

**PROGRESS REPORT NUMBER 14 ON THE HOPI TRIBE'S INVOLVEMENT AS A  
COOPERATING AGENCY IN THE GLEN CANYON DAM ENVIRONMENTAL  
IMPACT STATEMENT**

Prepared and Submitted by

Kurt E. Dongoske  
Tribal Archaeologist  
Cultural Preservation Office

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Reviewed and Approved by

Leigh Jenkins, Director  
Cultural Preservation Office  
The Hopi Tribe

Submitted to

Mr. Dave Wegner, Program Manager  
Glen Canyon Environmental Studies  
Bureau of Reclamation  
P.O. Box 22459  
Flagstaff, Arizona 86002-2459

January 31, 1994 - 1995

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## **Introduction**

According to the objectives outlined in the cooperative agreement, this report will address the progress and action that has been accomplished by the Cultural Preservation Office for the period beginning October 1, 1994 until December 31, 1994, the first quarter of the 1995 fiscal year, towards fulfillment of those objectives. This report fulfills the December 31, 1994 deliverable requirement of the cooperative agreement between the Bureau of Reclamation and the Hopi Tribe.

### **Progress Completed Towards Fulfillment of Objectives**

The first objective is to identify sensitive cultural resource concerns to ensure that they are included in the planning phase of the Glen Canyon Dam Environmental Impact Statement.

During this reporting period, Dr. Ferguson, Ethnohistorian under contract to the Cultural Preservation Office, as part of the ongoing Hopi ethnographic and ethnohistoric Grand Canyon research, participated in the fall 1994 Hopi GCES research trip in the Grand Canyon. This trip launched on 5 October 1994 and continued through October 11, a total of seven days. This particular river trip was limited only to the upper portion of the Colorado River from Lees Ferry to Phantom Ranch.

Represented on this river trip were Mr. Leigh Jenkins, Mr. Patrick Joshevama, Mr. Wilton Kooyahoema, Mr. Victor Masayesva, and Mr. Robert Sakiestewa. Mr. Yeatts, Hopi-GCES Archaeologist was also present. These individuals represent the villages of Walpi/Polacca of First Mesa; Mishongnovi, Shipalovi, and Shungopavi of Second Mesa; and Bacavi, Hotevilla, Oraibi, and Moenkopi of Third Mesa. The clans represented on this trip were the Bear, Bearstrap, Bluebird, Coyote, Eagle, Fire, Greasewood, Rattlesnake, Sun, Sun-forehead, Water, and Young Corn; Religious societies represented were the Katsina, One-horn, Two-horn, Singer, and Powamuy.

Dr. Ferguson took copious notes and photographs during this river trip documenting Hopi ethnography related to the Grand Canyon.

On 22 November 1994, Dr. Ferguson attended a meeting of the Cultural Resources Advisory Task Team. During this meeting Dr. Ferguson gave an oral report on the October River Trip in the Grand Canyon. On November 28-30, 1994, Dr. Ferguson and Mr. Leigh Jenkins traveled to Newton, Kansas to research the H.R. Voth collection at the Mennonite Library Archives. Voth was a Mennonite missionary and anthropologist, who later under contract to the Smithsonian Institution collected (i.e., stole) Hopi religious and cultural objects, who lived and worked at Hopi around the turn of the century. Dr. Ferguson and Mr. Jenkins collected accounts of "Skeleton House" written in Hopi and other materials that are

pertinent to the GCES research.

On December 13, 14, and 15, 1994, Dr. Ferguson attended a productive 3 day meeting with the Cultural Resources Advisory Task Team. On December 13, 1994, Mr. Jenkins and Dr. Ferguson presented a detailed slide show and oral report describing the October, 1994 River Trip. Also at this meeting, Dr. Ferguson reviewed the organization and structure of the draft GCES Ethnohistory Report. On December 14, the Cultural Resources Advisory Task Team reviewed other GCES issues, including a discussion of a proposed joint Hopi-Zuni spring river trip. Zuni representative, Roger Anyon, and representatives, Jan Balsom, Chris Coder, and Lisa Leap, from the National Park Service, Grand Canyon National Park, were present at this meeting. On December 15, the Cultural Resources Advisory Task Team discussed the Hopi concept of *Tutsqwa*, the Hopi lands, and its relationship to the GCES and the GCD EIS.

