweathouse.)

Gad bináá' (juniper eyes) [juniper berries]. The berries in their young stage were once used as a marginal food source. The hardened seeds of the mature berries are used in jewelry. The seeds are known to ward off evil and are now popularized as "ghost" beads at the numerous roadside vending stands in the western part of the reservation. (According to Elmore 1944:18, the berries are boiled and used as medicine for influenza.)

Gahideelzha, azee'deelchíihii (unknown). Mentioned as a medicine, but its uses and its preparation were not disclosed. (Elmore 1944:59 documents *azee' diilch'ílí* or curly leaf medicine but does not provide a common name or use.)

Gahtsodąąą' (jackrabbit food). The dried leaves of this plant are used as an ingredient in several tobacco mixtures. (Elmore 1944:44 notes that winterfat/lambstail/white sage is used to relieve blood spilling and also in the sweathouse during Mountaintop Way.) (Brugge 1982:93 notes that winterfat is excellent forage.)

Haashch'éédąąą' (food of the gods) [wolfberry; Mayes and Lacy 1989:136]. The berries of this plant were a marginal food source, now used mainly in ceremonial occasions when traditional foods are consumed. The berries are mixed with *dleesh* (see Minerals section below) and consumed. The berries were picked and prepared fresh or dried and then rehydrated. (Elmore 1944:74 also discusses their use as food.) (Brugge 1982:94 mentions use in ritual hoops.)

Hałchíítahdąąą' (food of the red lands; unknown). Identified as a medicinal plant but the preparation and identity of the plant were not revealed.

Hoogishii [plant that cuts you; bear grass]. The stalks of this plant are used in *tł'éél,* fire-starting kits. (Elmore 1944:33 mentions "beargrass" or narrowleaf yucca, *tsá'ászi' ts'óóz.*)

Hosh aditsahii (big needle cactus; Mayes and Lacy 1989:75) [cholla/chandelier cactus]. Portions of the cactus are used in various ceremonies. (Elmore 1944:64 translates this word as hedgehog or barrel cactus and emphasizes the use of the fruit as food.)

Hosh beeyildéhé (cactus cleaning plant) [cactus brush] often grows along roads and is used an enema. (Elmore 1944:88 provides the name *hosh bilt'ihi.)* (Brugge 1982:96 identifies this plant as groundsel, which can be used to clean spines from cactus fruits.)

Hosh nteelí (broad or wide cactus; Mayes and Lacy 1989:76) [prickly pear cactus; Figure 25]. *Hosh bineest'ą'* (prickly pear cactus fruit). The red fruit that appears in the fall is picked and eaten as food. They are also cut in half and dried for later use. The dried fruit is also used as a medicine for children for various illnesses. (Elmore 1944:65 describes the use of cactus spines for a sticky coating on buckskin hunting coats and the use of the pith to make poison for arrows.)

Hózhǫǫjí nát'oh (Blessingway tobacco; Figure 26) [gilia; Mayes and Lacy 1989:40] is the primary ingredient for all types of Blessingway tobaccos. It is collected and dried and mixed with other ingredients for specific or general purposes. The seeds of the plant were also collected and planted in gardens. The tobacco is used in many ceremonies or in casual situations.

Jiłhazhii (to nibble it) [hackberry]. This tree was once a marginal food source. The parts used and its preparation were not disclosed. (The plant is mentioned in Elmore 1944:41.)

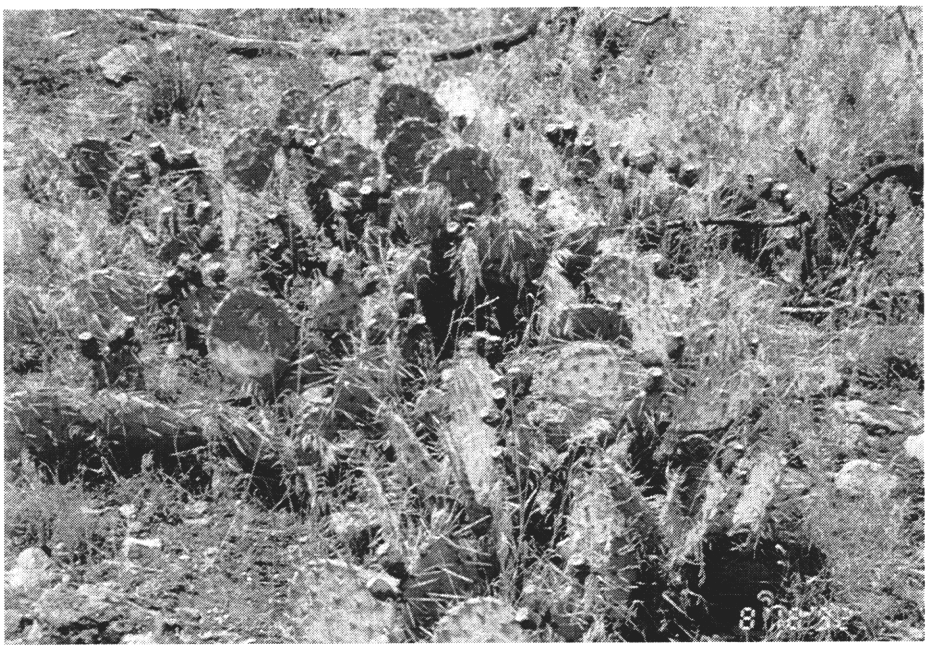

Figure 25. Hosh nteelí (prickly pear cactus), a plant collected in and around the Grand Canyon for food and medicine.

K'iiłtsoi (yellow on top; Elmore 1944:84) [rabbitbrush; Mayes and Lacy 1989:87]. The stems and leaves of this plant are collected and boiled and then used to dye wool for weaving. (Elmore 1944:84 states the plant is used as a dye and also to remove "evil spells" in *hóchxǫ́'íjí* and *níłch'ijí hatáál.*) (Brugge 1982:92 notes that the plant is used as tobacco in Evilway prayersticks.)

K'iiłtsoii tso (the big dye plant; big yellow top) [rabbitbrush; Brugge 1982:92]. Dried sap from this bush can be chewed like gum. (Elmore 1944:48 mentions *K'iiłtsoii tsoh,* desert barberry/fremont hollygrape, the roots and bark of which are used to dye buckskin yellow. The sap of rabbitbrush, *k'iiłtsoii,* is used like gum.)

K'íneeshdlíshii dąą́' (stink bug plant) [sand verbena, four-o'clock; Elmore 1944:46). Identified as a medicine but its uses and preparation not disclosed. (Elmore 1944:46 mentions that this plant is used to counter the effects of swallowing a spider.)

K'ínjił'ahí (skinned from a tree; Mayes and Lacy 1989:42) [gooseberry]. The purplish berry of this shrub was a marginal food source and is still used in when traditional foods are called for in certain ceremonies. The shrub itself has many utilitarian uses. (Elmore 1944:52 mentions gooseberry and also buckbrush [1944:55], from which arrows were made.)

Łichíí'í (the red one) [Brugge 1982:93: wild privet]. The red berries of this plant were a favored food source and are still used today, especially for ceremonies that call for traditional foods. The red berries are picked, dried and stored for future use. Many people moved far to collect this plant. It has been a much sought after food as it no longer grows abundantly. Red berries of all types are mixed with *chíłh* (hematite) and salt for *chíłh dik'ǫǫ́zh* during a girl's puberty ceremony.

Figure 26. Hózhǫǫjí nát'oh (Blessingway tobacco) is found and gathered in the Grand Canyon and its tributaries.

Lók'aa' (?) [reed; Mayes and Lacy 1989:101]. Reed is used in preparing tobacco offerings *(k'eet'áán)* in various ceremonies, including the Nightway (also see Elmore 1944:26).

Nát'oh tso (big tobacco) [mullen]. The leaves of this plant are picked and dried for use in various tobacco mixes. (Elmore 1944:75–76 lists a plant known as *Dził nát'oh* but does not mention "mullen.")

Nididlídii (To burn it) [Indian ricegrass; Mayes and Lacy 1989:102]. The grasses are gathered in great quantities and a fire is built, and the grasses are briefly burned to release the small black seeds. The seeds are stored and used in various dishes (also see Elmore 1944:26).

Neeshch'íí' (?) [piñon nuts]. Nuts are an important product of the piñon tree. The seeds are a food source, and in the "old days" people moved tens of miles, perhaps even a hundred or so miles to gather the year's crop of piñon. Plenty were picked and stored for winter use. The seeds are cooked and eaten from the shell or they were "shelled" by mano and metate and then prepared in various ways (also see Elmore 1944:94). Today the piñon is an important economic commodity.

Nídíshchíí' (the red tree) [ponderosa pine; Mayes and Lacy 1989:80]. The name is derived from the mature trees that turn "red." The bark of this tree is used in various ceremonies. Pine is also used for building materials (Elmore 1944:23).

Nideesgaii (?) [century plant]. When less than a foot tall, the young stalks are picked and roasted in a pit for eating. When dry, the taller stalks are used in firemaking kits, *tł'ééł.* (According to Elmore 1944:37 the stalks were formerly used in making blankets.)

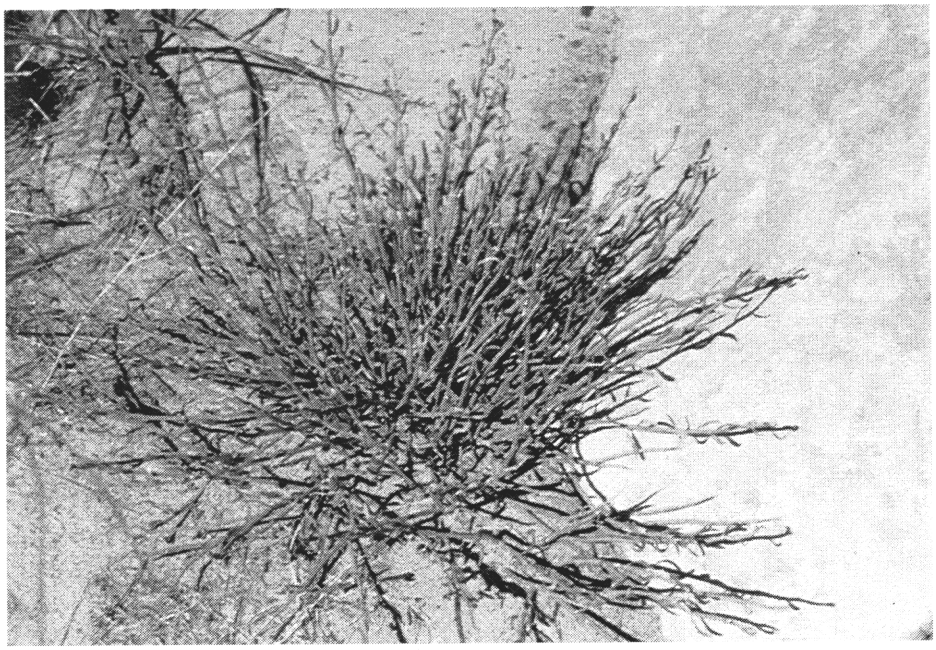

Figure 27. Tł'oh azihiiłt'ąą' (Mormon tea), a plant that is found and collected in the Grand Canyon and its tributaries.

Shtyináldzidí (afraid of summer). This plant was mentioned as a medicine but no other information was given. (Elmore 1944:25 identifies this plant as fringed brome grass, which "disappears before summer.") (Brugge 1982:91 identifies this plant as a medicine for skin infections.)

Tł'oh azihii, Tł'oh azihiiłt'ąą' (gray rubbing grass; Mayes and Lacy 1989:54) [Mormon tea; Figure 26]. Tea extracted from this plant is used to treat women after giving birth and for various purposes such as weight reduction. The plant is gathered and dried and brewed. (Elmore 1944:24 states that the plant was also used for kidney infections and venereal disease.) (Brugge 1982:92 also mentions Mormon tea.)

Tł'oh dąątbáhí (gray grass food). The miniscule black seeds of this plant were once used as a marginal food source. It saved many people during times of scarcity. Today it is generally mixed with blue cornmeal dishes, most notably *K'íneeshbízhii,* a winter dish. (Elmore 1944:44 mentions the use of goosefoot/pigweed as food and in a linament in Mountaintop Way.)

Tł'oh nástasí (bent grass; Mayes and Lacy 1989:45) [grama]. This grass is used in several ceremonies where *ooltáád* (to unravel) is required. It can also be burned with other plants to make black ash for *jint'eesh* (blackening; also mentioned in Elmore 1944:25).

Tł'ohii (unknown). Possibly a food source. (Elmore 1944:20 mentions tł'ooleh, a grass mixed with juniper for a dandruff remedy.)

Tł'osts'osi (skinny tall grass) [rush grass]. This tall grass was identified as good forage for livestock (also mentioned in Elmore 1944:24, 25, 27).

Tó iikááh (plant holding water). The plant is picked when need or picked and stored for later use. The plant has many uses in various ceremonies. It may be used with other plants for *ooltáád* (unraveling)

when called for in specific ceremonies. It is also a "cooling medicine," for fires, especially when lightning or other natural forces are involved. The plant holds morning dew or raindrops longer than other plants, which gives it a sacred quality. (Brugge 1982:91 notes that sagebrush is called "dew holder.")

Tsá'ászi' (yucca) [yucca; Mayes and Lacy 1989:116]. One of the most widely used plants, yucca is used in virtually all ceremonies. The root of this plant is a soap, *táláwhosh,* and is used to wash the body and hair in ceremonial settings. The fruit, *hask'aan,* is a food source and can be made into *Neesdógii,* the preparation of which is long and complicated. The green spikes are used in a number of ceremonies for *ooltáád,* or as counters in the sheo game, *keshjéé'.* Livestock will forage on this plant when grasses are scarce or covered in winter. The plant has many other uses (also see Brugge 1982:97; Elmore 1944:32-33).

Tsá'ászi' niteeli (wide-leaf yucca) *[Yucca latil].* This plant is used in a variety of ceremonies as a source of soap or constructed as a "drumstick" for the beating of basket drums during *Ts'aa' yaaniitįįh,* Upside Turning of the Basket, in certain ceremonies. It has other functions in many ceremonies (also see Brugge 1982:97; Elmore 1944:32-33).

Tséghá nłch'i (breeze through a rock) [?]. The distinctive pleasant odor of this plant is the identifier. The plants are gathered and dried and stored. The tea brewed from this plant is used in various ceremonies, and also used for general well-being or for stomach problems (mixed with cornmeal). (Elmore 1944:88 documents the use of chinch weed or lemon scent/limoncillo, as a liniment in Chiricahua Windway, and for stomach ache.)

Tsétah ts'ah (sage that grows in rocky places) [sage; Mayes and Lacy 1982:106]. Because it grows in rocky places it is generally much smaller than the range sage. It is used in conjunction with big sage (see *ts'ah,* below) and other bitter plants for various illnesses. The bitterness of the plants exorcises illnesses out of the body. It is gathered when needed.

Tsé ch'il (rock plant) [oak; Mayes and Lacy 1989:72]. Found in higher elevations, this tree has many purposes. The most widely known use is as a covering for ramadas, either for ceremonial or home use purposes. The various subspecies of oak have a variety of uses (also see Brugge 1982:96; Elmore 1944:40, 41).

Tsé ésdaazii (heavy like rock) [mountain mahogany; Mayes and Lacy 1989:68]. The stems of this shrub are used as offerings in various ceremonies and as a source of material for tools and other equipment in various ceremonies (also see Brugge 1982:91; Elmore 1944:53).

Ts'ah (?) [sage; Mayes and Lacy 1989:106]. A widely used plant, and found virtually across the reservation. The plant is used in conjunction with other plants for exorcising illnesses from the body. It can also be used in the field; a person should smell this plant and ask for health and happiness. The sage leaves are bitter and "long ago" every possible cooking method was used to try and turn sage into food, but all were unsuccessful. The Native American Church also uses this plant in their religious services.

Mineral Gathering Places

Áshįįh (salt) is the gift of Áshįįh Asdzáán (Salt Woman). The salt sources, or mines, in the Little Colorado River canyon and the "Hopi" Salt Mines in the Grand Canyon have significant places in the

ceremonial traditions and oral history of the local communities and across the reservation. The trails that lead to these sources are also sacred. These places are discussed in Chapters 3 and 4.

Asdzą́ą́ Nádleehí lived to the east and Áshiįh Asdzą́ą́ lived at the center of Navajoland, and one day Asdzą́ą́ Nádleehí visited Áshiįh Asdzą́ą́ and told her that she was moving west. A beautiful house had been built for her and she was going to live there. Áshiįh Asdzą́ą́ wanted to go too, but Asdzą́ą́ Nádleehí asked her to stay and to care for the People. Áshiįh Asdzą́ą́ agreed to stay, but first she traveled with Asdzą́ą́ Nádleehí throughout Navajoland (see Chapter 4). At certain places she left a part of herself. It is at these places that salt occurs [GCES-34, GCES-35].

In essence, then, salt becomes Salt Woman; she is a mother to the Navajo people, and that is how salt is addressed when it is being collected. The traditions involved in collecting salt are sacred and are still remembered and practiced by the Navajo people. Excerpts from interviews with people who have been to the Salt Mine or know about the salt collecting traditions are included in Chapters 3 and 4 [GCES-1, GCES-21, GCES-31, GCES-34, and GCES-35]; see also Cameron Chapter 1993.

Chíłh (red ocher) is collected wherever it occurs, mainly Salt Trail Canyon. *Chíłh* is used for a variety of purposes. It becomes the base of *Chíłh dík'ǫǫzh* during a young woman's puberty ceremony (adding resonance to Asdzaan Nádleehí's assocation with the Salt Trails, since hers was the prototype puberty ceremony); it becomes ceremonial paint in certain ceremonies, body paint in other ceremonies, and is used as a sunscreen in daily life. Although we were not taken to any *chíłh* source areas, it does occur throughout the canyon. Generally today it is collected when people go on a salt collecting pilgrimage or when involved in other activities.

Dleesh (white clay) is a source of food. This clay substance is eaten in its raw state or mixed with *łichí'ii.*

Other minerals are also collected in the Grand Canyon for ceremonial use. In 1940, Dave Skeet, from Ramah, New Mexico, told Dorthea Leighton about the use of quartz crystal. She recorded the following:

> Then, out of the bottom of the bag he takes a clear piece of quartz crystal, 2" × 1". Very clear. Called it *sehzad andine'* [tséghádindínii] means rock through shining. The pipe is mostly for Holy Way Hozozi [Blessingway]. The pipe belongs to the two little twins. I got some more of this kind of rock I want shaped up. I got to order from other people want to buy it I guess when it is finished. They all want to have it, but we always work it right first. It is pretty hard to get the right kind of medicine man to do it for you. Who are the people?
>
> Any of these neighbors around here. Maybe some Ramah people want some, also from the reservation. There is a lot more people that has the rocks shaped up, but they ain't done by a medicine man, just by themselves and the people don't want that kind. Grand Canyon is where I get these new rocks. I paid a man, he went down into the Canyon and stayed two nights. They can get them down at Albuquerque, but they are better here at the Grand Canyon. What I want to do is make 5 *badahonye?* 1 black, 1 blue, 1 yellow, stripe like and white. Those 5 got to be bound with a buck skin (not shot kind). That will be called *dahindilye h* (on file, Museum of New Mexico; personal communication, Jean Ann Mercer, SWCA Environmental Consultants, 1992).

