

**Pueblo of Zuni  
2011 Cultural Resource Monitoring of  
The Colorado River Ecosystem  
Through Grand Canyon**



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## Executive Summary

Between 13 and 22 August 2011, the Zuni Heritage and Historic Preservation Office, on behalf of the Pueblo of Zuni, conducted a monitoring river trip on the Colorado River through Grand Canyon from Lees Ferry to Diamond Creek. The purpose of this river trip was to provide the Zuni religious leaders and cultural advisors an opportunity to inspect the health of the Colorado River ecosystem through Grand Canyon as part of the long-term monitoring program that is associated with the Glen Canyon Dam Adaptive Management Program (GCDAMP). Ten (10) Zuni representatives participated in the 2011 Zuni monitoring river trip representing 7 medicine societies, 4 kiva groups, and the Bow priesthood.

During the 2011 Colorado River monitoring trip, Zuni cultural advisors monitored 28 places of traditional cultural importance. Of these 28 places, 18 are considered to be Zuni ancestral archaeological sites that are labeled as traditional cultural properties for their association with the Zuni emergence and the subsequent migrations that are part of Zuni traditional history, 9 represent Zuni collection areas, 3 contain Zuni sacred springs, 8 contain Zuni shrines that require protection and spiritual attendance by Zuni religious leaders, 3 places contain resources of Zuni traditional importance, and one is considered a uniquely sacred place (Little Colorado River confluence).

As a result of the 2011 Zuni monitoring trip thirteen management recommendations are provided to the Bureau of Reclamation and Grand Canyon National Park. The first three recommendations are directed toward the Bureau of Reclamation and the broader Glen Canyon Dam Adaptive Management Program. These recommendations are then followed by ten management recommendations that are directed to the Grand Canyon National Park Service regarding the management of natural and cultural resources within the Grand Canyon.

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*Grand Canyon is Sacred and is where many spirits of Zuni ancestors reside.*

George Yawakie 2011

## INTRODUCTION

Between 13 and 22 August 2011, the Zuni Heritage and Historic Preservation Office, on behalf of the Pueblo of Zuni, conducted a monitoring river trip on the Colorado River through Grand Canyon from Lees Ferry to Diamond Creek. The purpose of this river trip was to provide the Zuni religious leaders and cultural advisors an opportunity to inspect the health of the Colorado River ecosystem through Grand Canyon as part of the long-term monitoring program that is associated with the Glen Canyon Dam Adaptive Management Program (GCDAMP). The Zuni Heritage and Historic Preservation Office, on behalf of the Pueblo of Zuni, is funded (Contract R10PC40022) by the Bureau of Reclamation, Upper Colorado Regional Office through the Zuni Cultural Resource Enterprise, to implement the Zuni monitoring program. The 2011 Zuni monitoring river trip was conducted under the authority of the Grand Canyon National Park research permit no. GRCA-2011-SCI-0036.

This report presents the findings of that river trip, the impressions of the Zuni religious leaders and cultural advisors on the health of the resources that comprise the Colorado River ecosystem, and Zuni recommendations to the Department of the Interior (Bureau of Reclamation and Grand Canyon National Park) concerning management of the cultural, physical and biological resources located within the Colorado River corridor ecosystem through Glen and Grand Canyons.

## PURPOSE AND METHODS

The purpose of the Zuni monitoring river trip is to provide the Zuni Cultural Resource Advisory Team (ZCRAT), other Zuni religious leaders, and cultural advisors an opportunity to inspect ancestral archaeological sites and Zuni traditional cultural properties that may be experiencing impacts from erosion, presence of humans, other natural forces, and/or flows released from operations of Glen Canyon Dam. The Zuni monitoring program is designed to collect data that is utilized in identifying adverse impacts resulting from these forces on Zuni traditional cultural properties situated along the Colorado River corridor through Grand Canyon. The Zuni monitoring data is employed to guide measures taken to preserve Zuni traditional cultural properties in place for their continued use by ancestral and contemporary Zunis, and future generations of Zuni. The annual Zuni monitoring river trip provides the Zuni representatives with an opportunity to identify and ascertain the overall health and abundance of certain plant and animal communities of traditional cultural importance. It also provides an opportunity for the Zuni representatives to collect certain culturally important plants, minerals and water from springs and other areas for religious and ceremonial purposes.

Additionally, and perhaps more importantly, the annual monitoring river trips also provide the Zuni religious leaders, Rain priests, Bow priests, Kiva members and members of medicine societies an opportunity to directly experience the place where the *A:shiwí* emerged (Ribbon Falls) into this the fourth world and ascended out of the Grand Canyon in search of the Middle Place. The cultural,

biological, and physical resources located within the Grand Canyon are held most sacred by the Zuni as a result of their association with the Zuni emergence, migrations, and enduring ceremonies. Zuni *weltanschauung* is a relational one that presumes a personal responsible relationship with all life forms (i.e., animal and plant) that exist within the natural world. Embedded within this perspective is a Zuni mindfulness of honoring the primacy and validity of direct personal interaction with the ecosystem. This spirit of deliberate care is one of the hallmarks of the Zuni ethic of environmental stewardship. It is through this direct personal interaction with the Colorado River ecosystem through Grand Canyon that provides the Zuni monitoring team with its foundation for understanding the health and well-being of the Colorado River ecosystem through Grand Canyon.