Dr. Ferguson also spent considerable time this fiscal quarter in research and preparation of the final ethnographic project report. Information from all the interviews currently made available to Dr. Ferguson by the Cultural Preservation Office were collated in to this report, as were the data from Dr. Ferguson's field notes taken during the field research in the Grand Canyon and Little Colorado River in 1991, 1993, and 1994.

The second objective concerns assisting the GCD-EIS writing team in assessing the relative sensitivity of various cultural resource types. The ongoing process of fulfilling this objective has been and continues to be primarily facilitated by Dr. Steven W. Carothers, of SWCA, Inc., who is under contract to the Cultural Preservation Office of the Hopi Tribe to represent the Hopi Tribe on the EIS Writing Team.

### **EIS Writing Team Meeting**

On October 7, 1994, Dr. Carothers and Mr. Kurt Dongoske attended a meeting of the Glen Canyon Dam EIS Writing Team in Flagstaff, Arizona. The focus of the meeting was the response to public comments on the draft EIS to be presented in the final EIS. Also discussed were the slight revisions to the predam flows contained in chapters 1 and 2.

### **Cooperating Agencies Meeting**

On November 3, 1994, Mr. Kurt Dongoske represented the Hopi Tribe at a meeting of the Cooperating Agencies in Phoenix, Arizona. During this meeting the Bureau of Reclamation stated that they expected the final EIS to be out by March 17, 1995. Also, presented were the discussions between the Bureau and the Fish and Wildlife Service concerning the final Biological Opinion and that they were close to reaching a middle ground. The Bureau of Reclamation announced at this meeting that they were canceling the idea of a experimental test flow until the legal issues surrounding the flows were resolved.

## **GCES Tribal Advisory Team Meeting Regarding the GCES Archival Program**

On November 30, 1994, Mr. Dongoske and Mr. Yeatts represented the Hopi Tribe in a meeting of the GCES Tribal Advisory Team regarding the GCES non-computerized data archival program held at the GCES offices in Flagstaff. The meeting was chaired by Dr. Warren and the Museum of Northern Arizona. The purpose of this meeting was to provide the Tribes with a general background and overview regarding the GCES program in terms of its proposed national and international involvement of indigenous peoples. The concern for this meeting was to begin a dialogue regarding the GCES archival program and the proper management and organization of data and the concerns of the participating tribes.

During this meeting the issue of confidentiality and proprietorship of ethnographic data was raised by the Hopi Tribe. Given that much of the ethnographic data collected by the participating tribes was done under contract with the Bureau of Reclamation, does this mean that all ethnographic data becomes the legal property of the federal government and thereby subject to the Freedom of Information Act. Currently, there is no clear legal opinion on this issue and the Hopi Tribe requested that a legal opinion be presented at the next archival program meeting to be held in February.

The third objective concerns assisting the Glen Canyon Environmental Studies in the identification and interpretation of sacred Hopi sites and other sensitive aspects that are related to the archaeological sites.

### **Archaeological Survey of the LCR**

Towards the completion of this objective, Mr. Michael Yeatts, Hopi/GCES Archaeologist, organized and conducted a cultural resources inventory of the lower Little Colorado River Gorge, from Blue Springs to the confluence with the Colorado River. Mr. Yeatts submitted to the Cultural Preservation Office a preliminary draft report of this survey entitled *A Cultural Resource Inventory of the Lower Little Colorado River, Coconino county, Arizona*. The preliminary draft report was reviewed and suggested revisions presented by the Hopi Tribal Archaeologist. Currently, Mr. Yeatts is making the suggested revisions and elaborating on portions of the survey report. Subsequent to the completion of these revisions, another draft of this report will be submitted to the Cultural Preservation Office for review and editing by the Tribal Archaeologist and overall review and approval by the Cultural Resources Advisory Task Team.