> I know the country to the west to Havasupai Canyon. In fact, I have been down that canyon to its junction with the Colorado River. . . . I used to hunt in the country west to Supai Canyon, the San Francisco Peaks, and in the Grand Canyon. This was in the days when I was young and they didn't have game laws like today (Clyde Peshlakai 1961).

Bighorn sheep, deer, wild horses, beaver, foxes, mountain lion, redtailed hawk, owls, eagles, yellowbirds, bluebirds, blacktipped birds, vultures, crows, butterflies, and many other species of wildlife were and continue to be hunted for food, ceremonial equipment, and other uses.

Although fish was not exploited for food or even for ceremonial uses, they have a specific role in Navajo traditional thought. One interviewee remembers seeing "big fish" near Tanner Rapids as a little boy in the 1930s (see Chapter 3). The specific type of fish he saw then is unclear.

As the various accounts in Chapters 3 and 4 show, Navajos were hunting on Bodaway Mesa and in the Gray Mountain/Shadow Mountain areas and were crossing the Colorado River to hunt and to collect tobacco on *Ná'toh dziil,* the North Kaibab Plateau (GCES-39; see Chapters 3 and 4). As described in those chapters, many of the trails identified by GCES-NCRP consultants were used for hunting or figure in specific traditional historical accounts of hunting, especially related to the stories of Changing Woman's travels to the west (see Chapter 4, Tooh Bikooh [Little Colorado River]; Jádí Habitiin, GCES-4; Tsédáá' N'deetiin [Crossing of the Fathers], GCES-6; Tó hajisho', GCES-7; Lees Ferry, GCES-14; crossing of the Little Colorado River, GCES-15; and parts of the Havasupai Trail, GCES-21 and GCES-25).

Chapter 6

EFFECTS OF GLEN CANYON DAM ON NAVAJO CULTURAL RESOURCES AND RECOMMENDATIONS FOR THE FUTURE

EFFECTS ON NAVAJO CULTURAL RESOURCES IN THE RIVER CORRIDOR

To determine how the dam has historically affected archaeological resources, in 1990 the National Park Service inventoried archaeological sites within the river corridor between Glen Canyon Dam and Separation Canyon, 270 miles downriver. The corridor extended from the river to the historic high water zone, the point at which the river has historically run as high as 300,000 cfs (Fairley et al. 1991:2–3). Four hundred seventy-five archaeological sites were identified, of which 336 either have been affected in the past or could be affected in the future by floods (United States Department of the Interior 1994:248). The National Park Service inventory did not include "traditional cultural properties," which each tribe identified independently (see Chapter 2 for discussion).

Research on the Navajo ethnohistory and cultural resources in the Grand Canyon for the GCES-NCRP was not restricted to the river corridor because definition of the river corridor up to 300,000 cfs is only an artificial boundary necessary for management purposes, not one that is culturally meaningful. Navajo people do not think of the "river corridor" as a geographic unit distinguishable from the surrounding landscape, and they do not think of "cultural resources" as bounded units subject, in isolation, to identifiable impacts from dam operations. Nonetheless, we did try to concentrate our research on the river corridor as much as possible, particularly with Navajo consultants on various river trips and during interviews conducted from the rims of Marble and Grand canyons (see Chapter 2).

Table 4 lists the places Navajo consultants identified in the river corridor from the dam downriver (Map 3). Some are archaeological sites that had been identified by the National Park Service and some are non-archaeological sacred places or historically significant places ("traditional cultural properties"). All places identified during the GCES-NCRP are described in Chapter 4.

According to the people who identified these places during the GCES-NCRP, the most obvious source of potential impacts to these places is the lack of sediment in the river, which makes the water clear and has reduced or destroyed beaches. The same impacts were identified in the Glen Canyon Dam EIS (United States Department of the Interior 1994). Because sediment is trapped behind Glen Canyon Dam, beaches and terraces that once protected cultural resources are exposed to erosion and are not replenished by new sediment entering the system. This is especially true in the area between Glen Canyon Dam and the Little Colorado River, where terraces that antedate the dam are in direct contact with the river (United States Department of the Interior 1994:251).

Most places identified by Navajo consultants in the river corridor are sufficiently above the river that Glen Canyon Dam operations probably will not affect them directly, unless there are huge floods. Places directly in the river or part of it, such as the confluence of the Little Colorado and the Colorado Rivers (GCES-33), the beaches on which there were cornfields just downriver from the mouth of Twentynine Mile Canyon (GCES-23), or the sandbars near Tanner Rapids where there used to be a sheep corral (GCES-26), are dynamic places that change with the river, regardless of the presence of the dam. Part of the sheep corral at GCES-26 had already washed away when the interviewee saw it in about 1931. Natural erosion is an inevitable process that is not considered detrimental. What is most important is the

Table 4. Places in the river corridor identified by Navajo interviewees

GCES-84 (AZ:C:2:60) (unnamed)
GCES-47, "The Big Sand Dune"
GCES-85 (AZ:C:2:11), hogans at Lees Ferry
GCES-86 (AZ:C:2:57) (unnamed)
GCES-14, Lees Ferry and Honeymoon Trail (The Dugway)
GCES-29, sweathouses near Lees Ferry
GCES-23, cornfields on beaches
GCES-33, Tooh Ahidiilíní (river junction)
GCES-34 (AZ:C:13:3), Áshįįh (salt)
GCES-82 (AZ:C:13:99)
GCES-1, Áshįįh ha'atiin (salt trail)
GCES-26, sheep corral
GCES-81 (AZ:B:16:3), Crystal Creek site
GCES-30 (AZ:B:10:4), rockshelter
GCES-87 (unnamed)
GCES-88 (unnamed)
The whole river

preservation of the *stories* about those places that perpetuate the significance of the place from generation to generation. Even though the sheep corral at GCES-26 or the sweathouses at GCES-29 no longer exist, the places where they used to be are still important reminders of events in Navajo history. When Navajos no longer tell or know the stories about the former sheep corral at GCES-26 or the sweathouses that no longer exist at GCES-29, the places become anonymous. But the stories are also part of the places. Protecting the physical places as much as possible from an artificially high rate of erosion and encouraging Navajo access to them helps the perpetuation of the stories and thereby helps preserve the importance of the places.

For these reasons, dam operations that maintain sediment and encourage its distribution and deposition throughout the river corridor are important to the Navajo Nation. The Navajo Nation therefore endorsed an alternative that addressed these needs (Thomas 1993:11–12, 19 [Appendix B]). Besides dam operations, additional measures to reduce the frequency of floods (which can entirely destroy cultural resources and their beaches and terraces) and special high flows designed to churn up and redeposit sediment may benefit the preservation of cultural resources (United States Department of the Interior 1994:251). The same recommended dam operations and additional measures—flood frequency reduction and beach building flows—will also protect shoreline alluvial deposits which encourage the growth and health of riparian habitats and in turn promote some of the plant and animal species Navajo consultants identified as particularly important.

The GCES-NCRP also sponsored a Blessingway ceremony at the river in 1992 (see Chapter 4, GCES-14). Mr. Sam Spencer, Cameron, Arizona, made an offering to the Colorado River to benefit the Navajo people, and the people who are working on the GCES. The blessing reaffirmed that the river is still a vital, living being despite the intrusion of Glen Canyon Dam. By virtue of the offering, the ceremony blessed the river itself. The ceremony provided a measure of protection to the Grand Canyon and its resources that no dam operating scenario is able to provide.

A final measure for cultural resources preservation endorsed by the Navajo Nation is a long-term monitoring program developed along with a "Programmatic Agreement" among all the tribes and federal agencies involved with cultural resources management in the Grand Canyon. The Programmatic Agreement was developed under the provisions of the National Historic Preservation Act and was signed by the Navajo Nation in January 1994 (Appendix C). The agreement ensures that the Navajo Nation will be involved in monitoring Navajo cultural resources in the Colorado River corridor. The following are specific recommendations for long-term monitoring and management of sites and places identified by the Navajo Nation that could be affected by the operation of Glen Canyon Dam:

1) Although most sites are outside the area likely to be impacted by normal dam operations, the monitoring program should include periodic evaluations of the conditions of Navajo sites and places, especially sites AZ:C:2:60 [GCES-84], AZ:C:13:3 [GCES-34], AZ:C:13:99 [GCES-82], AZ:B:16:3 [GCES-81], and AZ:B:10:4 [GCES-30].

2) Monitors need to look for additional Navajo ceramics at sites AZ:C:2:60 [GCES-84] and AZ:C:13:99 [GCES-82] and any other sites visited during routine monitoring. The Navajo Nation should be notified and given documentation whenever Navajo ceramics are found during monitoring. Because of the connection between the Anasazi people and today's members of the Tachiini clan, the Navajo Nation also endorses the construction of check dams and other similar measures to slow the erosion at sites in the Palisades Complex and elsewhere.

3) Visitor impacts should be minimized at sites AZ:C:2:60 [GCES-84], AZ:C:13:99 [GCES-82], AZ:B:16:3 [GCES-81], and AZ:B:10:4 [GCES-30]. Navajo ceramics are rare in the canyon, and one sherd each has been found at AZ:C:2:60 [GCES-84] and AZ:C:13:99 [GCES-82]. Removal of Navajo ceramics destroys the archaeological evidence of the nineteenth century Navajo use of the river corridor. Similarly, the ground surface at site AZ:B:16:3 [GCES-81] is very deflated and ground disturbance may accelerate the destruction of ephemeral features such as ash piles which may help establish a Navajo affiliation at the site. Visitors frequently walk through site AZ:B:16:3 [GCES-81] if stopping above Crystal Rapid. AZ:B:10:4 [GCES-30] is a sacred place identified in particular stories (see Chapter 3 and 4) and should be respected by visitors. Distributing information on these and other sites to the river guides and rangers will help to protect them.

4) The historical Navajo uses of the river corridor and the Grand Canyon as a whole should be incorporated into the river industry's interpretive programs.

5) The Historic Preservation Plan developed for the Grand Canyon River Corridor District must recognize that the "District" is defined in terms meaningful in a management context, but not necessarily in a cultural or historical context, and that places and sites identified in the River Corridor District are related to sites and places on the canyon terraces and rims (not to mention more extensive landscapes). For this reason the Navajo Nation has not made specific National Register eligibility recommendations, but as the historic preservation plan for the National Register District is developed the Historic Preservation Department will provide information regarding each site's contribution to the district.

The significance to Navajos of the river corridor and specific places within it cannot be separated from the larger landscape of which it is a part. While this study was conducted for specific management purposes related to Glen Canyon Dam and its potential downstream impacts, the places identified in the river corridor are integral parts of a larger whole, as are the management issues that surround them. One cannot meaningfully discuss cultural resources in the river corridor apart from their larger context. The

river is connected to the Navajo side of the canyon rim by numerous historic trails. Once, the trails linked necessary riparian resources with a desert environment; today they link the National Park Service's and the Navajo Nation's administrative environments. Where one crosses into the next is generally a matter of disagreement, but an understanding of the "boundary dispute" is essential to addressing Grand Canyon management issues. The boundary between the National Park Service and the Navajo Nation is discussed in some detail below, followed by some long-range management recommendations.

"The Boundary Issue": Land Status in Glen and Marble Canyons

While the status of land bordering the Colorado River in Marble Canyon is a matter of disagreement between the National Park Service and the Navajo Nation, the status of lands bordering the river within Glen Canyon National Recreation Area is fairly clear.

In its planning of the Glen Canyon Dam site, the Bureau of Reclamation recognized the boundary of the Navajo Indian Reservation as the "Center of Channel, Colorado and San Juan Rivers in Utah" and "South Bank, Colorado River in Arizona" (Bureau of Reclamation 1955) (Figure 28).

The National Park Service reaffirmed the Bureau of Reclamation's recognition of the Navajo Indian Reservation Boundary in Arizona in its 1984 Draft Environmental Assessment and Upriver Recreation Plan for Lees Ferry, Glen Canyon National Recreation Area, which states that "The Navajo Indian Reservation boundary meets the Colorado River about seven miles above Lees Ferry and follows the river downstream past Lees Ferry. Recreational use occurs on Navajo lands as well as NPS lands" (1984:6).

Subsequent to the draft plan and environmental assessment, the National Park Service confirmed Navajo Nation land ownership and resources management authority in an unexecuted Memorandum of Agreement between the National Park Service and the Navajo Nation for the Management of Recreational Activities along the Colorado River (dated October 23, 1986) which, among other things, stated: "The Navajo Nation owns, occupies, and administers certain lands on and along the Colorado River, including lands adjacent to and those included within Glen Canyon National Recreation Area."

Acknowledgments of Navajo Nation ownership are not as explicit in Marble Canyon. An Executive Order of January 8, 1900, which established much of the western reservation, withdrew from sale and settlement public land in the Territory of Arizona that extended from the 1882 Executive Order Hopi and Navajo Reservation boundary west to the Little Colorado River, "thence down that stream," to the Grand Canyon Forest Reserve, north along its border to the Colorado River, "thence up that stream" until it met the established reservation boundary. Marble Canyon National Monument was established by Presidential proclamation in 1906. The remainder of what is now within the reservation west of the Little Colorado River was added by Executive Orders and Congressional Acts between 1900 and 1931 (see Chapter 3 of this report) and the boundaries were confirmed on June 14, 1934, in An Act to Define the Exterior Boundaries of the Navajo Indian Reservation in Arizona (48 Stat. 960–962).

Navajo lands in Glen and Marble canyons were defined by the Act as meeting the south bank of the Colorado River between the Arizona/Utah border and the Little Colorado River, then following the north bank of the Little Colorado River to a point opposite the east boundary of the Grand Canyon National Park and following the eastern boundary of the park. The Act excluded from the reservation, however, any lands already withdrawn by the Secretary of the Interior pursuant to the Arizona Enabling Act of 1910 for the development of water-power purposes or classified as "power-site" lands (36 Stat. 575 § 28).

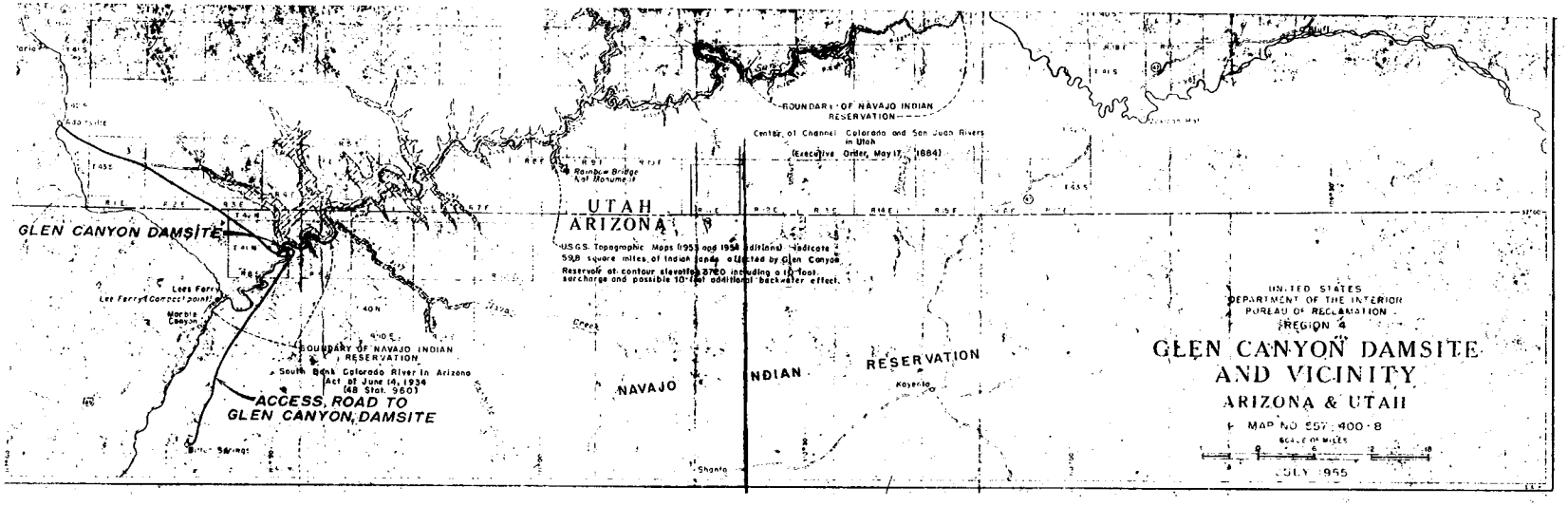

Figure 28. Bureau of Reclamation map (1955) showing Navajo Reservation boundary along south bank of Colorado River.

A Department of the Interior's 1969 solicitor's opinion found that the Secretary did make withdrawals in Marble Canyon in 1917 and on this basis asserted that the Navajo Nation's boundary is one-quarter mile east of the river. The opinion did not, however, include the specific withdrawal actions or specify where the withdrawals were made. Further, the Arizona Enabling Act referred to the Secretary's ability to exclude lands from being transferred to the State of Arizona, not lands held by the Navajo Tribe. Whether or not the 1917 withdrawal of lands in Marble Canyon for "water power purposes" can be made for lands designated as Navajo Indian Reservation by Executive Order in 1900 is not clear (Stanley Pollack, Attorney, Navajo Nation Department of Justice, personal communication 1992).

The boundary situation was also not clarified in the language of the Grand Canyon Protection Act in 1975 (P.L. 93-620 § 1, 88 Stat. 2089), which, among other actions, encompassed Marble Canyon (formerly Grand Canyon National Monument) within the boundaries of Grand Canyon National Park. In addition, by requiring the Navajo Nation's ratification of the provisions of the Act, Congress was not convinced that legitimate withdrawals had been made within the area in question, or the Navajo Nation's approval would not have been necessary (Stanley Pollack, personal communication, 1992). The Navajo Nation never did ratify the provisions of the Act.

It is apparently not only Congress, however, whose position wavers on the issue of land jurisdiction in Marble Canyon. The Department of the Interior's 1969 solicitor's opinion held that the Navajo Nation boundary is one-quarter mile east of the river bank. The National Park Service also unofficially maintains that its boundary is the historic high water mark on the south side of the river (Tom Workman, Grand Canyon National Park, personal communication 1992; Charles Chia, Navajo Nation Natural Resources Enforcement Officer, personal communication 1992). Despite these declarations, however, the National Park Service's General Management Plan Environmental Impact Statement Scoping Summary, Grand Canyon National Park (1992:23) states:

> At Marble Canyon the boundary dispute between the Navajo Nation and the National Park Service needs to be resolved. Because of the dispute few management actions are taken in the area downstream from Lees Ferry. River runners describe how they avoid the area due to the litter and unattractive appearance. Consequently, river users find more attractive places downstream to stop. Also, various recreational uses, such as fishing and camping are not well managed.

Thus, it is clear that there is no consensus, either between the Navajo Nation and the National Park Service or within the Department of Interior, regarding the Navajo Nation/National Park Service boundary. This confusion is reflected on USGS 1:100,000 scale topographic maps that show the Navajo Nation boundary on the riverbank and the National Park Service boundary on the rim, evidently overlapping each other! (USGS 1985 provisional series 1:24,000 scale maps of Marble Canyon show the reservation boundary on the riverbank.)

Adverse Consequences of the "Boundary Issue" and Recommendations

In the context of the Glen Canyon Environmental Studies program, this confusion over the boundary resulted in the National Park Service inventorying and documenting cultural resources on Navajo lands for the Glen Canyon Dam EIS without the Navajo Nation's knowledge or approval. After the fact, language was included in the Programmatic Agreement for compliance with the National Historic Preservation Act (Appendix C) that recognizes Navajo Nation jurisdictional responsibility:

> Whereas the Navajo Nation is responsible for the administration and management of historic properties within the boundaries of the Navajo Nation pursuant to the Cultural Resources Protection Act (CMY-19-88); and
>
> Whereas the Navajo Nation agrees to NPS administration and management of Navajo Nation historic properties included in this agreement until such time as the Navajo Nation assumes such responsibility; . . . .

Management recommendations for the 26 archaeological sites recorded by the National Park Service on Navajo lands adjacent to Glen Canyon National Recreation Area were discussed at a meeting between the Navajo Nation and the National Park Service on July 25, 1994. The meeting resulted in agreement about Navajo Nation and National Park Service joint management efforts for these sites under the terms of the Programmatic Agreement and associated Remedial Action and Monitoring Plan (see Burchett 1994 for discussion).

Similar agreements have not yet been reached regarding other law enforcement and compliance issues, to the detriment of Navajo people. The Arizona Game and Fish Department continues to cite Navajo people *on Navajo lands* for fishing near Lees Ferry, even when they have Navajo Nation fishing permits (Jon Dover and Charles Chia, Navajo Nation Resources Enforcement Officers; Larry Benally Sr., Director, Navajo Nation Fish and Wildlife Department, personal communications, 1992; John Rittenour, Chief, Resources Management, Glen Canyon National Recreation Area, personal communication 1994). Navajo ceremonial practitioners have been cited and fined by the National Park Service for collecting medicinal plants within Glen Canyon National Recreation Area, as recently as February 1994 (Pauline Wilson, Tribal Liaison, Glen Canyon National Recreation Area, personal communication 1993, 1994). The last incident resulted in National Park Service sponsorship of a two-day workshop held in Flagstaff, Arizona, on September 7 and 8, 1994, in which representatives of various Indian tribes and pueblos assisted the National Park Service in crafting new language for revisions to federal regulations regarding natural resources collection in national parks and monuments.

Navajo families and communities are also disturbed by uncontrolled tourism between Lees Ferry and Glen Canyon Dam, and on the south side of Lake Powell (Downer et al. 1989:46–47; Gap/Bodaway Chapter 1994), as well as along the east rim and around the Little Colorado River (Gap/Bodaway Chapter 1994; Cameron Chapter 1993). There are not nearly enough law enforcement personnel, either tribal or federal, to keep up with the illegal trespassing on Navajo lands and the associated looting of archaeological sites, vandalism to property, littering, disturbance of people's privacy and so forth (e.g., Figure 29). The Navajo Nation receives no revenues from the thousands and thousands of tourists handled by ARA Leisure Services between Glen Canyon Dam and Lees Ferry, yet it incurs the costs of damage to Navajo lands and resources and of the law enforcement necessary to try to keep it under control (Jon Dover, personal communication 1992). All of these are indirect impacts of Glen Canyon Dam.

Some of these issues were addressed during the July 25, 1994, meeting between the Navajo Nation and the National Park Service at Glen Canyon National Recreation area. Both entities agreed to reinitiate efforts to finalize and implement the unexecuted 1984 Memorandum of Agreement between the National Park Service and the Navajo Nation for management of Navajo lands bordering Glen Canyon National Recreation Area. The Navajo Nation has initiated the process of updating the Agreement as of this writing. The Agreement should eventually address resources management issues, fishing regulation, and Navajo Nation/National Park Service cross-jurisdiction in law enforcement matters.

Similar agreements are needed for the Marble Canyon area of Grand Canyon National Park since National Park Service and Navajo Nation lands in Marble Canyon are mutually accessible by way of Tanner Wash,

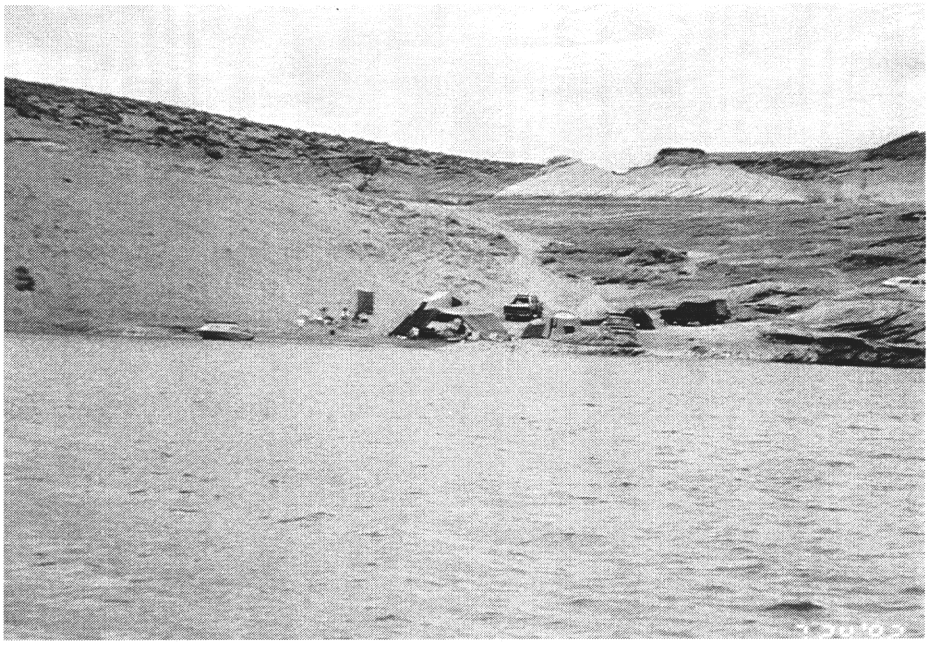

Figure 29. Dam-related impacts to Navajo lands on the shores of Lake Powell.

Twentynine Mile Canyon (Shinumo Wash), Eminence Break Canyon, Jackass Canyon, the Little Colorado River gorge, and others. The Navajo Nation and the National Park Service should enter into Memoranda of Agreement to jointly manage these areas, since it is unlikely that either the National Park Service or the Navajo Nation will take legal action in the foreseeable future to resolve the conflicted status of their common boundary in Marble Canyon.

The National Park Service issues backcountry permits for hiking within the Grand Canyon, which may include exiting the canyon onto Navajo lands via any of these routes. Issuance of National Park Service permits is not contingent upon proof of Navajo Nation permits for exiting National Park Service lands onto Navajo lands. Similarly, the Navajo Nation issues backcountry permits for the trails entering the Grand Canyon from the Navajo side but does not require proof of National Park Service permits for hikers to enter National Park Service lands. Also, these trails are not maintained, and Navajo Nation law enforcement officers often have to rescue injured hikers. In addition, non-Navajo tourists drive around on Navajo land looking for trail heads, sometimes four-wheeling and damaging grazing areas and disturbing livestock.

Some of these issues were discussed at a visit to Jackass Canyon by representatives of the Navajo Nation and the National Park Service on August 30, 1994. Both parties agreed to initiate development of a Joint Management Plan Pilot Project specifically for Jackass Canyon (Roberts 1994). The plan will address issues of access, permitting, resources management, litter control, and cross-jurisdiction. Depending on the success of the pilot project, such an agreement should be extended to address Marble Canyon as a whole.

Ultimately, the National Park Service and the Navajo Nation should require hikers to prove that they have permits for the other landholder's jurisdictions before issuing permits that may affect both landholders. Some trails should be closed off entirely until mechanisms for their management are in place. The two landholders should create cross-jurisdiction for law enforcement. Each landholder should advertise the

permitting requirements of the other as well as its own. The National Park Service should include information about Navajo Nation lands in its own Grand Canyon publications or any publications about the Grand Canyon subject to National Park Service approval, such as river guide books and so forth. Along with information on permits, the National Park Service must include information on the Navajo role in Grand Canyon's human history in its interpretive programs and publications.

INTERPRETATION AND CONSULTATION WITH NAVAJO COMMUNITIES

The Bureau of Reclamation funded the Navajo Nation to conduct the Glen Canyon Environmental Studies-Navajo Cultural Resources Project to help evaluate the potential impacts of Glen Canyon Dam operations on cultural resources important to the Navajo Nation. In collecting that information, we collected the stories that go with the places, and those stories are the Navajo history of the Grand Canyon. The applicability of the project results extends far beyond the specific purposes for which the project was conducted. The Navajo history of Grand Canyon as revealed by GCES-NCRP research should be used as a reference for future federal project planning and interpretation (as well as for use within Navajo communities). It should not simply be filed away with materials related to Glen Canyon Dam operations.

Dissemination of this information is important to the Navajo Nation and the members of the Grand Canyon–area communities because Navajo residents are asked so often to repeat information and restate concerns that they have already provided for one federal project purpose after another. On the western border alone, the Navajo Nation is surrounded by Glen Canyon National Recreation Area, Rainbow Bridge National Monument (both NPS Rocky Mountain Region), Grand Canyon National Park (NPS Western Region), Wupatki National Monument (NPS Southwest Region), and Kaibab and Coconino National Forests (each including numerous ranger districts). These agencies and thier individual managment units all consult the Navajo Nation separately, and each one often asks about several separate, concurrent projects that may have overlapping purposes. For example, the Navajo Nation Historic Preservation Department (only one of many Navajo Nation programs involved in these consultations) is currently working simultaneously with the Bureau of Reclamation and the National Park Service on the Glen Canyon Dam EIS project, with Rainbow Bridge National Monument on its General Management Plan, with Grand Canyon National Park on its General Management Plan, with Grand Canyon on its interpretive prospectus, with Wupatki National Monument on Navajo occupation and grazing issues, with Kaibab National Forest on general consultation mechanisims and (indirectly) on its Environmental Impact Statement for the proposed Canyon Forest Village at Tusayan, and with each agency on specific responses to individual projects subject to compliance with the National Historic Preservation Act. And this is just on the western border! The point is that the issues addressed in individual consultations overlap with one another, and the repetition required to consult repeatedly with each agency on each project is not only an unnecessary expenditure of limited resources, but is bothersome to the knowledgeable residents who are interviewed over and over again. It is also not good land-use planning because it is not integrated and therefore may subject the same land to incompatible programs. Consultation needs to be coordinated among agencies and among the individual plans within each agency. The Navajo Nation is currently woring with the Kaibab National Forest to address these issues, at least within one agency.

The Navajo Nation has often advocated comprehensive consultation in the context of long-range federal agency planning (see Downer and Roberts 1993). We see this study as a potential springboard for somewhat more integrated consultation. The history provided here applies to lands under the jurisdiction of multiple land-managing agencies, and provides a good idea of some the areas in which the Navajo Nation may have concerns. This study should be referred to generally, as a background for additional, fine-grained consultation about specific issues.

This study also points out the need for close working relationships between the federal agencies and the Navajo communities on the western border. All the information contained in this report came from the people who live there. They are the ones with knowledge of the land and concerns for its care. But, neither the communities nor their individual members have the resources (or the patience) to be presented with dozens of requests for consultation on individual projects by various agencies. The agencies can, however, begin to attend Chapter meetings and communicate with Chapter officials at the time when the agencies are initiating annual or general management plans. Having tribal liaisons employed in the agencies may help agency-community communication immensely. Agencies may also form Navajo or intertribal advisory committees to work with them on planning issues. Good examples are the recently formed advisory committee for the Rainbow Bridge General Management Plan, the Navajo representatives to which are local community members, and the Native American Work Group for the Grand Canyon General Management Plan. In our experience, such committees can be extremely successful, but they must be able to address comprehensive, rather than unnecessarily restricted issues.

For example, at a recent meeting of the Native American Work Group for the Grand Canyon National Park General Management Plan, the federal planners wanted the tribal representatives to address extremely specific issues related to future development of the south rim. But, as this report demonstrates, the tribal representatives at the meeting did not think of the Grand Canyon in terms of management zones as agencies do. The Indian committee members wanted to address the Grand Canyon, as the whole place that it is. The planners, however, were thinking in terms of the limits of the Plan, which cannot address other issues. So while tribal representatives wanted to discuss the problems with the sale of non-Indian arts by the concessionaires on the south rim, for example, concessionaire issues can not be addressed in a General Management Plan and discussion of these issues had to be set aside. Similarly, issues in other areas were directed to other management processes such as the Glen Canyon Dam EIS, or the Grand Canyon Wilderness Area Management Plan, or the Kaibab National Forest's Canyon Forest Village EIS, and so forth, each of which is being developed simultaneously but independently.

Addressing many individual projects separately from one another is cumbersome for Navajo people, both at the governmental level and at the community level. These citizens are participating in public planning on their own time, after all. People in the communities often do not distinguish between one kind of federal planning process and another and they wonder why "the federal people" ask the same questions over and over, when they've been told about these concerns before. Formation of advisory committees made up of people from the affected communities promotes broad-based communication, and allows agency planning to be based on peoples' concerns, rather than simply soliciting reactions after the planning is all but completed and squeezing those concerns into bureaucratic compartments too small to contain them.

Consultation with knowledgeable Navajo people is also essential for correcting seriously outdated interpretations (or worse, lack of interpretation) of the long Navajo presence in the Grand Canyon, and its continuing spiritual significance to Navajo people. The lack of Navajo interpretation at the Grand Canyon and the inappropriate names applied to certain geographic features as a result (such as the "Hopi Salt Mine") were among the main concerns people expressed during interviews for the GCES-NCRP. These are issues about which the National Park Service and other agencies must be aware, and not simply in the context of the Glen Canyon Dam EIS, but in the context of the Grand Canyon as a whole.

Pursuing successful consultation and integrating Navajo concerns at a broad level was one of our purposes in preparing this report. While we believe it addresses the Bureau of Reclamation's needs for Glen Canyon Dam management purposes, it is also a useful tool for many purposes. We hope that this report will provide a foundation with which the Navajo Nation and federal agencies can pursue mutually beneficial consultation, and that it does justice to the stories that so many Navajo people told.

Chapter 7

EPILOGUE

Between August 30 and September 6, 1994, the Navajo Nation made its second GCES-sponsored trip down the Colorado River from Lees Ferry to Diamond Creek. Although the preceding chapters of this report were already completed, the Navajo Nation requested the trip because, as the Navajo Nation approaches the transition from a Cooperating Agency in the development of the EIS to a participant in the post-EIS Adaptive Management program, we wanted to review our various natural and cultural resources concerns and ensure that they were adequately addressed by our recommendations to the Bureau of Reclamation regarding experimental flows, long-term monitoring, and so forth.

The Navajo Nation is also developing its lead role in the Little Colorado River Planning and Development Inventory, which is a cooperative effort among the Navajo Nation, Bureau of Reclamation, National Park Service, and other Cooperating Agencies and entities. The management plan is designed to meet certain requirements of the U.S. Fish and Wildlife Service's draft Biological Opinion on the Bureau of Reclamation's preferred alternative for the operation of Glen Canyon Dam (see Thomas, Pollack, and Tremble 1994 for discussion). The Navajo Nation was asked by the Bureau of Reclamation to take the lead in coordinating the first phase of the planning process to address resources management that would ensure maintenance of habitat in the perennial reach of the Little Colorado River. The Navajo Nation had not had the opportunity to visit the Little Colorado River since assuming this role and wanted to visit the area with representatives of the Bureau of Reclamation and the National Park Service.

We also hoped to visit the area between Lees Ferry and the Little Colorado River with Grand Canyon National Park's new Superintendent to address management issues of mutual concern along the Navajo Nation's and National Park Service's common boundary. Under the previous Grand Canyon National Park superintendency, discussions were initiated between the Navajo Nation and the National Park Service about development of a Memorandum of Agreement for cooperative management of the disputed land area described in Chapter 6 of this report. These discussions were interrupted by a change in administrations, and the Navajo Nation hoped to begin them again. Members of the trip included officials of the Gap/Bodaway Chapter to see first hand the resources in question and to assist in discussion of their long-term management.

Most importantly in making the trip, however, was the opportunity to visit the Colorado River with Mr. Alfred Yazzie, a well-known Chanter of the Nightway Ceremony, in the origin of which the Colorado River is an important figure. We wanted Mr. Yazzie to visit the places identified on the first Navajo Nation trip in 1992 and possibly to point out places in the river corridor associated with the Nightway or other ceremonial origin stories that we had not yet learned about. We also wanted to ensure that the management recommendations we had been developing were acceptable in the context of Navajo traditional knowledge about the river and the larger landscape through which it flows. Additional management recommendations made during the trip have been incorporated into Chapter 6. We hoped to afford representatives of the Bureau of Reclamation and the National Park Service the opportunity to learn first hand about the significance of the resources they are responsible for managing from Navajo traditional historians. We revisited all the places that were identified during our first trip, and some additional places pointed out by Ms. Jan Balsom, Grand Canyon National Park archaeologist. Mr. Yazzie provided the following report.

COLORADO RIVER TRIP (1994)

A Navajo Perspective of Natural Resources

Alfred W. Yazzie

The Navajo Tribe of Indians of North America is a race of people who has a long oral history of existence in the present states of Arizona, Utah, Colorado, and New Mexico. The tribe has a unique history which they honor and believe in, as it tells how they evolved from one era to another since the beginning of time.

Their language, culture, spiritual values, the land, and strategies used in their teachings and learning techniques are unmatched by the present methods of teaching Navajo children in the classrooms of "western" (non-Navajo) education.

Under provisions of the tribe's treaty with the U.S. government on the first day of June, 1868, the tribe had to agree to send their children to the White men's school to become educated in the white culture and language, not knowing that someday it would cause them to drift away from their own belief in the holy beings.

Today, tribal members find themselves caught up in "progress" in the age of the fast pace of living. They are becoming skillful in the ways of the Whiteman so they can enjoy "the good things" even if it means the final era of their language, culture, and their strategies of teaching their children in the ancient art of healing and spiritual beliefs. In the face of today's continued progress in the Whiteman's world, the treasures of the tribe's ancient heritage in wisdom, health, and welfare are vanishing at a very fast pace and the people that knew them are dying out.

The Navajo Nation needs to reexamine in detail Navajo perspectives of natural resources and the land, and how they apply to all aspects of environment, spirit, and life, along with Navajo history, to regain the beauty of living while honoring and respecting our surroundings.