### **Summary of Hopi River Trips**

In November, the Hopi Tribe distributed to the Grand Canyon National Park, the Glen Canyon National Recreation Area, and the Bureau of Reclamation a document entitled *Summary of Hopi Participation in the Glen Canyon Environmental Studies: River Trips* by Michael Yeatts (Submitted as Appendix A to this report). The purpose of this document is

to provide federal agencies (NPS & BOR) with management information of the river trips that the Hopi Tribe has participated in as a portion of the Glen Canyon Environmental Studies. This summary was compiled from over 170 pages of field notes of Dr. Ferguson and Mr. Yeatts taken during river trips and is limited solely to management issues regarding cultural resources in the Grand Canyon and participation in the Glen Canyon Environmental Studies by the Hopi Tribe.

To date, the Hopi Tribe has participated in four river trips in conjunction with the Glen Canyon Environmental Studies; all river trips have been facilitated by the National Park Service. The first trip was from September 11-17, 1991. Hopi tribal members accompanied the trip from Lees Ferry to the Little Colorado River. The second trip was from September 30 to October 8, 1993 with Hopi personnel traveling from Lees Ferry to Phantom Ranch. On the third trip, April 25 to May 9, 1994, two groups of Hopis participated, one from Lees Ferry to Phantom Ranch, and the second group from Phantom Ranch to Diamond Creek. The fourth trip running October 5 to the 9, 1994, was limited only to the upper portion of the river, Lees Ferry to Phantom Ranch. Nineteen Hopi individuals have participated in river trips in conjunction with Hopi research efforts. Six of these individuals have traversed the entire river corridor over the course of two trips.

Based primarily on petroglyphs observed in the Canyon, and to some extent discussions held during the trips, at a minimum 13 Hopi clans were present in the Grand Canyon at some point in their migrations. Indications suggest that further research would likely reveal additional clans. The thirteen Hopi clans are: Badger, Bear, Bearstrap, Bow, Deer, Eagle, Fire, Greasewood, Katsina, Lizard, Rabbit, Snake, and Spider.

A total of 113 named resources of cultural importance to the Hopi people have been identified during the research trips including plants, animals, and minerals (see attached summary for the detailed listing). Most of these resources have specific uses associated with them, both ritual and utilitarian.

Also presented in this summary are both general and archaeological site specific management recommendations. Overall, the most adamant request was that the burial and associated funerary objects at site AZ:C:5:1 remain in the Canyon.

### **Testing of Two Archaeological Sites at Tanner Wash**

Between November 7 - 10, 1994, Mike Yeatts hiked into the Canyon and assisted the Grand Canyon National Park archaeologists in subsurface testing of two archaeological sites (AZ. C:13:273 and AZ. C:13:339). These sites were tested as a result of planned trail improvements which could potentially impact these sites.

### **Meetings of the Signatories to the Programmatic Agreement**

On November 4, 1994, Mr. Yeatts and Mr. Dongoske attended a meeting of the

signatories to the Glen Canyon Dam Programmatic Agreement held in Phoenix, Arizona. Attending this meeting was the National Park Service, the Bureau of Reclamation, the Arizona State Historic Preservation Office, the Navajo Nation, Hualapai Tribe, and the Southern Paiute Consortium. The purpose of this meeting was to discuss the status of the Programmatic Agreement and to determine what tasks need to be completed for fiscal year 1995. Additionally, December 1 was identified as a deadline for the development of the Historic Preservation Plan outline.

Also discussed was a potential meeting between the cooperating Tribal groups and the National Academy of Sciences Review Committee. The Hopi Tribe was willing to meet again with the review committee. What was agreed upon by the Tribes, was that the agenda for the meeting must be established by the Tribes and that the Tribes control the direction of the meeting. Mr. Dongoske agreed to develop a draft agenda for the meeting between the Tribes and the Review Committee for review and discussion at the next Programmatic meeting to be held in December.

On December 15, 1994, Mr. Yeatts and Mr. Dongoske representing the Hopi Tribe attended a meeting of the signatories to the Glen Canyon Dam Programmatic Agreement held at the GCES offices in Flagstaff, Arizona. Present at this meeting was the National Park Service, the Bureau of Reclamation, the Arizona State Historic Preservation Office, the Navajo Nation, the Hualapai Tribe, and the Southern Paiute Consortium. The purpose of this meeting was to discuss the Historic Preservation Plan.