It has been known throughout our history that no one person knows everything about the many chants, events, and so forth that make up our history. It is challenging and time consuming but worthwhile to begin our own research into the lost art of teaching and healing. The recent Colorado River trip by the Navajo Nation Historic Preservation Department and others is an example of such a task, to re-experience the natural world, spirituality, and Navajo history, and how they go together to form the basis of life.

The trip began on the 29th of August, 1994. Richard Begay and I left Window Rock, Arizona, and arrived at Days Inn, in Flagstaff, Arizona, at about 8:30 PM to spend the night and meet with other Navajo Nation Historic Preservation Department staff and other invited Navajos to make a historic boat ride down the great river called "The Colorado River." Early the next morning as the sun came up and it was a beautiful day, we were met by some staff members of HPD at a place called JB's Restaurant to have breakfast with us.

At about 9:15 AM (MST) we all came together in front of Days Inn to board a 16 or 18 passenger bus to transport us to Lees Ferry some 90 miles to the north, but not until after we had packed all of our belongings in two separate rubber (waterproof) bags since we will be exposed to water and moisture on the river for the next eight days and nights. We arrived at Lees Ferry at about 11:15 AM where two Navajo chapter officials, Robert Church and Sonny Nockideneh from Gap, Arizona, joined the group.

On our way to Lees Ferry we also picked up a Navajo Historian, Henry Lane, and an archaeologist, Jan Balsom, NPS, who were very familiar with the areas we were to visit.

About an hour after we arrived at Lees Ferry, we were on our way down the great Colorado River in two huge rubber boats especially designed for such trips. We averaged about twenty-five miles per day to our destination some two hundred and twenty-five miles away. We had to stop several places each day to visit known sacred and historical sites and to document places where ancient Navajos used to live along the river some 800 plus years ago according to research done by anthropologists. The information furnished by Mr. Lane, Ms. Balsom, and the other two chapter officers as we went along each day from point to point was very interesting and encouraging regarding the necessity and justifications of the trip where Navajo Tribal History is of concern and regarding the origin of the Ceremonial Chants that I do for the Navajo People. It was a trip of a lifetime, and I am very proud to have been a part of it.

As a Navajo and an ordained Navajo Traditional Chanter of several chants, including one major winter ceremony known as the "Nightway," which has much to do with the Colorado River in its development, I was amazed, but felt at ease thinking of a legendary figure named "The Dreamer" who is said to have made the river trip from Mancos Creek into the San Juan and then the Colorado River in a hollowed log known in the Nightway as the "Whirling Log." It is also a shame that only a few Navajos of today know something about the values and the treasures of the great canyons and the river where it applies to Navajo History, not only in the migrations of clans, but in the final art of healing.

With the eastern banks of the river being part of the Navajo Indian Reservation, there were no signs of improvements to accommodate visitors who travel on the river. Evidence of Navajo occupations was there, and people living on the rims of Marble Canyon still relate stories of their great-great-grandparents and how they used to live and make use of the river in ancient times even before they heard of the coming of the Whiteman.

We had the privilege of seeing some of the animals grazing along the river banks as mentioned in the Nightway Ceremony and experienced walking on the banks and occasional hikes into the wilds of adjoining canyons and creeks. There were many waterfalls of various sizes either in the main canyon or up some other canyons that join the main river. The ancient salt and hematite (Ocher) mines that Navajos told about were there but we could not find the turquoise mine nor the hardened blue clay used for offerings. However, we found some other valuable items used with offerings that are very scarce and some herbs and other plants. We also enjoyed camping on the sandy banks and the food provided by the boat company.

We had several rain and thunder storms during the day and at night, which made it very realistic listening to the rain, the river, the rapids, and most of the time, the quiet of the canyons. There were ravens, ducks, hawks, falcons, and other bird life seen daily, but no eagles, etc., but the canyon was lively from day to day.

At the end of the trip at a place called Diamond Creek, on the Hualapai Reservation, we had the privilege to meet some members of the Hualapai Tribe who were making final preparations for a trip down the river.

The trip was educational, exciting and interesting as it revealed many sacred aspects in the history of the Navajos in relationship with Mother Earth, the great waters, the skies, and other life which should always be honored and respected. Careful surveys of the ancient hogan foundations and a search for other evidence and hogan remains on the northern and western side of the river are in order for documentation of early Navajo occupations of the areas.

* * * * *

In addition to many of the places already described in Chapter 4 of this report, Mr. Yazzie talked about several other important places that are connected to the Navajo history of the Grand Canyon. Because Chapter 4 and the site maps were completed by the time we finished our 1994 trip, Mr. Yazzie describes the additional places here.

Mancos Creek, Colorado *(Tó nits'ósi kooh):* Begins at Mesa Verde National Park and collects runoff from other canyons and empties into the San Juan River. This place is the origin of the Whirling Log story of the Nightway chant, the travels of certain Yei gods, and the Sun Dance team.

San Juan River *(tooh):* The main river from New Mexico and Colorado that empties into the Colorado River. This river holds many stories of good and bad, and the Gods and people traveled up and down this river.

Salt Water Wash Petroglyph: This site was pointed out by Jan Balsom, NPS archaeologist. It shows the present Blessing Way sandpainting of the Navajo Blessingway—"Wide Cornfield."

South Canyon Petroglyphs: Same as above, this petroglyph is a copy of the Blessingway sandpaintings of narrow and wide cornfields.

Possible sites in Stone Creek (near the trail on the way to the lower waterfall): These appeared to be the foundations of Navajo-type dwellings.

Lava Falls region: This area demonstrates the truth of the Black God story in which Black God set the river and the canyon on fire to unblock the path of the river so the Dreamer could continue his trip.

Hematite mine at Indian Canyon: This place is mentioned in Navajo stories, and the red ocher is used by Navajos as a sunscreen and for other purposes.

Mr. Yazzie also mentioned the presence of swallows *[táshchozhii],* blue herons *[táłtł'ááh 'alééh],* and ravens *[gáagii],* which figure in the Nightway ceremony and in Navajo history but are not included in the resources listed in Chapter 5.

In addition, Mr. Yazzie talked about four kinds of places, at any example of which holy people may be present at certain times. Kelley and Francis (1992) refer to these kinds of places as "prototypes," places that have many possible geographic references. Prototypical places mentioned by Mr. Yazzie in the Grand Canyon are any rock pinnacle *[yé'ii néézí];* any rapid *[táláwosh];* any waterfall *[tó adahiilí];* and any pictograph or petroglyph *[tsé bik'í nida'ashch'ąą'ígíí],* most of which depict Navajo historical and ceremonial stories.

REFERENCES CITED

NOTE: Many of the works we consulted are not cited in the text because they did not contain references to places that we could identify with the GCES study area.

Altschul, Jeffrey H., and Helen C. Fairley
1989 Man, Models and Management: An Overview of the Archaeology of the Arizona Strip and the Management of Its Cultural Resources. U.S. Department of Agriculture, Forest Service, and U.S. Department of the Interior, Bureau of Land Management.

Automobile Club of Southern California
1951 Exploring Marble Canyon. *Westways* 43(11):6–7. Automobile Club of Southern California, Los Angeles.

Bailey, Garrick, and Roberta G. Bailey
1986 *A History of the Navajos: The Reservation Years*. School of American Research Press, Santa Fe.

Baker, Robert D., Robert S. Maxwell, Victor H. Treat, and Henry C. Dethloff
1988 *Timeless Heritage: A History of the Forest Service in the Southwest*. FS-409. United States Department of Agriculture, Forest Service.

Bartlett, Katharine
1940 How Don Pedro de Tovar Discovered the Hopi and Don Garcia de Lopez de Cardenas Saw the Grand Canyon, with Notes on Their Probable Route. *Plateau* 12:37–45.
1942 How the Navajo and Apache Brought about the State of Arizona. *Plateau* 15(1)14–20.
1945 The Distribution of the Indians of Arizona in 1848. *Plateau* 17(3)41–45.

Begay, Richard, and Alexandra Roberts
1992 Field notes of the Glen Canyon Environmental Studies-Navajo Cultural Resources Project. Confidential files of the Navajo Nation Historic Preservation Department, Window Rock.

Belknap, Buzz, and Loie Belknap Evans
1969 *Grand Canyon River Guide*. Westwater Books, Evergreen, Colorado.

Benally, Clyde
1982 *Dineji Nakee Naahane'—A Utah Navajo History*. San Juan School District, Monticello, Utah.

Brewer, Sallie Pierce
1937 The Long Walk to Bosque Redondo, as Told by Peshlakai Etsidi. *Museum Notes* 9(11):55–62. Museum of Northern Arizona, Flagstaff.
n.d. Diary Kept While Living at Wupatki National Monument 1935–1936. Ms. in possession of author.

Brugge, David M.
1968 Pueblo Influence on Navajo Architecture. *El Palacio* 75(3)14–20.

1982 Western Navajo Ethnobotanical Notes. In *Navajo Religion and Culture: Selected Views,* edited by David M. Brugge and Charlotte J. Frisbie, pp. 89–97. Museum of New Mexico Press, Santa Fe.

1983 Navajo Prehistory and History to 1850. In *Handbook of North American Indians,* Vol. 10, edited by Alfonso Ortiz. Smithsonian Institution, Washington, D.C.

Bryant, Keith L., Jr.

1974 *History of the Atchison, Topeka and Santa Fe Railway.* McMillan, New York.

Burchett, Tim W.

1994 Glen Canyon National Recreation Area Consultation Trip Report with the Navajo Nation Historic Preservation Department Concerning Monitoring of Archaeological Sites from Glen Canyon Dam to the Paria Riffle. On file, National Park Service, Glen Canyon National Recreation Area, Page, Arizona.

Butchart, J. H.

1962 Old Trails in the Grand Canyon. *Appalachia* 28:45–64.

Cameron Chapter

1993 Statement of Interest and Claims by the Cameron Chapter, Navajo Tribe of Indians, in the Grand Canyon General Management Plan. On file, National Park Service, Grand Canyon National Park.

Chappel, Gordon

1976 Railroad at the Rim: The Origin and Growth of Grand Canyon Village. *The Journal of Arizona History* 17(1):89–107.

Clinton, Alvin

1990 Interview. In "I Am a Child of This Sacred Land," by The Teesto Navajos Affected by the Relocation Efforts. Ms. on file, Navajo-Hopi Land Commission, Window Rock, Arizona.

Colton, Harold S.

1964 Principal Hopi Trails. *Plateau* 36:91–94.

Correll, J. Lee

1968 Historical, Archaeological, Scenic, and Sacred Places in Navajo Country. Unpublished ms. Research Section, Navajo Nation Parks and Recreation Department, Window Rock, Arizona.

1976 *Through White Men's Eyes: A Contribution to Navajo History.* Publication No. 1 of the Navajo Heritage Center, a project sponsored by the Arizona Bicentennial Commission. The Navajo Times Publishing Company, Window Rock, Arizona.

Correll, J. Lee, and Alfred Dehiya

1978 *Anatomy of the Navajo Indian Reservation: How It Grew,* second ed. The Navajo Times Publishing Company, Window Rock, Arizona.

Courlander, Harold

1971 *The Fourth World of the Hopis.* Crown, New York.

Crampton, C. Gregory
1959 *Outline History of the Glen Canyon Region, 1776–1922.* Anthropological Papers No. 42 (Glen Canyon Series No. 9). Department of Anthropology, University of Utah.
1960 *Historical Sites in Glen Canyon: Mouth of San Juan River to Lee's Ferry.* Anthropological Papers No. 46 (Glen Canyon Series No. 12). Department of Anthropology, University of Utah.
1963 Historical Archaeology on the Colorado River. In *The American West: An Appraisal,* edited by R. G. Ferris. Museum of New Mexico Press, Santa Fe.
1988 *Ghosts of Glen Canyon: History beneath Lake Powell.* Publishers Place, St. George, Utah.

Creer, Leland Hargrave
1958 *Mormon Towns in the Region of the Colorado.* Anthropological Papers Number 32 (Glen Canyon Series No. 3). Department of Anthropology, University of Utah.

Crumbo, Kim
1981 *A River Runner's Guide to the History of the Grand Canyon.* Johnson Books, Boulder, Colorado.

Darton, N. H., and others
1915 *Guidebook of the Western United States, Part C: The Santa Fe Route, with a Side Trip to the Grand Canyon of the Colorado.* Department of the Interior, United States Geological Survey, Bulletin 613. Government Printing Office, Washington, D.C.

Dobyns, Henry F., and Robert C. Euler
1972 *The Navajo Indians.* Indian Tribal Series, Phoenix.

Downer, Alan, and Alexandra Roberts
1993 *Traditional Cultural Properties, Cultural Resources Management and Environmental Planning.* CRM Bulletin 16. National Park Service. Washington, D.C.

Downer, Alan, Richard Begay, Harris Francis, Klara Kelley, and Alexandra Roberts
1989 *Navajo Nation Historic Preservation Plan Pilot Study: Identification of Cultural and Historic Properties in Seven Arizona Chapters of the Navajo Nation.* Navajo Nation Historic Preservation Department and Navajo Nation Archaeology Department, Window Rock, Arizona.

Duncan, Jeanne, and Rita Schmidt Sudman
1991 *Layperson's Guide to the Colorado River.* Water Education Foundation. Sacramento, California.

Ellis, Florence H.
1974 An Anthropological Study of the Navajo Indians. In *Navajo Indians* I, David A. Horr, editor. Garland Publishing, New York.

Elmore, Francis H.
1944 *Ethnobotany of the Navajo.* University of New Mexico Bulletin. University of New Mexico Press, Albuquerque.

Euler, Robert C.
1961 Havasupai Historical Data. A Report Prepared for Marks and Marks, Phoenix, Arizona. Petitioners' Exhibit No. 24, Docket 91 (Havasupai). The Havasupai Tribe of the Havasupai

Reservation, Arizona, Petitioners, v. the United States of America, Defendants, before the Indian Claims Commission.
1969 The Archaeology of the Canyon Country. In *John Wesley Powell and the Anthropology of the Canyon Country,* by Don D. Fowler, Robert C. Euler, and Catherine S. Fowler. Geological Survey Professional Paper 670. United States Government Printing Office, Washington, D.C.

Fairley, Helen C., Peter W. Bungart, Christopher M. Coder, Jim Huffman, Terry L. Samples, and Janet R. Balsom
1991 The Grand Canyon River Corridor Survey Project: Archaeological Survey along the Colorado River between Glen Canyon Dam and Separation Canyon, Draft Report. National Park Service, Grand Canyon National Park. Prepared in cooperation with Bureau of Reclamation, Glen Canyon Environmental Studies, Flagstaff.

Faris, James C.
1990 *The Nightway: A History and a History of Documentation of a Navajo Ceremonial.* University of New Mexico Press, Albuquerque.

Fishbein, Seymour L.
1991 *Grand Canyon Country: Its Majesty and Its Lore.* National Geographic Society, Washington, D.C.

Fishler, Stanley A.
1953 *In the Beginning: A Navaho Creation Myth.* University of Utah Anthropological Paper 13. University of Utah Press, Salt Lake City.

Forbes, Jack D.
1960 *Apache, Navajo and Spaniard.* University of Oklahoma Press, Norman.
1966 The Early Western Apache, 1300–1700. *Journal of the West* 5:336–354.

Fowler, Don D., and Catherine S. Fowler
1969 John Wesley Powell, Anthropologist. *Utah Historical Quarterly* 37:172–172.

Franciscan Friars
1910 *An Ethnologic Dictionary of the Navajo Language.* St. Michaels Press, St. Michaels, Arizona.

Gillespie, Susan D.
1991 Ballgames and Boundaires. In *The Mesoamerican Ballgame,* edited by Vernon L. Scarborough and David R. Wilcox, pp. 317–345. University of Arizona Press, Tucson.

Glendening, Eber, and Woody Shyrock
1979 *Lees Ferry, Arizona.* Grand Canyon Recreational Series Map No. 1. Rainbow Expeditions, Tucson, Arizona.

Goddard, Pliny Earle
1933 *Navajo Texts.* American Museum of Natural History, New York.

Grand Canyon Natural History Association
n.d.a Man in the Grand Canyon.
n.d.b A Human Look: An Overview of Human History at Grand Canyon.

Gratten, Virginia L.
1980 *Mary Colter, Builder upon the Earth.* Northland Press, Flagstaff.

Greever, William S.
1954 *Arid Domain: The Santa Fe Railway and Its Western Land Grant.* Stanford University Press, California.

Haile, Father Berard
1938 *Origin Legend of the Navaho Enemy Way: Text and Translation.* Yale University Publications in Anthropology 17. New Haven.
1943 *Origin Legend of the Navaho Flintway.* University of Chicago Publications in Anthropology, Linguistic Series. Chicago.
1950 *Levend of the Ghostway Ritual of Shootingway and Suckingway.* St. Michaels Press, St. Michaels, Arizona.
1977 *Starlore among the Navaho.* Gannon, Santa Fe. (Originally published in 1947)
1978 *Love Magic and Butterfly People: The Slim Curley Version of the Ajilee and Mothway Myths.* Museum of Northern Arizona Press, Flagstaff.
1979 *Waterway: A Navajo Ceremonial Myth told by Black Mustache Circle.* Museum of Northern Arizona Press, Flagstaff.
1981 *The Upward Moving and Emergence Way: The Gishin Biye' Version.* University of Nebraska Press, Lincoln.

Hastiin Daghaa' Bitsoi
1954 The Traditional Navajo Country 1-4. In *Navajo Historical Selections,* by Robert Young and William Morgan, pp. 10–18 and 86–93. Navajo Historical Series 3. U.S. Department of the Interior, Bureau of Indian Affairs, Phoenix (Arizona) Indian School Print Shop.

Henderson, Eric
1985 *Wealth, Status and Change among the Kaibito Plateau Navajo.* Ph.D. dissertation, Department of Anthropology, University of Arizona, Tucson.

Hennessey, Erin
1991 *Grand Canyon and the National Parks of Arizona and Utah.* Gallery Books, New York.

Hester, James J.
1962 *Early Navajo Migrations and Acculturation in the Southwest.* Museum of New Mexico Papers in Anthropology No. 6. Museum of New Mexico Press, Santa Fe.

Hill, W. W., and Dorothy W. Hill
1943a The Legend of the Eagle-Catching Way. *New Mexico Anthropologist* 6–7(2):31–36.
1943b Two Navajo Myths. *New Mexico Anthropologist* 6–7(3):111–114.

Hogan, Patrick
1989 Dinetah: A Re-evaluation of the Pre-Revolt Navajo Occupation of Northwest New Mexico. *Journal of Anthropological Research* 45:53–66.

Hughes, J. Donald
1967 *The Story of Man at the Grand Canyon.* Grand Canyon Natural History Association.
1978 *In the House of Stone and Light: A Human History of the Grand Canyon.* University of Denver.

Hurt, Wesley R., Jr.
1942 Eighteenth Century Navajo Hogans from Canyon de Chelley National Monument. *American Antiquity* 8:89-104.

Hyde, Philip, and Steven Jett
1967 *Navajo Wildlands, As Long as the Rivers Shall Run,* edited by Kenneth Brower. Sierra Club, San Francisco.