Dr. Larralde, Regional Archaeologist, Bureau of Reclamation, stated that the Historic Preservation Plan would not be completed by the end of December, 1994 as stated in the Programmatic Agreement. Dr. Larralde identified March 16, 1995 as the target date for the completion of the Historic Preservation Plan. She further requested comments on the Historic Preservation Plan draft outline by 3 January 1995.

Mr. Anyon, Zuni Pueblo, stated that the Historic Preservation Plan needed to integrate traditional cultural property concerns and issues more effectively. How the signatories approach or do not approach traditional cultural properties will be a critical factor in the development of a sound and effective management plan. He suggested that the participating Tribes be given the task of drafting the traditional cultural property section for the Historic Preservation Plan.

Mr. Dongoske accepted the responsibility for organizing and scheduling a meeting of the participating Tribes to draft an outline for the traditional cultural property section. This meeting will be held on January 20, 1995 at the GCES offices in Flagstaff.

Also at this meeting, the draft agenda, submitted by Mr. Dongoske, for the meeting between the participating Tribes and the National Academy of Sciences Review Committee was discussed, revisions made, and a new agenda developed and finalized.

Additionally, the Site Stabilization Workshop was discussed and was proposed for early spring 1995.

### **Cultural Resources Advisory Task Team Meeting**

On December 14, 1994, Mr. Yeatts met with the Hopi Cultural Resources Advisory Task Team to present the current status of the Environmental Impact Statement.

### **Other Efforts Towards the Completion of this Objective**

Mr. Yeatts, who is stationed at the GCES offices in Flagstaff, is the Hopi Cultural Preservation Office's representative at numerous meetings regarding all aspects of the Glen Canyon Environmental Studies. These include meetings on economics, fish studies, EIS writing team meetings, non-use value economics, and GCES staff meetings.

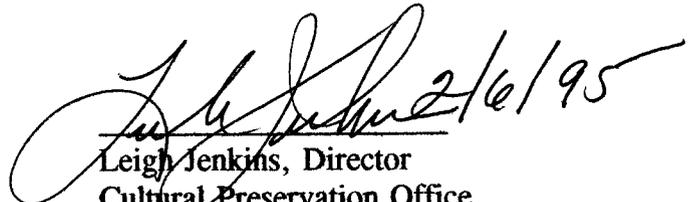
During this time Mr. Yeatts was instrumental in coordinating and organizing the Hopi Tribe's participation in the October NPS monitoring river trip.

Mr. Yeatts will continue to monitor the Section 106 consultation process, between the Bureau of Reclamation, the National Park Service, the Arizona State Historic Preservation Office, the Advisory Council on Historic Preservation, and the concerned Native American Tribes. Throughout this process, Mr. Yeatts and Mr. Dongoske have been instrumental in commenting on and directing the development of the Programmatic Agreement and the associated Monitoring Plan for the treatment and consideration of Hopi concerns and cultural and historic properties within the Glen and Grand Canyons.

The fourth objective of the Hopi Tribe's involvement in the Glen Canyon Dam Environmental Impact Statement addresses Hopi assistance to the GCD-EIS writing team in the development, writing, and review of the environmental documents. This objective has been previously addressed by outlining the Cultural Preservation Office's actions and continuing involvement with the GCD-EIS and the GCES process under objective #2 and the involvement of Mr. Yeatts and Mr. Ferguson in the compilation and preparation of various documents that are submitted to the GCD-EIS writing team.

The above summarizes the Hopi Tribe's involvement as a Cooperating Agency in the development of the Glen Canyon Dam Environmental Impact Statement as of December 31, 1994. If you should have any questions concerning this progress report or if you need additional information please contact Mr. Leigh Jenkins, Director, or Mr. Kurt Dongoske, Tribal Archaeologist, at 602/734-2441, extension 202, or 602/734-6636.

REVIEW AND CONCURRENCE

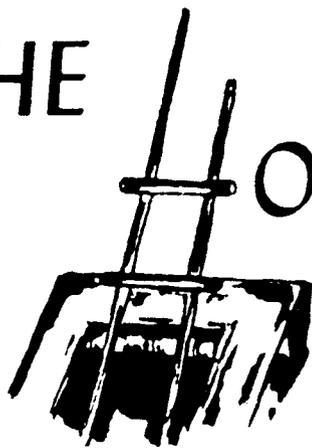
  
Leigh Jenkins, Director  
Cultural Preservation Office  
The Hopi Tribe

**APPENDIX A**

**SUMMARY OF HOPI PARTICIPATION IN THE GLEN CANYON  
ENVIRONMENTAL STUDIES: RIVER TRIPS**

by  
**Michael Yeatts**  
**Cultural Preservation Office**  
**The Hopi Tribe**

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# HOPI TRIBE

Ferrell Secakuku

CHAIRMAN

Wayne Taylor, Jr.

VICE-CHAIRMAN

## SUMMARY OF HOPI PARTICIPATION IN THE GLEN CANYON ENVIRONMENTAL STUDIES: RIVER TRIPS

prepared by:  
Michael Yeatts  
GCES Project Director  
Hopi Cultural Preservation Office

November, 1994

This document summarizes management information of the river trips that the Hopi Tribe has participated in as a portion of the Glen Canyon Environmental Studies (GCES). It was compiled from the over 170 pages of field notes of Dr. T.J. Ferguson, Institute of the North American West ethnohistorian on contract to the Hopi Tribe and Michael Yeatts taken during the river trips. The field notes are the confidential property of the Hopi Tribe and are on file at the Hopi Cultural Preservation Office.

This summary is limited solely to management issues regarding cultural resources in the Grand Canyon and participation in the GCES by the Hopi Tribe. Specific information and interpretation obtained from the Hopi consultants during the river trips is not included in this summary as it will be incorporated into the technical report by T.J. Ferguson entitled *Öngtupka: The Grand Canyon and the Hopi People*. Additionally, only the English or scientific names for resources are provided in this summary as this minimizes the ambiguity encompassed in equating multiple, culturally different classification systems. More detailed examination of resources, their Hopi nomenclature, as well as uses are explored in the technical reports being prepared under the auspices of the Hopi Tribe.

To date, the Hopi Tribe has participated in four river trips in conjunction with the Glen Canyon Environmental Studies; all have been in conjunction with the Park Service. The first trip was from September 11-17, 1991. Hopi tribal members accompanied the trip from Lees Ferry to the Little Colorado River. The second trip was from September 30 to October 8, 1993 with Hopi personnel traveling from Lees Ferry to Phantom Ranch. On the third trip, April 25 to May 9, 1994, two groups of Hopis participated, one from Lees Ferry to Phantom Ranch, and the second group from Phantom Ranch to Diamond Creek. The fourth trip running October 5-9, 1994, was limited only to the upper portion of the river, Lees Ferry to Phantom Ranch.

### Personnel

Nineteen Hopi individuals have participated in river trips in conjunction with the Hopi research effort. Six of these individuals have

traversed the entire river corridor over the course of two trips:

September 1991 Trip:

Leslie David, Walter Hamana, and Eric Polingyouma. In addition, Jean Ann Mercer and Dr. Steven Carothers (of SWCA, Inc), T.J. Ferguson, and Michael Yeatts, all representing the Hopi Cultural Preservation Office, were present.

October 1993 Trip:

Bradely Balenqua, Walter Hamana, Orville Hongeva, Leigh Jenkins, Wilmer Joshevama, Fred Koruh, and Harlan Williams. In addition, T.J. Ferguson and Michael Yeatts were present.

April 1994 Trip:

Upper Half - Ronald Humeystewa, Gilbert Naseyowma, Owen Numkena, Jr., Rex Talayumptewa, and Byron Tyma.

Lower Half - Bradely Balenqua, Walter Hamana, Orville Hongeva, Leigh Jenkins, Fred Koruh, and Harlan Williams.  
T.J. Ferguson and Michael Yeatts participated on both portions of this trip.

October 1994 Trip:

Leigh Jenkins, Patrick Joshevama, Wilton Kooyahoema, Victor Masayesva, and Robert Sakiestewa. Again, T.J. Ferguson and Michael Yeatts were present.