Inderhill, Roc H.
1990 Roadside Fever: The Social Organization of Roadside Frontage Tenure in the Context of the Navajo Beadwork Trade, 1928-1988. Unpublished M.A. thesis, Department of Anthropology, Northern Arizona University, Flagstaff.

Indian Claims Commission
1968 Findings of Fact. The Havasupai Tribe of the Havasupai Reservation, Arizona (Docket No. 91) and the Navajo Tribe of Indians (Docket No. 229), Petitioners, v. The United States of America, Defendant. 20 Ind. Cl. Comm. 210.

James, George Wharton
1900 *In and around the Grand Canyon.* Little, Brown, Boston.

Jennings, Jesse D.
1961 Salvage and Scholarship. *Northwestern University Tri-Quarterly* 3(2):43-47. Evanston, Illinois.
1966 *Glen Canyon: A Summary.* Anthropological Papers 81 (Glen Canyon Series No. 31), University of Utah, Salt Lake City.

Jennings, Jesse D., and Floyd W. Sharrock
1965 The Glen Canyon: A Multi-Discipline Project. *Utah Historical Quarterly* 33(1):34-50.

Jett, Stephen C., and Virginia E. Spencer
1981 *Navajo Architecture: Forms, History, Distribution.* University of Arizona Press, Tucson.

Johnston, Philip
1939 Peshlakai Etsidi. *Plateau* 12(2):21-25. Museum of Northern Arizona, Flagstaff.

Kelley, Klara
1985 Navajo Use of Utah Lands: A Preliminary Summary of Archaeological and Historical Information. NNCRMP-85-387. Navajo Nation Cultural Resources Management Program, Window Rock.
1992 Comments on "The Grand Canyon River Corridor Survey Project: Archaeological Survey Along the Colorado River between Glen Canyon Dam and Separation Canyon, Draft Report." Memorandum dated March 4, 1992, to Alan Downer, Navajo Nation Historic Preservation Officer. Submitted by Alan Downer to Robert S. Chandler, Superintendent, Grand Canyon National Park.
1993 Navajo Sacred Landscapes in the Region of the Grand Canyon and Lower Little Colorado. Ms. on file, Navajo Nation Historic Preservation Department, Window Rock.

Kelley, Klara B., and Alan S. Downer
1991 Proposal for Involvement of the Navajo Nation in GCES Projects in the Colorado River Corridor and the Little Colorado River. Submitted to U.S. Bureau of Reclamation, Glen Canyon

Environmental Studies Program. On file, Navajo Nation Historic Preservation Department, Window Rock, Arizona.

Kelley, Klara B., and Harris Francis
1992 A Story Goes With It: Navajo Sacred Places and the Encounter with Economic Development. Published in 1994 as *Navajo Sacred Places* by Indiana University Press, Bloomington.
1993 Navajo Sacred Landscape in the Lower Little Colorado: Its Significance to Navajos and Their Concerns about Its Future. Ms. on file, Navajo-Hopi Land Commission, Window Rock.
1994 Navajo Sacred Places in the 1882 Executive Order Reservation and Former Bennett and Statutory Freeze Area. Ms. on file, Navajo-Hopi Land Commission, Window Rock, Arizona.

Kelley, Klara B., Harris Francis, and Peggy F. Scott
1991 Navajo Sacred Places on Hopi Partitioned Lands. Confidential ms. on file, Navajo-Hopi Land Commission, Window Rock, Arizona.

Kelley, Klara, Peggy F. Scott, and Harris Francis
1991 Navajo and Hopi Relations. Ms. on file, Navajo Nation Historic Preservation Department and Navajo-Hopi Land Commission, Window Rock, Arizona.

Keur, Dorothy L.
1941 *Big Bead Mesa: An Archaeological Study of Navaho Acculturation.* Memoirs of the Society for American Archaeology, No. 1.
1944 A Chapter in Navajo-Pueblo Relations. *American Antiquity* 10(1)75–86.

Klah, Hosteen
1942 *Navajo Creation Myth,* recorded by Mary C. Wheelwright. Museum of Navajo Ceremonial Art, Santa Fe.

Kluckhohn, Clyde
1967 *Navaho Witchcraft,* reprint edition. Beacon Press, Boston. (Originally published in 1944)

Kolb, Emory L.
1989 *Through the Grand Canyon from Wyoming to Mexico,* reprint ed. MacMillan, New York. (Originally published in 1914)

Lister, Robert H.
1963 Salvage Archaeology Today and the Glen Canyon Project. In *The American West: An Appraisal,* edited by R. G. Ferris. Museum of New Mexico Press, Santa Fe.

Locke, Raymond Friday
1976 *The Book of the Navajo.* Mankind Publishing, Los Angeles.

Luckert, Karl W.
1975 *The Navajo Hunter Tradition.* University of Arizona Press, Tucson.
1977 *Navajo Mountain and Rainbow Bridge Religion.* Museum of Northern Arizona Press, Flagstaff.
1978 *A Navajo Bringing-Home Ceremony: The Claus Chee Sonny Version of Deerway Ajilee.* Museum of Northern Arizona, Flagstaff.

Luckert, Karl W., and Johnny C. Cooke
1979 *Coyoteway: A Navajo Holyway Healing Ceremonial.* University of Arizona Press, Tucson.

MacArthur, Loren
1988 Navajo Rug Auction at the Grand Canyon: A Personal View. *Masterkey* 62:2–27. Southwest Museum, Los Angeles.

Martin, Russell
1989 *A Story That Stands Like A Dam: Glen Canyon and the Struggle for the Soul of the West.* Henry Holt, New York.

Masayesva v. Zah
1992 Findings of Fact and Conclusions of Law and Judgment re: partition of the 1934 reservation. CIV 74-842 PCT EHC, September 25, Arizona District, Federal District Court.

Matthews, Washington
1884 The Mountain Chant: A Navajo Ceremony. In *Fifth Annual Report of the Bureau of American Ethnology for the Years 1883–1884,* pp. 37–467. Smithsonian Institution, Washington, D.C.
1897 *Navaho Legends.* American Folklore Society, New York.
1902 *The Night Chant: A Navaho Ceremony.* Memoirs of the American Museum of Natural History 6. Knickerbocker Press, New York. (AMS Reprint, 1978)

Mayes, Vernon O., and Barbara Bayless Lacy
1989 *Nanise', A Navajo Herbal: One Hundred Plants from the Navajo Reservation.* Navajo Community College Press, Tsaile.

McLuhan, T. C.
1986 Dream Tracks: A Tale of Corporate Myth-Making and the American Tourist. Excerpts in *Impact* 9(20):4–7. Albuquerque Journal Magazine. Albuquerque, New Mexico.

McPherson, Robert
1992 Navajo Deer Hunting: A Second Look. Paper presented at the Sixth Annual Navajo Studies Conference, Window Rock, Arizona.

Mitchell, Frank
1978 *Navajo Blessingway Singer,* edited by Charlotte J. Frisbie and David P. McAllester. University of Arizona Press, Tucson.

National Park Service
1984 Draft Environmental Assessment and Upriver Recreation Plan for Lees Ferry, Glen Canyon National Recreation Area. On file, Glen Canyon National Recreation Area.
1992 General Management Plan Environmental Impact Statement Scoping Summary, Grand Canyon National Park. On file, Grand Canyon National Park.

Navajo Nation
1977 List of Navajo sacred places on Hopi Partitioned Lands. On file, Navajo Nation Historic Preservation Department, Window Rock, Arizona.
1988 Navajo Nation Fax 88: A Statistical Abstract. Commission for Accelerating Navajo Development Opportunities, Window Rock.
1993 Chapter Images: 1992 Edition. Division of Community Development, Window Rock.

n.d. Forms for archaeological sites in the area of the Navajo Land Claim before the Indian Claims Commission, Docket 229. On file, Navajo Nation Research Library, Window Rock, Arizona.

Navajo Times
1966 Tribe Opposes Dams in the Grand Canyon. *Navajo Times* August 11, p. 9.

Navajo Tribe of Indians
1963 Proposed Findings of Fact in Behalf of the Navajo Tribe of Indians in Area of Havasupai Overlap. Docket 91 before the Indian Claims Commission.

Newcomb, Franc Johnson
1940 Origin Legend of the Navaho Eagle Chant. *Journal of American Folklore* 53:50–77.

Newcomb, Franc Johnson, and Gladys Reichard
1975 *Sandpaintings of the Navajo Shooting Chant.* Dover, New York. (Originally published in 1937 by J. J. Augustin, New York)

Niehuis, Charles
1977 Historical Perspective on El Rio Colorado. *Arizona Highways* 53(1):2–5. Arizona Department of Transportation, Phoenix.

Oakes, Maud, Jeff King, and Joseph Campbell
1943 *Where the Two Came to Their Father: A Navaho War Ceremonial.* Bollingen Series I. Princeton University Press, Princeton, New Jersey.

O'Bryan, Aileen
1956 *The Dine: Origin Myths of the Navaho Indians.* Bureau of American Ethnology Bulletin 163. Government Printing Office, Washington, D.C.

Parker, Patricia L., and Thomas F. King
1990 *Guidelines for the Identification and Evaluation of Traditional Cultural Properties.* National Register Bulletin 38. National Park Service, Washington, D.C.

Pattison, Natalie
1980 Steps and Trails in the Glen Canyon Area. In *Proceedings of the Second Conference on Scientific Research in the National Parks,* Vol. 2. National Park Service.

Pattison, Natalie B., and Loren D. Potter
1977 *Prehistoric and Historic Steps and Trails of Glen Canyon–Lake Powell.* Lake Powell Research Project Research Bulletin No. 45. Institute of Geophysics and Planetary Physics, University of California, Los Angeles.

Peshlakai, Clyde
1961 Affidavit of Clyde Peshlakai as to Navajo Residence, Use, and Occupancy of Certain Lands. Docket 229 before the Indian Claims Commission. On file, National Park Service, Southwest Regional Office, Santa Fe.

Peterson, Charles S.
1973 *Take Up Your Mission: Mormon Colonizing along the Little Colorado River, 1870–1900.* University of Arizona Press, Tucson.

Preston, Scott
1954 The Clans. In *Navajo Historical Selections*, edited by Robert Young and William Morgan, pp. 23-27. Navajo Historical Series 3. U.S. Department of the Interior, Bureau of Indian Affairs, Phoenix (Arizona) Indian School Print Shop.

Redhouse, John
1985 *Geopolitics of the Navajo Hopi Land Dispute*. Roots of Navajo Relocation Series, Part II. Redhouse/Wright Productions, Albuquerque, New Mexico.

Reichard, Gladys
1928 *The Social Life of the Navajo Indians*. Columbia University Contributions to Anthropology 8. New York.
1944 *The Story of the Navajo Hail Chant*. J. J. Augustin, New York.
1963 *Navajo Religion: A Study in Symbolism*. Princeton University Press, Princeton, New Jersey. (Originally published in 1950)
1977 *Navaho Medicine Man: Sandpaintings and Legends of Miguelito*. Dover, New York. (Originally published in 1939 by J. J. Augustin, New York)

Riley, Carroll L.
1954 *A Survey of Navajo Archaeology*. University of Colorado Studies in Anthropology No. 4. Boulder.

Robbins, Ethel
1961 Affidavit of Ethel Robbins as to Navajo Residence, Use, and Occupancy of Certain Lands. Docket 229 before the Indian Claims Commission. On file, National Park Service, Southwest Regional Office, Santa Fe.

Roberts, Alexandra
1980 The Alvarado Hotel: A Reflection of the Railroad Years in Albuquerque. Paper prepared for Railroad Centennial Symposium. Ms. on file, Albuquerque Museum.
1990 Navajo Ethnohistory and Archaeology. In *The Wupatki Archaeological Inventory Survey Project: Final Report*. Southwest Cultural Resources Center Professional Paper 35. National Park Service. Santa Fe.
1992 *An Archaeological and Ethnohistorical Investigation of Restricted Mobility Among Navajo Families in the Wupatki Basin, Arizona*. Unpublished Ph.D. dissertation, Department of Anthropology, University of New Mexico, Albuquerque.
1994 Letter to Robert Arberger, Superintendent, Grand Canyon National Park. September 15. On file, Historic Preservation Department, Window Rock.

Rusho W. L., and C. Gregory Crampton
1992 *Lee's Ferry: Desert River Crossing*. Cricket Productions, Salt Lake City.

Sapir, Edward
1942 *Navaho Texts*. Linguistic Society of America, University of Iowa, Iowa City.

Saturday Evening Post
1929 Getting Closer to the Indian. June 15. Reprinted in *The Coconino Sun* June 21, 1929. Flagstaff, Arizona.

Spier, Leslie
1928 *Havasupai Ethnography*. Anthropological Papers of the Museum of Natural History, Vol. XXIX, part III. New York.

Stephen, Alexander M.
1930 The Navajo Origin Legend. *Journal of American Folklore* 43:88-104.

Stevens, Larry
1983 *The Colorado River in Grand Canyon: A Comprehensive Guide to Its Natural and Human History*.

Stokes, M. A., and T. L. Smiley
1964 Tree-Ring Dates from the Navajo Land Claim II: The Western Section. *Tree-Ring Bulletin* 26(1-4)13-27.

Stone, Lyle M.
1988 Archaeological Survey in the Vicinity of Navajo Bridge on Highway U.S. 89A in Northern Coconino County, Arizona. Prepared for Cannon and Associates, Tucson, Arizona. On file, Historic Preservation Department, Window Rock, Arizona.

Sweeney, Catherine L.
1963 Ethnohistoric Study in the Grand Canyon. *Utah Archaeology: A Newsletter* 9(3):9-13. Utah Statewide Archaeological Society.

Thomas, David H.
1978 *The Southwestern Indian Detours*. Hunter, Phoenix.

Thomas, John R.
1993 Navajo Nation Position Paper: Glen Canyon Dam Environmental Impact Statement. On file, Navajo Nation Historic Preservation Department, Window Rock, Arizona. (included as Appendix B of this report)

Thomas, John R., Stanley Pollack, and Michael Tremble
1994 A Proposal to Develop a Little Colorado River Resource and Development Inventory Program. Navajo Nation Historic Preservation Department and Navajo Nation Department of Justice, Window Rock, Arizona.

United States Commissioner of Indian Affairs
1897 Annual Report of the Commissioner of Indian Affairs (1857-1911). U.S. Government Printing Office, Washington D.C.

United States Department of Agriculture
1934 Report of Navajo Goat and Sheep Reduction Campaign. Exhibit 2522, on file, law offices of Brown and Bain, Phoenix.
1994 Willis and Burro Forest Plan Implementation Land Unit Management Situation Report. U.S. Forest Service, Kaibab National Forest, North Kaibab Ranger District, Fredonia, Arizona.

United States Department of the Interior
1926 Rules and Regulations: Grand Canyon National Park Arizona. National Park Service. Government Printing Office, Washington, D.C.

1961 *The Navajo Yearbook, 1951-1961: A Decade of Progress.* Report No. viii. Bureau of Indian Affairs, Navajo Agency, Window Rock, Arizona.
1969 Location of the Boundary between the Navajo Indian Reservation and Marble Canyon National Monument, Arizona. Opinion of the Field Solicitor. Office of the Solicitor, Santa Fe Field Office.
1994 Operation of Glen Canyon Dam: Draft Environmental Impact Statement. Bureau of Reclamation, Salt Lake City, in preparation.

Vannette, Walter M.
1988 Navajo Religious Use of the 1934 Reservation Area. Expert Witness Report prepared on behalf of the Navajo Nation. Submitted to the Navajo Nation Department of Justice, Window Rock, Arizona, and Brown and Bain Law Offices, Phoenix.

Vannette, Walter M., and Alison Feary
1981 Navajo Sacred Places and Resource Use in and near the Coconino, Kaibab, and Apache-Sitgreaves National Forests. Northern Arizona University, Flagstaff. Confidential ms. on file, U.S. Department of Agriculture, Coconino National Forest, Flagstaff, Arizona.

Van Valkenburgh, Richard F.
1940 Sacred Places and Shrines of the Navajos: Navajo Rock and Twig Piles Called Tsenadjih. *Plateau* 13(1):6–9.
1941 *Dine Bikeyah.* United States Department of the Interior, Office of Indian Affairs, Navajo Service. Window Rock, Arizona.
1954 Synoptic Report of Navaho Use and Occupancy of Wupatki Basin, Arizona. Letter to K. W. Dixon, Navajo Agency, Window Rock, Arizona. Navajo Exhibit 2877. On file, Brown and Bain Law Offices, Phoenix.
1974 Navajo Sacred Places. In *Navajo Indians* III, edited by David A. Horr. Garland, New York.

Watson, Editha
1964 *Navajo Sacred Places.* Navajo Tribal Museum, Window Rock, Arizona.

Wallace, Robert
1973 *The Grand Canyon.* Time-Life Books, Chicago.

Wheelwright, Mary Cabot
1945 *Eagle Catching Myth and Bead Myth.* Museum of Navajo Ceremonial Art Bulletin 3. Santa Fe.
1946a *Hail Chant and Water Chant.* Navajo Religion Series 2. Museum of Navajo Ceremonial Art, Santa Fe.
1946b *Wind Chant and Feather Chant.* Museum of Navajo Ceremonial Art Bulletin 4. Santa Fe.
1951 *Myth of Mountain Chant and Myth of Beauty Chant.* Museum of Navajo Ceremonial Art Bulletin 5. Santa Fe.
1956 *The Myth and Prayers of the Great Star Chant and the Myth of the Coyote Chant.* Navajo Religion Series 4. Museum of Navajo Ceremonial Art, Santa Fe.
1958 *Red Ant Myth and Shooting Chant.* Navajo Religion Series 7. Museum of Navajo Ceremonial Art, Santa Fe.

White, Richard
1983 *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees and Navajos.* University of Nebraska Press, Lincoln.

Winnie, Ray
1982 Origin of Clan. Ms. on file, Navajo and Indian Studies DIvision, Navajo Community College, Tsaile, Arizona.

Wood, John H., and Walter M. Vannette
1979 A Preliminary Assessment of the Significance of Navajo Sacred Places in the Vicinity of Big Mountain, Arizona. Prepared for Navajo and Hopi Indian Relocation Commission. Ms. on file, Department of Anthropology, Northern Arizona University, Flagstaff.

Worcester, Donald E.
1951 The Navaho during the Spanish Regime in New Mexico. *New Mexico Historical Review* 26(2).

Wyman, Leland C.
1957 *Beautyway: A Navaho Ceremonial.* Bollingen Series. Princeton University Press, Princeton, New Jersey.
1962 *The Windways of the Navaho.* Taylor Museum, Colorado Springs.
1965 *The Red Antway of the Navaho.* Navajo Religion Series 5. Museum of Navajo Ceremonial Art, Santa Fe.
1970 *Blessingway.* University of Arizona Press, Tucson.
1975 *The Mountainway of the Navajo.* University of Arizona Press, Tucson.

Yazzie, Alfred
1984 *Navajo Oral Tradition,* 3 vols. Rough Rock Demonstration School, Chinle, Arizona.

Young, Robert W., and William Morgan, Sr.
1954 The Traditional Navajo Country, 1-4. In *Navajo Historical Selections,* pp. 11-17, 88-92. Phoenix Indian School Print Shop.
1987 *The Navajo Language: A Grammar and Colloquial Dictionary.* University of New Mexico Press, Albuquerque.

Appendix A

Memorandum of Understanding (MOU) between the Bureau of Reclamation and the Navajo Nation for Cooperation in the Preparation of the Glen Canyon Environmental Impact Statement

MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN
BUREAU OF RECLAMATION AND THE NAVAJO NATION
FOR
COOPERATION IN THE PREPARATION OF
THE GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT

I. INTRODUCTION

The Secretary of the Interior has directed that an Environmental Impact Statement (EIS) be prepared to address the operations of Glen Canyon Dam and the resultant effects. That activity involves the management jurisdictions and responsibilities of several Federal bureaus or agencies, a State agency, and Indian Tribes.

II. PURPOSE

The purpose of this MOU is to establish a formal understanding between the Bureau of Reclamation (Reclamation) and the Navajo Nation regarding roles and responsibilities in the preparation of the EIS, and on the participation of the Navajo Nation as a cooperating agency.

III. AUTHORITY AND BACKGROUND MATERIAL

A. Public Law 91-190, National Environmental Policy Act (NEPA) of 1969, January 1, 1970.

B. Council of Environmental Quality (CEQ), Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR Parts 1500-1508).

C. Council on Environmental Quality, 40 Questions and Answers About the NEPA Regulations (46 Federal Register 18026 - March 23, 1981).

IV. DEFINITIONS

A. Reclamation - means Regional Director, Upper Colorado Region, Bureau of Reclamation.

B. Navajo Nation - means the President of the Navajo Nation represented by his designee.

V. PROVISIONS OF UNDERSTANDING

A. Reclamation has primary responsibility for the Glen Canyon Dam EIS and is the lead agency for its preparation under the regulations of the CEQ. Decisions regarding EIS content are the ultimate responsibility of Reclamation.

B. The Navajo Nation has a major interest in the project because the Glen Canyon Dam operations currently and potentially impact areas in which the Navajo Nation has jurisdiction by law and expertise, specifically with respect to natural, cultural and recreational resources.

C. In order to facilitate and assure full coordination at the management level, the Navajo Nation will provide a management official to actively participate in meetings of the cooperating agencies. This official will assist in providing management oversight to Glen Canyon Environmental Studies and the Glen Canyon Dam EIS.

D. In order to achieve the comprehensive evaluation needed in the EIS, it is agreed upon by both Reclamation and the Navajo Nation that the Navajo Nation will actively participate in the various phases of EIS preparation and review. Reclamation invites the Navajo Nation to cooperate in the EIS according to the regulations of the CEQ.

E. In its role as cooperating agency, the Navajo Nation will provide a representative to the EIS team who will prepare assigned portions of the EIS and provide technical information, advice, and review on topics, resources and environmental impacts including, but not limited to, those areas specified under CEQ guidance where the Navajo Nation has jurisdiction by law or expertise. (Note: This item is optional. Cooperating agencies may participate in reviewing materials rather than preparing EIS text.)

F. As lead agency, Reclamation will prepare the EIS management plan, schedules, public involvement plan, and other administrative activities. Cooperating agencies will provide review comments and assistance. Reclamation will arrange and coordinate EIS team meetings, making arrangements through mutual agreement, and monitor work progress. Both agencies share responsibility to see that schedules are met and work quality is acceptable.

G. Reclamation will provide the Navajo Nation with advance notice of critical review points and time periods for review and will further provide the Navajo Nation with adequate opportunities to review all EIS-related products, including but not limited to preliminary drafts, reports, graphics, original data, alternatives analyses, and associated preferred alternative, draft and final EIS's, and the draft Record of Decision prior to publication and public distribution.

H. Both Reclamation and the Navajo Nation will actively participate in public briefings, hearings, and any other public events related to the draft and final Glen Canyon Dam EIS.

I. As lead agency, Reclamation will be responsible for preparation of responses to comments on draft and final EIS's, but will seek assistance from and incorporate the Navajo Nation's responses to comments on issues involving the Navajo Nation's EIS

team members' assignment or the Navajo Nation's jurisdiction by law or expertise.

J. Reclamation is fully responsible for publication, filing and distribution of both the draft and final EIS, as well as the Record of Decision. Reclamation will fully afford the Navajo Nation adequate opportunity to review and incorporate as appropriate the Navajo Nation comments on such documents.

VI. DISPUTE RESOLUTION

Differences between Reclamation and the Navajo Nation with regard to the information to be included in the EIS will be resolved, to the maximum extent possible at the field level. Should conflict exist that cannot be resolved to the satisfaction of the parties to this MOU, participation may be requested from each agency's top management and/or ultimately the Office of the Secretary of the Interior to obtain resolution.

VII. OTHER RESPONSIBILITIES

Nothing in this MOU will be construed to amend or abridge the authority of either Reclamation or the Navajo Nation to further comment and carry out their respective responsibilities under the provisions of NEPA, CEQ regulations and guidance, or other specific mandates and legal responsibilities.

VIII. IMPLEMENTATION AND TERMINATION

This MOU is effective on the last signature date. This MOU may be modified through bilateral agreement between the parties. Any modification made to this MOU shall be confirmed in writing prior to performance of the change. The Navajo Nation assumes all risks, liabilities, and consequences of performing additional work outside the specified scope of work without prior written approval from Reclamation's Regional Director. The MOU may be cancelled by either signatory 30 days after the date of formal notice of cancellation. The MOU will be reviewed on completion of the Record of Decision by the Secretary of the Interior. At that time, it may be terminated by mutual agreement or adjusted to reflect and follow-up NEPA work or other coordination needs that may result from the decision.

Signatures: Date:

President
The Navajo Nation

JUL 19 1993

Regional Director
Bureau of Reclamation

JUL 30 1993

Appendix B

NAVAJO NATION POSITION PAPER
GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT

NAVAJO NATION POSITION PAPER
GLEN CANYON DAM
ENVIRONMENTAL IMPACT STATEMENT

Prepared for

THE NAVAJO NATION
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June 1993

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STATEMENT OF OBJECTIVE

The Bureau of Reclamation in cooperation with numerous federal and state agencies and tribal governments, is developing an Environmental Impact Statement (EIS) for the operation of Glen Canyon Dam. The objective of this position paper is to identify and prioritize the issues and concerns of the Navajo Nation regarding the Glen Canyon EIS and to identify the Navajo Nation's preferred alternative.

I. BACKGROUND

Glen Canyon Dam is located on the Colorado River, 15 miles upstream of Lees Ferry near the town of Page, Arizona. The Bureau of Reclamation completed the construction of Glen Canyon Dam in 1963. Since that time, the character of the Colorado River below the dam has been irreversibly altered. Prior to the dam, the Colorado River was sediment laden with high spring floods and warm summer water temperatures. The post-dam river is clear and cold with flows controlled by the demands of electrical power markets, water storage, and downstream water delivery requirements. The effect of the dam and these operational priorities has been reduction of seasonal floods, decreased water temperature, cessation of sediment transport from the upper Colorado River basin, and a daily fluctuating river flow pattern in response to peak power demands.

Many different interests including federal and state agencies, river runners, scientists, and environmental groups have argued that Glen Canyon Dam operations result in beach erosion, endanger native fishes and trout, damage archaeological sites and riparian habitats, and impact recreational river running. Other interests, including the Western Area Power Administration (Western) and power consumers, have countered that restrictions on operations will affect power revenues to the federal government, increase rates to power consumers, and require the use of more expensive and environmentally damaging alternative methods of power generation.

Two actions focused attention on the issue of how Glen Canyon Dam is operated: (1) the Bureau of Reclamation 1981 proposal to uprate the generators at Glen Canyon Dam and (2) the U.S. Fish and Wildlife Service 1978 Glen Canyon Dam jeopardy opinion for the endangered humpback chub. The result of discussions and comment on the proposed generator uprate and the jeopardy opinion was initiation of an extensive research effort to develop an understanding of how downstream resources were affected by dam operations and what could be done to

mitigate impacts. This research effort, known as the Glen Canyon Environmental Studies, evaluated impacts to endangered fish, riparian habitat, and recreation along the Colorado River corridor below Glen Canyon Dam. Phase One of the Glen Canyon Environmental Studies was completed in 1987. A Phase Two research program was initiated in 1988. The Bureau of Reclamation completed uprating of the generators in 1987; however, use of the uprated capacity was restricted until completion of the research.

In 1990, the Secretary of the Interior directed the Bureau of Reclamation to reevaluate Glen Canyon Dam operations, develop alternatives which minimize impacts on natural and cultural resources and Native American interests in Glen and Grand Canyons, and evaluate these alternatives in an EIS. In November, 1991, Interim Operating Criteria were implemented by the Secretary of the Interior. These criteria restrict powerplant discharges to a maximum of 20,000 cfs and a minimum of 8,000 cfs and restrict daily and hourly flow change. The Interim Operating Criteria include exception criteria which allow restrictions on powerplant operations to be exceeded. Under the exception criteria, unused electrical generation capacity at Glen Canyon Dam could be utilized to respond to emergency conditions, for system regulation, and as a means of avoiding the expense of purchasing replacement firm capacity and energy.

In an action distinct from but parallel to the EIS, the Bureau of Reclamation agreed in 1990 to fund seven conservation measures to assist in removing the jeopardy opinion for the humpback chub. These measures include taxonomic and ecological research, evaluations of impacts of Glen Canyon Dam operations on humpback chub, development of a management plan for the Little Colorado River, and evaluation of a potential second spawning population.

The schedule for completion of the conservation measures extends beyond the EIS completion date thereby complicating the relationship between the two processes. Therefore, the conservation measures are being integrated into the EIS in several ways. Research conducted as part of the conservation measures is being used in the evaluation of impacts associated with individual alternatives in the EIS. Research findings forthcoming after the EIS Record of Decision will be incorporated into the adaptive management program which is a component of several EIS alternatives. Evaluation of a second spawning population of humpback chub and long-term monitoring are incorporated into EIS alternatives. The preferred alternative in the EIS will be the action that the U.S. Fish and Wildlife Service evaluates in a biological opinion which will supersede the 1978 jeopardy biological opinion for humpback chub. It is unclear whether an additional biological opinion will be issued following completion of the research and

management planning funded under the conservation measures. Potentially, this issue will be resolved in the biological opinion issued for the EIS.

A recent development has been the passage of the Grand Canyon Protection Act in October 1992. This act instructs the Secretary of the Interior to operate Glen Canyon Dam in a manner that protects the resources of Grand Canyon National Park and Glen Canyon National Recreation Area. The Secretary is required to consult with Indian tribes and others in the adoption of operating criteria and plans and long-term monitoring.

The Navajo Nation has specific and unique interests which are affected by Glen Canyon Dam operations. Most significantly, the Navajo Reservation boundary extends to the Colorado River in Glen and Grand Canyons. Cultural and natural resources of the Navajo Nation associated with these lands including archaeological sites, traditional cultural properties, and riparian and aquatic habitat are directly affected by dam operations. Additionally, the Navajo Nation has other interests which may be affected. The Navajo Nation purchases power generated at Glen Canyon Dam, benefits from money spent by recreationists who utilize Glen and Grand Canyons, and has plans to develop a marina at Antelope Point on Lake Powell.

II. GLEN CANYON EIS

PURPOSE AND SCHEDULE

The purpose of the Glen Canyon EIS is to determine legal options for Glen Canyon Dam operations that could be implemented to minimize adverse impacts to the downstream environmental and cultural resources and Native American interests in Glen and Grand Canyons. Analysis of operational alternatives is needed to allow the Secretary of the Interior to balance and meet statutory responsibilities to protect downstream resources, produce hydropower, and protect Native American interests. The Grand Canyon Protection Act mandates completion of the EIS by October 1994.

NAVAJO NATION PARTICIPATION IN THE EIS

The Navajo Nation became a Cooperating Agency for the Glen Canyon EIS in April 1991. A Cooperating Agency is an agency which has legal jurisdiction and/or special expertise with respect to environmental issues considered in the EIS process. In the Memorandum of Understanding with Bureau of Reclamation, which established the Navajo Nation as a Cooperating Agency, it was recognized that the Navajo Nation "has a major interest in the project because the Glen Canyon Dam operations currently and potentially impact areas in which the Navajo Nation has jurisdiction by law and expertise." The Navajo Nation is represented at the bi-monthly meetings of the Cooperating Agencies and on the EIS writing team. Other Cooperating Agencies for the Glen Canyon EIS are: Bureau of Reclamation, National Park Service, Western Area Power Administration, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, Arizona Game and Fish, Hualapai Tribe, Pueblo of Zuni, San Juan Southern Paiute Tribe, Southern Paiute Consortium, and Hopi Tribe.

In addition to serving as a Cooperating Agency, the Navajo Nation is providing research services for the Glen Canyon EIS. The Historic Preservation Department is conducting ethnographic research which will contribute directly to the Glen Canyon EIS. This research is to document historic and current use and traditional cultural properties of the Navajo people in Glen and Grand Canyons. This work is funded by the Bureau of Reclamation. The Historic Preservation Department will submit a technical report to the Bureau of Reclamation in September 1993. Any confidential information will be retained by the Navajo Nation and will not be included in the technical report.

The Bureau of Reclamation is also funding research activities by the Navajo Department of Fish and Wildlife Natural Heritage Program as part of the conservation measures for the humpback chub. The Natural Heritage Program is conducting a literature review for the Little Colorado River and developing a geographic information system data base for humpback chub habitat in the Little Colorado River. The Natural Heritage Program is also performing research on the life history and ecology of the humpback chub on a subcontract to Arizona State University. As noted above, this work is being conducted for purposes other than the specific needs of the Glen Canyon EIS.

SUMMARY OF EIS ALTERNATIVES

Eight alternatives are considered in detail in the draft EIS. They include seven action alternatives and the no action, or status quo, alternative. The seven action alternatives were designed to provide a broad spectrum of options. One alternative would allow unlimited fluctuations in flow to maximize power production, three would provide varying restrictions on fluctuations, and three others would provide steady flows on a monthly, seasonal, or annual basis. The alternatives are discussed below.

1. No Action Alternative

The objective of the No Action Alternative is to produce the greatest amount of firm capacity and energy practicable while adhering to the releases required under the "Law of the River." Under No Action, Glen Canyon Dam operations would be the same as they were from 1963, when the dam was placed in operation, until flows to accommodate research needs began in June 1990.

Minimum flows are restricted to no less that 1,000 cfs from Labor Day until Easter and 3,000 cfs from Easter until Labor Day (the recreation season). Peak discharges under normal No Action operations do not exceed 31,500 cfs. The range of daily fluctuations under the No Action Alternative are restricted only between the minimum and maximum flows. Ramp rates are not restricted beyond power operating criteria.

2. Maximum Powerplant Capacity Alternative

This alternative was developed to allow use of the maximum powerplant discharge capacity that resulted from the generator uprate. Operations under the Maximum Powerplant Capacity Alternative would be the same as the No Action Alternative except that full powerplant capacity, with estimated flows of 33,200 cfs, would be available. Monthly and annual operations, including flood control, would be identical to those under the No Action Alternative. Releases in excess of 31,500 cfs would only be possible when Lake Powell's elevation is greater than 3,641 feet.

3. High Fluctuating Flow Alternative

The High Fluctuating Flow Alternative was developed to slightly reduce fluctuating flows for the benefit of downstream resources while allowing flexibility for power operations. Releases would be tied to stream flow forecasts and actual discharges and power system demand. This alternative would add flood frequency reduction measures, adaptive management and beach/habitat-building flows and would include additional restrictions on daily and hourly operations.

Minimum flows would be 3,000, 5,000 or 8,000 cfs depending on the monthly release volume. The maximum flow would be limited to 31,500 cfs under normal circumstances. The limit on daily fluctuations would often be more restrictive than the minimum and maximum flow rates. Fluctuations would be limited to 15,000, 20,000, 21,000, or 22,000 cfs over any 24-hour period, depending on the monthly release volume. The ramp rate would follow the power load for increasing flows without restrictions, but decreasing flows would be limited to 5,000 cfs per hour in winter and summer and 4,000 cfs per hour during spring and fall.

4. Moderate Fluctuating Flow Alternative

The Moderate Fluctuating Flow Alternative was developed to permit fluctuating flows below no action levels for the benefit of downstream resources while allowing intermediate flexibility for power operations. This alternative would add flood frequency reduction measures, adaptive management, beach/habitat-building flows, and beach maintenance flows.

Minimum flows for a given month would vary depending on the monthly release volume but would be no less than 5,000 cfs. The maximum rate of release for a given month also would vary depending on monthly release volumes but would be no greater than 31,500 cfs under normal operations. The ramp rate would be limited to 4,000 cfs per hour for increasing flows and 2,500 cfs per hour for decreasing flows.

Allowable daily fluctuations as well as minimum and maximum flows would be determined based on the mean releases for the month. The allowable fluctuation would be plus or minus 45 percent of the mean daily flow, not to exceed plus or minus 6,000 cfs. Maximum flows during a minimum release year would not exceed 31,500 cfs.

5. Low Fluctuating Flow Alternative

The Low Fluctuating Flow Alternative was developed to reduce fluctuating flows to well below no action levels for the benefit of downstream resources while allowing limited flexibility for power operations. This alternative is essentially the same as the Interim Operating Criteria except for the addition of flood frequency reduction measures, adaptive management, beach/habitat-building, and habitat maintenance flows.

Minimum flows would be no less than 8,000 cfs between 7 a.m. and 7 p.m. and 5,000 cfs at night. The maximum rate of release would be limited to 20,000 cfs during fluctuating hourly releases. Any releases greater than 20,000 cfs would be steady on a daily basis and would be made in response to high inflow and storage conditions. The limit on daily fluctuations would often be more restrictive than the minimum and maximum flow rates. Fluctuations would be limited during any 24-hour period, depending on monthly release volumes.

The Low Fluctuating Flow alternative is presented in two versions: one that includes the Habitat Maintenance Flows which is named the Modified Low Fluctuating Flow, and one that does not included this component which retains the name Low Fluctuating Flow alternative. Habitat Maintenance Flows are discussed in Section 9, Common Elements.

6. Existing Monthly Volume Steady Flow Alternative

Under this alternative, water would be released from Glen Canyon Dam at a constant rate within each month to maintain the operational flexibility necessary to avoid spills and maintain conservation storage while eliminating the possible negative effects of daily fluctuating flows on downstream resources. Releases within each month would be steady and would have to equal or exceed the monthly minimums. Maximum steady releases would be determined by the monthly volume of water to be released.

7. Seasonally Adjusted Steady Flow Alternative

Under this alternative water would be released at a constant rate during defined seasons to enhance the aquatic ecosystem downstream of the dam. Flows would be steady during a given month with adjustments through the year to meet downstream resource needs. The highest

releases would occur in May and June, with relatively low releases from August through November.