Villages Represented

First Mesa - Walpi/Polacca.

Second Mesa - Mishongnovi, Shipalovi, Shungopavi.

Third Mesa - Bacavi, Hotevilla, Moencopi, Oraibi.

Clans Represented

Bear, Bearstrap, Bluebird, Coyote, Eagle, Fire, Greasewood, Rattlesnake, Sun, Sun-forehead, Water, Young Corn.

Societies Represented

Kachina, One-horn, Two-horn, Singer, Powamuy.

*Sites Visited*

A total of 55 sites have been visited during the field work; the following is a cumulative listing. Sixteen of the sites have had repeat visits (2 to 4 times) in the course of the field work. For those sites that have had repeat visits, the number of visitations is listed following the site number in parentheses. All site numbers are preceded by "AZ".

A:15:5      A:15:55      A:15:44      A:16:1(2)      A:16:4      A:16:153  
A:16:160      A:15:25(2)

B:9:317      B:10:1      B:10:225      B:10:261      B:11:2      B:16:3  
"Deer Creek"(2).

C:2:101      C:5:1(4)      C:6:3(3)      C:6:5(4)      C:6:25      C:6:31  
C:9:1C      C:9:4      C:9:27(3)      C:9:32      C:9:50      C:9:88  
C:9:94(2)      C:9:151      C:13:1(3)      C:13:2      C:13:3(4)      C:13:4(2)  
C:13:10(3)      C:13:69      C:13:70      C:13:98(2)      C:13:99(2)      C:13:131  
C:13:132      C:13:271      C:13:273      C:13:322(2)      C:13:339      C:13:384  
C:13:385      C:13:386      C:13:387      C:13:468      "Nankoweap"(4).

### Clans associated with the Grand Canyon

Based primarily on petroglyphs seen in the canyon, and to some extent discussions held during the trips, at a minimum the following 13 clans were present in the Grand Canyon at some point in their migrations; further research would likely reveal additional clans.

Badger, Bear, Bearstrap, Bow, Deer, Eagle, Fire, Greasewood, Katsina, Lizard, Rabbit, Snake, and Spider.

### Resources

A total of 113 named resources have been identified during the research trips including plants, animals and minerals. Most of the resources have specific uses associated with them, both ritual and utilitarian; some of them are only named without a specifically recognized (by the Hopi consultants who viewed them) use. Additional resources are likely present, but were not identified either because of the seasons that the trips were taken, knowledge level of the trip participants, or ritual constraints. No ranking of relative importance is implied in the following listing; it is assumed that any resource that has a Hopi designation is of some value to the Hopi people.

### Plants

Agave spp.  
Aster sp.  
Artemisia filifolia  
Artemisia sp.  
Asclepias subverticillata  
Atriplex sp.  
Atriplex canescens  
Baccharis glutinosa  
Berbis fremontii  
Castilleja sp.  
Celtis reticulata  
Chrysothamnus sp.  
Cleome lutea  
Datura meteloides  
Echinocereus engelmannii  
Encelia farinosa  
Ephedra spp.  
Equisetum sp.  
Fallugia paradoxa  
Ferocactus acanthodes  
Gutierrezia spp.  
Juniperus sp.  
Mirabilis multiflora  
Muhlenbergia pungens  
Nicotiana trigonophylla  
Oenothera caespitosa  
O. pallida  
Opuntia basilaris  
O. phaeacantha

Oryzopsis hymenoides  
Parryella filifolia  
Pectis angustifolia  
Populus fremontii  
Phragmites australis  
Proboscidea parviflora  
Prosopis glandulosa  
Quercus sp.  
Rhus trilobata  
Salix spp.  
Sphaeralcea sp.  
Stanleya pinnata  
Thelesperma gracile  
Typha sp.  
Vitis arizonica  
Wyethia scabra  
Yucca angustissima  
Y. baccata

In addition:

Algae  
"Hummingbird Plant"  
"Rats-tail Grass"  
Mushroom  
Laqapa  
Masavi  
Pushö  
Paatso  
Tiqatsumnsi