8. Year-round Steady Flow Alternative

The Year-Round Steady Flow Alternative was developed in response to scoping comments calling for complete elimination of fluctuating flows. Under this alternative, water would be released from Glen Canyon Dam at a year-round steady rate, thus eliminating daily river fluctuations and minimizing peak discharges in order to preserve sediment within the river channel.

The minimum flow would be determined from the mean monthly release but would correspond generally to the minimum annual release volume of 8.23 million acre-feet, which is about 11,400 cfs. The monthly volume would be approximately the annual volume divided by 12, except when response to forecast changes would be required.

9. Common Elements

All alternatives with the exception of No Action and Maximum Powerplant Capacity include the following environmental mitigation elements:

Adaptive Management - The Bureau of Reclamation has recognized that the exact outcome of the operational alternatives with respect to downstream resources can not be predicted with certainty. A program of adaptive management is proposed to allow operational flexibility to respond to continuing analyses of the effects of dam operations on natural, cultural, recreational, and power resources. The adaptive management program would include participation by affected agencies and tribes in developing long-term monitoring and changes in operating criteria. The Navajo Nation is directly involved in the development of the adaptive management program.

Monitoring and Protection of Cultural Resources - Ongoing monitoring and protection of cultural resources will be undertaken per a programmatic agreement between the National Park Service, the Bureau of Reclamation, the Advisory Council on Historic Preservation, the Arizona State Historic Preservation Office, and the pertinent native American tribes. This agreement is currently in negotiation.

Flood Frequency Reduction Measures - Reducing flood frequency would be accomplished by dedicating reservoir space for flood control, reduction of base reservoir storage level, and/or increasing spillway height.

Beach/habitat-building Flows - Short duration, high releases would be scheduled in the spring to rebuild beaches and restore backwater channels which are used by native fish. Releases would be at least 10,000 cfs greater than the allowable peak discharge but not greater than 45,000 cfs. Recommendations for scheduling beach/habitat-building flows would be made by the adaptive management program.

New Population of Humpback Chub - Efforts would be made to establish a second spawning population of humpback chub in a Colorado River tributary within Grand Canyon.

Further Study of Selective Withdrawal - Selective withdrawal structures could be built at Glen Canyon Dam to provide seasonal variation in water temperature. Additional research and analysis would be undertaken to determine whether or not a selective withdrawal structure would enhance endangered species and other native fish populations.

Emergency Exception Criteria - Operations described under any alternative could be altered temporarily to respond to power system emergencies.

The Moderate Fluctuating, Low Fluctuating, and Seasonally Adjusted Steady Flow alternatives also include a provision for habitat maintenance flows which are described below.

Habitat Maintenance Flows - High, steady releases within powerplant capacity for one to two weeks would be scheduled in the spring. The purpose of these flows would be to rebuild sandbars above normal peak stage, reform backwaters and maintain open beaches for camping by controlling vegetation invasion. These flows would differ from beach/habitat building flows in that they would be within powerplant capacity and would occur every year that the reservoir is low.

III. NAVAJO NATION ISSUES AND CONCERNS

Navajo Nation officials have received briefings regarding the effects of Glen Canyon Dam operations, the Glen Canyon Dam EIS process, and potential ramifications for the Navajo Nation. Officials who received briefings or are directly involved in the EIS process include:

Marshall Plummer, Vice President, Navajo Nation
Stanley Robbins, Bodaway/Cameron Council Delegate
Stanley Pollack, Department of Justice
Alan Downer, Historic Preservation Officer
Richard Begay, Anthropologist
Alexa Roberts, Anthropologist
Larry Benallie, Sr., Department of Fish and Wildlife
Michael Tremble, Natural Heritage Program
Fredrick H. White, Tourism Department
Henry Deal, Resources Enforcement Officer
John Dover, Resources Enforcement Officer
Clarence Gorman, Parks and Recreation Department
John Norstog, Navajo Hopi Land Commission
Marlene A. Lynch, Financial Officer, Navajo Tribal Utility Authority
Sterling Mike, Environment and Public Affairs, Navajo Tribal Utility Authority

Residents of the Gap/Bodaway, Cameron, and Tuba City Chapters have had direct input in the identification of Navajo Nation concerns through the Historic Preservation Department technical study.

A variety of issues and concerns related to the operation of Glen Canyon Dam and the EIS process have been identified. These issues can be grouped into the following general categories:

- Impacts of Glen Canyon Dam operations on cultural and natural resources.

- Land ownership and management in Glen and Grand Canyons.

- Adequate compliance with National Environmental Policy Act (NEPA) and related legislation such as the National Historic Preservation Act which fully addresses issues of concern to the Navajo Nation.

- Recognition of Navajo Nation sovereignty and the requirement for government to government relations.

- Limitation of the issues considered in the EIS to those directly affected by the operation of Glen Canyon Dam.

The specific issues and concerns are discussed in the following sections.

IMPACTS TO CULTURAL AND NATURAL RESOURCES

1. Cultural Resources

Archaeological Sites - Over 400 archaeological sites have been identified by the National Park Service within the Colorado River corridor in Glen and Grand Canyons. Over 300 of these sites have been affected or have the potential to be affected by flows released from Glen Canyon Dam. Many of these archaeological sites exhibit use by Navajo peoples. These sites are concentrated upstream of the confluence with the Little Colorado River at river mile 61, however, Navajos have left evidence of use as far west as Crystal Creek at river mile 98.

The primary impact to these sites from dam releases is direct erosion by river flows or the erosion of alluvial deposits which protect the sites. A secondary impact could result from reduction in the number and size of beaches available to river runners for camping. This could force camping use onto higher terraces thereby threatening cultural resources located in these areas.

Traditional Cultural Properties - Traditional cultural properties are locations which do not necessarily contain archaeological remains but are significant because they are areas of spiritual importance and or traditional use by Native Americans. The traditional cultural properties of the Navajo peoples in Glen and Grand Canyons reflect Navajo use of the canyons over hundreds

of years and the importance of the canyons for their spiritual well being. Impacts to traditional cultural properties can occur due to physical impacts such as erosion or inundation as well as inappropriate uses by others or restriction of access by Navajo peoples.

Modern Use - The Navajo people continue to utilize the canyons and river for subsistence, recreation, and renewal. These uses can be affected by beach erosion, access restriction, and productivity of natural resources such as the Colorado River trout fishery.

Dam operations which maintain alluvial deposits that protect cultural resources and maintain natural resources which are components of traditional cultural properties are in the interest of the Navajo Nation.

2. Water Rights

While the operation of Glen Canyon Dam is not perceived to have a direct effect on any existing or potential water rights of the Navajo Nation, there are concerns regarding indirect affects. These concerns involve the ability to utilize Colorado River and Little Colorado River water rights due to potential conflicts with the endangered humpback chub, the potential for water marketing and transfers, and effects on available Upper Basin depletions.

The Little Colorado River is the only known location within Grand Canyon at which successful humpback chub spawning occurs. The majority of the perennial reach of the Little Colorado River, Blue Springs to the mouth, is within the boundaries of the Navajo reservation. The Secretary of the Interior has designated critical habitat for humpback chub to include the Little Colorado River from mile 8 to the confluence with the Colorado River and river mile 34 to 208 on the mainstem Colorado River (Federal Register January 25, 1993). The potential exists that the presence of critical habitat may limit future utilization of Little Colorado River water and associated groundwaters.

Certain dam operational scenarios may benefit the humpback chub population in Grand Canyon by maintaining backwater habitats which are utilized by juvenile fish. The addition of selective withdrawal intake structures at Glen Canyon Dam to warm released water and the establishment of an additional spawning population within Grand Canyon are actions considered in the EIS which may benefit humpback chub. These actions alone or in combination may reduce the importance of the Little Colorado River for humpback chub in Grand Canyon thereby potentially

mitigating constraints on development of Little Colorado River waters. The efficacy of any action to benefit humpback chub is difficult to determine in advance due to the presence of non-native fish in the system and other factors.

The potential exists in the future for the Navajo Nation to market water rights to parties in the lower Colorado River basin. This transferred water would be "delivered" through Glen Canyon Dam to the lower basin consumers. The operational regimes being considered in the Glen Canyon Dam EIS would not affect the amount of water which passes through the dam in a given year. Therefore, the ability to achieve water transfer deliveries is not here considered to be affected by dam operational alternatives proposed in the Glen Canyon EIS.

All of the Glen Canyon Dam EIS alternatives except No Action and Maximum Powerplant Capacity include measures to reduce flood frequency. One of the methods for accomplishing this reduction is the dedication of 1 million acre-feet of Lake Powell storage to flood control. As Upper Basin depletions approach the levels permitted in the Colorado River Compact, a reduction in available storage in Lake Powell would have a measurable impact on consumptive use. A 1 million acre-feet reduction in storage would reduce Upper Basin yield by 40,000 acre-feet per year which is only 0.67 percent of total yield but 58 percent of New Mexico's interim excess yield. In New Mexico, Native American and other uses are approaching their compact allocation. Water uses that could be jeopardized include the Jicarilla settlement, the Gallup-Navajo municipal and industrial uses on the reservation, and full development of the Navajo Indian Irrigation Project.

3. Endangered Species - Humpback Chub

As noted above, lands of the Navajo Nation contain important habitat necessary for the perpetuation of the humpback chub in Grand Canyon. The humpback chub is listed as endangered by U.S. Fish and Wildlife Service and is the only species on the Navajo Nation Endangered Species list which could be directly affected by dam operations. Actions which would favor humpback chub populations in Grand Canyon would be of benefit to the Navajo Nation in terms of assisting in the management of a significant tribal natural resource, the humpback chub, and potentially mitigating restrictions which the endangered status of humpback chub may impose on development. Conversely, impacts to the humpback chub resulting from dam operations would be viewed as a detriment to tribal interests.

Dam operations do not appear to have direct impact on humpback chub habitat within the Little Colorado River except for potentially minor impacts at the mouth. Dam operations may have the potential to positively influence habitat availability and quality in the mainstem Colorado River primarily for juvenile life stages.

The conservation measures being implemented in response to the U.S. Fish and Wildlife Service jeopardy opinion may have significant benefit for humpback chub populations in Grand Canyon. However, the conservation measures include long-term studies and actions that continue beyond the completion date of the Glen Canyon Dam EIS. Actions common to all alternatives in the EIS include the continued evaluation of multi-level intake structures at Glen Canyon Dam and of the potential for establishing a seconding spawning population of humpback chub in Grand Canyon. These actions are potentially positive for tribal interests.

4. Riparian and Marsh Habitat

Navajo Nation lands in Glen and Grand Canyons support extensive stands of riparian habitat along the shores of the Colorado River, This habitat is part of the "new riparian" zone which has developed in response to flood control provided by Glen Canyon Dam. In addition, since interim flows have been in effect extensive marsh and backwater habitats have developed in certain reaches of Marble Canyon. Riparian and marsh areas are some of the most valuable habitats for wildlife in the Southwest. From the perspective of stewardship and management of the tribe's natural resources it is in the interests of the Navajo Nation to maintain riparian habitat on reservation lands within Glen and Grand Canyons.

5. Trout Fishery

The completion of Glen Canyon Dam in 1963 and the subsequent operation of the dam has lowered water temperatures and reduced turbidity to the point where trout have proliferated in the Colorado River. This trout fishery provides recreation for tribal members and supports tourism in northern Arizona. Dam operation alternatives that contribute to a high quality trout fishery below Glen Canyon Dam are in the interest of the Navajo Nation.

6. Navajo Nation Tourism

Glen and Grand Canyons are major tourist/recreation destinations in Northern Arizona. The primary recreation activities along the Colorado River corridor are river running and trout fishing. While the Navajo Nation does not have direct interests in these activities in the form of commercial river running or sport fishing concerns, there are significant opportunities for enterprises on the reservation which can benefit from the recreation traffic attracted to Glen and Grand Canyons. These on-reservation operations range from small scale craft stands to full hotel/restaurant facilities along the major highways. These operations can make a significant contribution to the local reservation economy particularly in the Gap, Bodaway, Cameron, and Tuba City chapters. In the past, the Bennett Freeze has restricted tourist developments which could capture Glen Canyon/Grand Canyon Colorado River tourist dollars. Dam operation alternatives that maintain the attributes of the Colorado River corridor and attract recreationists are in the interest of the Navajo Nation.

The Navajo Nation has plans to develop a marina at Antelope Point on Lake Powell. Fluctuations in reservoir elevation can be very costly for marina operations particularly if the fluctuations are large. The amount of fluctuation in reservoir surface elevation is not expected to vary significantly between the proposed alternatives.

7. Energy

The Navajo Tribal Utility Authority (NTUA) purchases power capacity and energy a portion of which is generated from Glen Canyon Dam. NTUA has a 22 megawatt allocation from Western Area Power Administration (Western), the marketing entity for power from Glen Canyon Dam and the rest of the Colorado River Storage Project (CRSP). NTUA's total load is approximately 110 megawatts. NTUA provides service to the majority of electricity consumers on the Navajo Nation. Navajo Agricultural Products Inc. (NAPI) receives capacity and energy from Western as part of the Navajo Indian Irrigation Project (NIIP). This will amount to 96 megawatts by 1998.

The restricted fluctuating flow and steady flow alternatives affect power operations and marketing at Glen Canyon Dam by limiting fluctuations and maximum and minimum flows. Restrictions on maximum discharge result in a reduction of generation capacity. Reducing capacity has two principal potential effects. First, a reduced capacity means that Western will

have less energy to sell during periods of peak demand. This will result in reduced power revenues which may require an increase in energy rates to Western's customers. Second, if Western is unable to replace the lost capacity, then allocations to individual customers will need to be reduced. The cost of replacement capacity will be significantly higher than that currently provided by Glen Canyon Dam.

An additional concern is expenditures for research and management. Power revenues have funded the majority of research on dam affects in Glen and Grand Canyons and are proposed as the funding for adaptive management and long-term monitoring.

As a power consumer and rate payer, the Navajo Nation is interested in maintaining low electric rates. Dam operation alternatives which maintain low rates for power generated at Glen Canyon Dam are in the interest of the Navajo Nation.

NAVAJO NATION LAND OWNERSHIP AND MANAGEMENT IN GLEN AND GRAND CANYON

In An Act to Define the Exterior Boundaries of the Navajo Indian Reservation in Arizona, June 14, 1934, Navajo lands are described as extending to the south bank of the Colorado River between the Arizona/Utah border and the Little Colorado River, then following the north bank of the Little Colorado River to a point opposite the east boundary of the Grand Canyon National Park and following the east boundary of the Park. Subsequent to the 1934 Act, the Grand Canyon Expansion Act established the boundary of Grand Canyon National Park at the rim of Marble Canyon "subject to the concurrence of the Navajo Nation." This concurrence has not been given. However, in the draft Lees Ferry Upriver Recreation Plan and Environmental Assessment dated February 1984, the National Park Service acknowledged that "the Navajo Indian reservation boundary meets the Colorado River about seven miles above Lees Ferry and follows the river downstream past Lees Ferry." The conflict inherent in these acts and other federal actions have created a controversy regarding the boundaries of the Navajo reservation and Grand Canyon National Park. The Glen Canyon Dam EIS is not the appropriate forum to resolve the claims of others on Navajo lands. However, it is imperative that the legislated boundary of the Navajo reservation, and the actions which have contributed to confusion regarding the boundary, be recognized in the EIS.

The Navajo Nation should be included in the ongoing management strategies for Glen Canyon and Grand Canyon which are developed in the EIS. The Navajo Nation deserves this recognition because of land ownership and the attendant management rights and obligations and well established cultural affinity with Grand Canyon. The Glen Canyon Dam EIS calls for a program of adaptive management to monitor the effects of the dam operation program and to prescribe changes to address adverse impacts. It is imperative that the Navajo Nation have full participation in the adaptive management program.

EIS PROCESS AND NEPA COMPLIANCE

The Glen Canyon EIS is important as a process and as a document. The EIS process provides a forum to address important issues to the Navajo Nation including relations with the National Park Service and other federal agencies, the right and obligation of the Navajo Nation to have a major role in decisions affecting Glen Canyon Dam and the Colorado River, and recognition of the sovereignty of the Navajo Nation and its management and responsibilities for its lands and resources. It is also important to limit the process to issues germane to the EIS purpose and need and to not allow the process to be utilized to pursue extraneous matters that may be detrimental to Navajo interests.

The EIS will set precedent on many issues and will define research and management programs that will continue for many years. It is critical that all Glen Canyon Dam issues which are important to the Navajo Nation are treated in the document and that the language used is precise and accurate. The document will be subject to extensive review and comment. It is in the interest of the Navajo Nation that the document is complete and defensible from a technical standpoint and that it meets all regulatory requirements and is in compliance with NEPA.

IV. PRIORITIZATION OF ISSUES

As discussed in the preceding sections, the Navajo Nation has numerous concerns regarding the Glen Canyon EIS. The Navajo Nation recognizes that actions would favor or resolve one issue may compromise others. Prioritizing issues is necessary if the Navajo Nation is to evaluate the EIS alternatives and recommend a preferred alternative.

A subset of the issues important to the Navajo Nation are of overall concern in the EIS process and are not affected by the specific action alternatives. These issues are:

- Recognition of Navajo Nation land ownership and sovereignty
- Participation by the Navajo Nation in ongoing management
- NEPA compliance.

The remaining issues can be grouped into two priority levels. The first, and highest, priority issues are of vital importance to the Navajo Nation and avoiding or mitigating impacts to them should be the first consideration in evaluation of alternatives. These issues are:

- Cultural resources
- Water rights
- Endangered species.

The second level priority issues, while important, are less critical to the tribe. These issues are:

- Riparian and marsh habitat
- Trout fishery
- Recreation
- Energy.

V. RECOMMENDED NAVAJO NATION PREFERRED ALTERNATIVE - MODIFIED LOW FLUCTUATING FLOW

The proposed EIS alternatives were evaluated on the basis of the issues prioritized in Section III of this document. Alternatives were first ranked per their predicted impact to the first priority issues of cultural resources, water rights, and endangered species. Alternatives were evaluated with regard to their potential impact to sediment deposits which protect cultural resources, potential threats to water rights, and any beneficial or adverse impact to humpback chub. With regard to the second priority issues of riparian habitat, trout fishery, recreation, and energy; alternatives were ranked per their predicted impact to riparian substrate, riparian community diversity, aquatic productivity, recreation benefits, maintenance of camping beaches, and energy rates. This process concluded in the recommendation that the Navajo Nation adopt Modified Low Fluctuating Flow as its preferred alternative and that the Interim Operations financial exception criteria be extended and flood protection measures be limited to raising spillway gate height. The rationale for the overall recommendation based on evaluation of the prioritized issues is presented below.

1. Cultural Resources

Flows prescribed in the Modified Low Fluctuating Flow Alternative have a high probability of net sediment increase. The annual habitat maintenance flows included in this alternative provide the ability to move sand to higher elevations. The combination of these factors provides greatest protection for shoreline sediment deposits; therefore, cultural resources.

A blessing to provide protection for the cultural resources in Grand Canyon and the Colorado River as a whole was given by Mr. Sam Spencer of Cameron, Arizona. He was assisted by Mr. Hotachellie Arizona. The blessing was given at Mr. Arizona's residence at Cedar Ridge and at Lees Ferry, Arizona.

2. Water Rights

The alternatives are considered to be equal in preference with respect to water rights of the Navajo Nation. The ability to achieve water transfers is also equivalent between alternatives.

Dedicating Lake Powell storage for flood control may impact Navajo water allocations. Raising spillway gate height to increase flood protection does not present this risk.

3. Endangered Species

The affect of dam operation alternatives on humpback chub and other native fish has not been established by current research. The ongoing research under the conservation measures may provide additional insight to these issues. Pertinent findings can be incorporated into operating criteria through the adaptive management process.

While the steady flow alternatives provide more stable backwaters than Modified Low Fluctuating Flow, it has not been clearly demonstrated that providing backwater stability will be a benefit to humpback chub. However, if ongoing research demonstrates backwaters to be valuable to chub, their continued existence would be enhanced by the habitat maintenance flows included in the Low Fluctuating Flow alternative. Habitat maintenance flows are not included in the steady flow alternatives.

Research scientists and resource managers generally agree that spawning by humpback chub in the mainstem Colorado River will not occur under current temperature conditions. The Modified Low Fluctuating Flow alternative includes provision for further evaluations of selective withdrawal structures to raise mainstem water temperatures.

4. Riparian and Marsh Habitat

As noted above, the Low Fluctuating Flow alternative will the provide greatest protection for shoreline alluvial deposits which form riparian substrate. The extended, high and steady discharges provided under the habitat maintenance flows will disrupt climax vegetation and maintain variability in serial stages of riparian vegetation in the river corridor. This serves to maintain diversity in riparian communities and habitats.

5. Trout Fishery

Aquatic productivity is the parameter selected as the measure of an alternative's benefit to trout production. Low Fluctuating Flow has higher aquatic productivity due to higher minimum discharges than other fluctuating or steady flow alternatives.

6. Recreation

As noted above, the Low Fluctuating Flow alternative serves to maintain shoreline deposits which are the beaches used by river runners for camping and to control the colonization of those beaches by riparian vegetation thereby maintaining a greater availability of open camping beaches. The Low Fluctuating Flow alternative has the highest recreation benefits of any alternative with the exception of Seasonally Adjusted Steady Flow, to which it is equal.

7. Energy

Western Area Power Administration projects Low Fluctuating Flow to have an increase in energy rates of 24 percent over No Action. In comparison, Moderate and High Fluctuating Flows incur 21 and 3 percent increases, respectively. The steady flow alternatives all incur substantially greater energy rate increases than Low Fluctuating Flow. NTUA projects that Low Fluctuating Flow will result in an increase of $1.15 million annual power costs. NTUA projects an increase in the bill for a 500 kilowatt hour per month customer of $1.11 per month or six percent. NTUA projects that Modified Low Fluctuating Flow which includes beach maintenance flows will result in an increase of $1.28 million annual power costs. NTUA projects an increase in the bill for a 500 kilowatt hour per month customer of $1.24 per month or seven percent.

The capacity reduction associated with the Low Fluctuating Flow Alternatives is approximately 30 percent. Without action by Western to replace capacity at Glen Canyon Dam, reductions of like portion in the allocation of CRSP power capacity to NTUA would occur. Allocations to NIIP are not at risk in this scenario.

Western is pursuing short- and long-term avenues to replace lost capacity at Glen Canyon Dam. Various sources of replacement capacity are available, particularly in the short-term due to the current excess generating capacity. Additionally, the Secretary of Energy is directed in the Grand Canyon Protection Act to identify economically and technically feasible methods for replacing capacity which is lost through adoption of restricted operating criteria for Glen Canyon Dam and to report to Congress within two years after adoption of long-term operating criteria in the Record of Decision. These studies will identify additional long-term sources of replacement capacity. These studies, however, do not guarantee that Western will be allowed to replace lost capacity. Congress must pass legislation to permit capacity replacement.

Western has concerns that the Record of Decision for the EIS will rescind the financial exception criteria of the Interim Operating Criteria. The financial exception criteria allow deviation from flow restrictions for financial considerations in addition to exceptions allowed for power system disturbances and emergencies. Use of the exception criteria has not resulted in discernable impacts to downstream resources. Rescinding the financial exception criteria would effectively reduce capacity of Glen Canyon Dam powerplant to the maximum normal discharge allowed under the adopted alternative. Extending financial exception criteria through the period of time required to complete the capacity replacement study and pass legislation giving authority to develop replacement capacity will allow Western to maintain existing capacity and avoid adjustments in capacity allocations.

With regard to expenditures for research and management, the adaptive management process will have a significant role in determining the level of these expenditures. Active participation in adaptive management to control unnecessary expenditures for research and management is in the interests of the Navajo Nation.

VI. SUMMARY

To address the issues of concern to Navajo Nation the EIS must include appropriate references to Navajo Nation land ownership and sovereignty, confirm and clarify Navajo Nation participation in adaptive management, and provide adequate NEPA compliance. The Navajo Nation, through its comments on the draft and final EIS documents, should strive to ensure that these issues are adequately addressed.

It is the conclusion of the analysis presented in this paper that the Modified Low Fluctuating Flow Alternative provides the best opportunity to maintain and preserve the Navajo Nation's high priority resources and is recommended as the preferred alternative. Modified Low Fluctuating Flow is projected to result in a seven percent increase in energy costs to power consumers served by NTUA. A seven percent increase is not inconsequential. However, in evaluating this increase the history of the Glen Canyon Dam EIS and the current political environment must be considered.

The process which has lead to the EIS has been driven by the perception on the part of the National Park Service, scientists, the environmental community, and to some extent, the public

at large, that the historical operation of Glen Canyon Dam has resulted in downstream impacts which are unacceptable. The No Action, Maximum Powerplant Capacity and High Fluctuating Flow Alternatives do not provide any meaningful mitigation for downstream impacts and these alternatives are unacceptable to the groups noted above, and are not achievable in the current political climate. In other words, the range of energy cost increase associated with Low Fluctuating Flow is probably inevitable. However, mitigation of cost increases can be achieved by extending the financial exception criteria and it is recommended that this element be incorporated into the preferred alternative.

Appendix C

PROGRAMMATIC AGREEMENT AMONG THE
BUREAU OF RECLAMATION, ADVISORY COUNCIL ON HISTORIC PRESERVATION,
NATIONAL PARK SERVICE, ARIZONA STATE HISTORIC PRESERVATION OFFICER,
HAVASUPAI TRIBE, HOPI TRIBE, HUALAPAI TRIBE, KAIBAB PAIUTE TRIBE,
NAVAJO NATION, SAN JUAN SOUTHERN PAIUTE TRIBE, SHIVWITS PAIUTE TRIBE, AND ZUNI PUEBLO
REGARDING OPERATIONS OF THE GLEN CANYON DAM

WHEREAS, the Secretary of Interior has directed the preparation of an Environmental Impact Statement (EIS) on the effects of the operation of the Glen Canyon Dam on the downstream environmental and ecological resources, and historic properties of Glen Canyon and Grand Canyon; and

WHEREAS, the Grand Canyon Protection Act of 1992(PL 102-575 Title XVIII) mandates the continued monitoring and management of resources located within the ares of impact covered by this agreement and requires completion of the EIS by October 1994; and

WHEREAS, the purpose of the EIS is to ". . . reevaluate the operation of the Glen Canyon dam to determine specific options that could be implemented to minimize - consistent with law - adverse impacts on the downstream environmental and cultural resources and Native American interests in Glen and Grand Canyons." (Interim Preliminary Draft EIS 7/92); and

WHEREAS, the Bureau of Reclamation (Reclamation), Upper Colorado Regional Office, administers the releases of water from the Glen Canyon Dam and has determined that the operation of the Dam (the Program) may have effects upon properties included in or eligible for inclusion in the National Register of Historic Places and has consulted with the Advisory Council on Historic Preservation (Council), the National Park Service (NPS), and the Arizona State Historic Preservation Officer (SHPO) pursuant to 36 CFR § 800.13 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (ACT) (16 U.S.C. 470f); and

WHEREAS, Reclamation is the lead Federal agency for the Program for purposes of Section 106: and

WHEREAS, the NPS is responsible for the administration and management of historic properties within the boundaries of the Glen Canyon National Recreation Area and the Grand Canyon National Park pursuant to Section 110 of the Act; and

WHEREAS, given their mutual responsibilities, Reclamation and the NPS have determined to coordinate their respective roles in the management and consideration of historic properties which may be affected by the Program; and

WHEREAS, the Hualapai Tribe is responsible for the administration and management of historic properties within the boundaries of its reservation lands affected by the Program; and WHEREAS, prior to performing any work required under the terms of this Agreement within the boundaries of the Hualapai Indian Reservation. Reclamation or the NPS shall notify the Hualapai Tribe of such work and obtain appropriate Tribal permits before entering the boundaries of the Hualapai Indian Reservation. The Tribe will require that a Hualapai Tribe member monitor be present when necessary for any culturally sensitive work, as determined by the Tribe.

WHEREAS, the Navajo Nation is responsible for the administration and management of historic properties within the boundaries of the Navajo Nation pursuant to the Cultural Resources Protection Act (CMY-19-88); and

WHEREAS, the Navajo Nation agrees to NPS administration and management of any Navajo Nation historic properties which may be included under the terms of this agreement until such time as the Navajo Nation assumes such responsibility; and

WHEREAS, the Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Paiute Tribe, Navajo Nation, San Juan Southern Paiute Tribe, Shiviwits Paiute Tribe and the Zuni Pueblo (the Tribes) participated in consultation and are signatories to this Programmatic Agreement;

NOW, THEREFORE, Reclamation, the Council, NPS, SHPO, and the Tribes agree that the Program shall be administered in accordance with the following stipulations to satisfy Reclamation's Section 106 responsibilities for all individual aspects of the Program.

STIPULATIONS

Reclamation, as lead Federal agency for purposes of the Program, shall ensure that the following stipulations are carried out.

1. IDENTIFICATION AND EVALUATION
   a. The NPS has identified a total of 313 contributing properties, referred to as the Grand Canyon River Corridor District (District), within the Area of Potential Effects (APE). Nine additional properties within the boundaries of the district remain unevaluated. The NPS shall assist Reclamation in obtaining the necessary information to complete the evaluation of these nine sites for determining their eligibility for listing on the National Register as contributing properties to the District or as eligible on their own merits. Reclamation shall submit such evaluations to the SHPO for determinations of eligibility. In the event that Reclamation and SHPO do not agree on the eligibility of any property, or if the Council or Keeper so request, Reclamation shall obtain a formal determination of eligibility from the Keeper of the National Register in accordance with 36 CFR § 800.4(c). Determinations of eligibility for the remaining nine properties shall be completed by August 1993.
   b. Reclamation and the NPS, in consultation with SHPO, shall identify and evaluate historic properties in the remaining 37 miles of the APE not previously intensively inventoried (Attachment A). Properties identified within the 37 mile corridor shall be evaluated on their own merits and as contributing elements to the district pursuant to 36 CFR § 800.4(c). An intensive inventory of the entire APE shall be completed by August 1993. Ongoing identification and evaluation efforts shall be a part of the management program identified at Stipulations 2 and 3.
   c. In consultation with the Tribes and SHPO, Reclamation and the NPS shall identify and evaluate properties within the APE which retain traditional cultural values. Such properties shall be evaluated under criteria A, B, C, and D of the National Register Criteria pursuant to 36 CFR Part 60, and taking into consideration "National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties".
      (1) Traditional Cultural Properties shall be identified by Reclamation and the NPS through the conduct of ethnographic studies. Ethnographic studies shall solicit and include the participation of and consultation with the Tribes to collaborate in the identification and evaluation of traditional cultural properties.
      (2) Reclamation shall submit such evaluations to the SHPO for determinations of eligibility. In the event that Reclamation and SHPO do not agree on the eligibility of any property, or if

the Council or Keeper so request, Reclamation shall obtain a formal determination of eligibility from the Keeper of the National Register in accordance with 36 CFR § 800.4(c). Such study and evaluations shall be completed by October 1994.

2. MONITORING AND REMEDIAL ACTION
   a. Within three months of the execution of this Programmatic Agreement, Reclamation and the NPS, in consultation with the SHPO and Tribes, shall develop a Plan for monitoring the effects of the Glen Canyon Dam operations on historic properties within the APE and for carrying out remedial actions to address the effects of ongoing damage to historic properties. The purpose of the Monitoring and Remedial Action Plan shall be to generate data regarding the effects of Dam operations on historic properties, identify ongoing impacts to historic properties within the APE, and develop and implement remedial measures for the treating historic properties subject to damage. Such data shall be incorporated into Reclamation's Long-term Operating and Monitoring Plans governing dam releases identified in the EIS, The EIS is schedule for completion in October 1994.
   b. The Monitoring and Remedial Action plan (Plan) shall provide for the identification and evaluation of previously unrecorded properties overlooked by previous surveys or exposed subsequent to the surveys, and include measures by which any adverse effects identified during the monitoring effect shall be avoided or minimized. Remedial measures shall be implemented to mitigate ongoing adverse effects and may include, but not be limited necessarily to, bank stabilization, check dam construction and data recovery, as appropriate. The Plan shall specify an expedited consultation process among the parties to this agreement to accommodate situations requiring remedial actions.
   c. Reclamation shall submit a draft of the Plan to the parties in this agreement for review and comment. Each party shall have 60 days from receipt of the Plan to comment. Reclamation may assume the concurrence of any party which does not issue comments within 60 days of their receipt of the Plan.
      (1) Reclamation shall take into consideration all comments received in their development of a final draft Plan, and submit the final draft Plan to the reviewing parties for a second review opportunity. Each reviewing party shall have 20 days from receipt to review the final draft Plan and issue comments to Reclamation.
      (2) If any reviewing party objects to the adequacy of the final draft Plan, Reclamation shall consult with the objecting party, and the other parties to this Programmatic Agreement as necessary to resolve the objection pursuant to Stipulation.
      (3) When all objections are resolved, Reclamation shall implement the Monitoring and Remedial Action Plan.

3. MANAGEMENT
   a. Reclamation and the NPS shall incorporate the results of the identification, evaluation, and monitoring and remedial action efforts into a Historic Preservation Plan (HPP) for the long-term management of the Grand Canyon River Corridor District and any other historic properties within the APE. The HPP shall be developed in consultation with the parties to this Programmatic Agreement. The HPP shall integrate Reclamation's lead agency role pursuant to Section 106 of the Act and the NPS's stewardship role pursuant to Section 110 of the Act. Specifically, the HPP shall provide management direction responsive to the NPS's responsibilities under Sections 110(a)(1) and 110(a)(2); and NPS's and Reclamation's responsibilities under Sections 110(b) and 110(d).
   b. The HPP shall establish consultation and coordination procedures, long term monitoring and mitigation strategies, management mechanisms and goals for long term management of historic properties within the APE.
   c. Reclamation and the NPS shall submit a draft of the HPP to the parties to this agreement for 60 days review. The parties to this agreement shall have 60 days from receipt to issue comments to

Reclamation and the NPS regarding the adequacy of the HPP. Reclamation and the NPS may assume the concurrence of any party which does not issue comments within 60 days of the receipt of the HPP.

(1) Reclamation and the NPS shall take into consideration all comments received in their development of a final draft HPP, and submit the final draft HPP to the reviewing parties for a second review opportunity. Each reviewing party shall have 30 days from receipt to review the final draft HPP and issue comments to Reclamation and the NPS.

(2) If any reviewing party objects to the adequacy of the final draft HPP, Reclamation and the NPS shall consult with the objecting party, and the other parties to this agreement as necessary to resolve the objection pursuant to Stipulation 4. When all objections have been resolved, Reclamation and the NPS shall implement the HPP.

d. The development, and review of the HPP shall be completed prior to the issuance of a Record of Decision for the GCD-EIS, or December 1994, whichever comes first. Upon issuance of a Record of Decision, the HPP shall be reviewed by the parties to this agreement and revised, if necessary, based on the decision. The review of a revised HPP shall conducted in accordance with the procedures of stipulation 3.C.1. and 2.

4. DISPUTE RESOLUTION

a. Should any party to this agreement object within 30 days to any plans, specifications, or actions proposed pursuant to this agreement, Reclamation and the NPS shall consult with the objecting party to resolve the objection. If any party involved in the dispute determines that the dispute cannot be resolved, Reclamation shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will either:

(1) Provide Reclamation and the NPS with recommendations, which Reclamation will take into account in reaching a final decision regarding the dispute; or

(2) Notify Reclamation and the NPS that it will comment pursuant to 36 CFR § 800.6(c)(2) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; Reclamation's responsibility to carry out all actions under this agreement that are not the subjects of the dispute shall remain unchanged.

b. At any time during implementation of the measures stipulated in this agreement should an objection to any such measure of its manner of implementation be raised by a member of the public, Reclamation and the NPS shall take the objection into account and consult as needed with the objecting party, SHPO, the Tribes, or the Council to resolve the objection.

5. REVIEW OF THE AGREEMENT

a. The Council, SHPO, NPS and Tribes may review activities carried out pursuant to this Programmatic Agreement, and the Council will review such activities if so requested. Reclamation will cooperate with the Council, SHPO, NPS and Tribes in carrying out their reviewing activities.

b. Reclamation and the NPS shall cooperatively provide bi-annual summary reports of their progress toward completing the terms of this agreement to each of the parties to this agreement. The biannual reports shall identify accomplishments and actions completed and provide schedules for completion of all remaining tasks. The first biannual report shall be submitted to the parties of this agreement six (6) months after the date of the Council's signature on this agreement and every six months thereafter until the HPP has been implemented.

c. A yearly meeting will be held among the signatories to review the agreement and the results of the monitoring and remedial actions.

6. AMENDMENT

Any party of this Programmatic Agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR § 800.13 to consider such amendment.

7. TERMINATION
   Any party to this Programmatic Agreement may terminate this agreement by providing 30 days written notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, Reclamation will comply with the 36 CFR § 800.4 through 800.6 with regard to individual undertakings covered by this Programmatic Agreement.
8. FAILURE TO CARRY OUT TERMS
   In the event Reclamation and the NPS do not carry out the terms of this Programmatic Agreement, Reclamation will comply with 35 CFR § 800.4 through 800.6 with regard to individual undertakings covered by this Programmatic Agreement.

Execution and implementation of this Programmatic Agreement evidences that Reclamation has afforded the Council a reasonable opportunity to comment on the Program and that reclamation has taken into account the effects of the Program on historic properties.

Signators:

Advisory Council on Historic Preservation
Bureau of Reclamation
Arizona State Historic Preservation Officer
National Park Service, Western Region
Havasupai Tribe
Hopi Tribe
Hualapai Tribe
Kaibab Paiute Tribe
Navajo Nation
San Juan Southern Paiute Tribe
Shivwits Paiute Tribe
Zuni Pueblo

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