### Animals

Ant (generic)	Frog
Ant (Black)	Grasshopper
Ant (Red)	Hummingbird
Ant (Small Black)	Kingfisher
Ant (Red/Black)	Kingsnake
Bat	Lizard (generic)
Beaver	Lizard ("Cameleon")
Big-horn Sheep	Lizard (small)
Black Fly	Mountain Lion
Blue Heron	Owl (two separate types)
Butterfly	Pinyon Jay
Buzzard	Peregrine falcon
Cactus Wren	Rattlesnake
Canyon Wren	Raven
Chipmunk	Red-tail Hawk
Cicada	Snakeskin
Coyote	Spider
Deer	Squirrel
Deer (female)	Swallow (Violet-green)
Duck (generic)	Termite
Duck (Mallard)	Turkey
Eagle (Bald)	Turtle
Eagle (Golden)	Yellow "finch"
Flicker	Warbler
Flycatcher (Olive-sided)	Waterskipper

### Other

Ashes	Sand
"Black sand"	Water
Hematite	Yellow Ocher
Salt	

### *Named Locations*

Grand Canyon - *Öngtupka*  
Colorado River - *Piisivayu*  
Little Colorado River - *Sakwa'vayu* (confluence area)  
Havasu Creek - *Sakwa'vayu, Sakwatupka*  
Vasey's Paradise - *Paanungkpu, Yam'taqa*  
Shinumo Alter - *Sinomua*  
Rock formation ca. 22mi - has appearance of *Hayay'i*  
Hopi Salt Mine - *Önga*

### *Recommendations*

The following recommendations were made in the course of the river trips concerning cultural resources in general and at specific sites. Most were presented as suggestions of things that could be done, not necessarily thing that had to be done. The most adamant request was that the burial and grave goods at site AZ:C:5:1 remain in the canyon. This feeling can be extended to any other burials: their correct place is where they were originally interred.

## General

There is the general feeling that cultural resources should be preserved in situ as a testament to Hopi occupancy of the region and their compliance with the covenant made with Ma'saw.

If resources are being impacted by natural causes, then they should be left alone; if they are being impacted by man-caused actions, then the impacts should be mitigated in as least intrusive method as possible; excavation should be a last course of action. Traditional methods of erosion control should be employed whenever possible, and revegetation may be appropriate at a number of the sites.

Mitigation of impacts at sites where monitoring has identified adverse impacts need to be undertaken; additional monitoring at those sites will not serve to preserve the resource. Since the Park is the land managing agency, it needs to take the lead in initiating the mitigative measures.

The term "Anasazi" is not considered appropriate by the Hopi people. The Hopi term *Hisatsinom* is used by the Hopi when referring to their prehistoric puebloan ancestors.

The dam should be operated so as to protect the Canyon rather than to maximize power production.

There should be a training course organized in order to allow Native Americans and Park personnel to share ideas and methods used in stabilization of archaeological sites and providing erosion control. This could also serve the greater purpose of helping to educate each other on issues and views of cultural resource interpretation and management.

An educational pamphlet should be developed that informs people about the value of archaeological sites in an attempt to limit vandalism.

## Site Specific

A:16:153 - Collection of samples for radiocarbon dating might be useful for obtaining a better date at the site.

B:10:1 - This site should be monitored more frequently because of its high frequency of visitation.

C:2:101 - Some form of erosion control, such as check dams or terraces, should probably be implemented.

C:5:1 - the burial should remain in the canyon. If it is necessary to move the burial, then it should be placed as close to the original location as long as it will remain secure. The pottery vessels should be reburied with the burial.

C:13:10 - the predominant, though not exclusive, Hopi view was that at parts of the site where erosion could be catastrophic, information should be recovered before it is lost. Excavation for scientific knowledge and education is appropriate for those parts of the site that can't be stabilized.

C:13:70 - the upright manos should be moved if they are going to be lost to erosion. Additionally, redirection of the drainage may be a way to preserve the site in situ.

C:13:99 - erosion control such as check dams, riprap or diversion/modification of runoff may be effective at this site.

C:13:271 - revegetation to help control erosion at this site is appropriate.

C:13:273 - the trail should be moved so that it does not impact the site.

G:3:20 - This site needs to be monitored on an annual basis.