In addition to visiting and making observations regarding the wellbeing of natural and cultural resources of traditional Zuni importance within the Grand Canyon, the annual Zuni monitoring river trip provides the Zuni Heritage and Historic Preservation Office with vital information regarding the condition of ancestral archaeological sites and Register-eligible Zuni traditional cultural properties located along the Colorado River corridor within Glen and Grand Canyons. This information is essential to the Pueblo of Zuni's participation, as a consulting signatory, in the Programmatic Agreement on the Operations of the Glen Canyon Dam (GCDPA) pursuant to the National Historic Preservation Act of 1966, as amended and the Bureau of Reclamation's compliance responsibilities and as a stakeholder in the GCDAMP.

In the past, the Zuni monitoring program has annually identified archaeological sites to be assessed as Zuni traditional cultural properties, defined specific sampling activities within designated archaeological sites, and which Zuni traditional cultural properties were to be monitored. Listing of proposed Zuni TCPs, archaeological sites, and sampling locations proposed for visitation during a river trip were normally provided to the Grand Canyon National Park Service as part of their permitting process. Archaeological sites of cultural importance to the Zuni were visited and inspected by the 2011 Zuni monitoring river trip for the purpose of assessing their condition from a Zuni traditional cultural perspective.

Ten (10) Zuni representatives participated in the 2011 Zuni monitoring river trip representing 7 medicine societies, 4 kiva groups, and the Bow priesthood. The Zuni representatives ranged in age from 46 to 80 with a mean age of 59 and a median age of 63. Table 1 presents the names of the Zuni representatives, their religious societal affiliation and current religious position.

Table 1. Zuni Representatives Participating in the 2011 Grand Canyon Monitoring River Trip			
Name	Age	Religious Societal Affiliation	Religious Position
Wilbert Tucson, Sr.	49	Galaxy Society/Corn Kiva	Leader/Leader
Octavius Seowtewa	58	Galaxy Society (ZCRAT)/Eagle Down Society/Wide Wall Kiva	Leader/Member/Member
George Yawakie	80	Snake Society / Galaxy Society/ Manure Kiva group	Leader /Member/Member
Cornel Tsalate	46	Eagle Down/Brain Kiva/Ant society/Bow Priest	
Mark Martinez	-	Tribal Councilman	-
Ben Kallestewa	69	Brain Kiva Group / <i>Shum:ah:kwe</i> Society –	Leader / Member

		Coyote	
Titus Ukestine	-	Mudhead Society	-
Steve Boone	54	Tribal Councilman	-
Arden Kucate	53	Big Charcoal/Corn Kiva/Councilman	Leader/Member
Curtis Quam	-	Small Group Kiva/A:Shiwi A:wan Museum	-

On 29 August 2011, a draft of this Zuni monitoring report was reviewed by the Zuni Grand Canyon monitoring team to ensure that the cultural information provided to the Bureau of Reclamation and the National Park Service was accurate and the appropriate recommendations provided. The following individuals participated in the review of this draft report: Perry Tsadiasi (ZCRAT member), Arden Kucate (cultural advisor and river trip participant), George Yawakie (ZCRAT member and river trip participant), Ben Kallestewa (ZCRAT member and river trip participant), Octavius Seowtewa (ZCRAT member and river trip participant), Cornell Tsalate (ZCRAT member and river trip participant), and Titus Ukestine (cultural advisor and river trip participant).

The Grand Canyon and all the resources within it are culturally significant to the Zuni people (*A:shiwi*). The following is a brief narrative summary of the history of the Zuni ties to the Colorado River corridor through Grand Canyon, the Little Colorado River and how this traditional history is intertwined with Zuni cultural beliefs to establish a context for understanding the Zuni perspectives provided in this report.

#### ZUNI AND THE SACRED GRAND CANYON LANDSCAPE

From the time that the Zunis (*A:shiwi*) emerged on to the surface of the Earth, the Grand Canyon, and the Colorado River have been sacred. According to the narratives that describe the emergence of the Zuni people (*A:shiwi*) from Earth Mother's fourth womb, sacred items that identify the Zuni people, the *Etdo:we* (fetish bundles), were the first to emerge; the people then came out into the sunlight world at a location in the bottom of the Grand Canyon near present day Ribbon Falls. The creation narratives also describe the Zunis' (*A:shiwi*) subsequent search for the center of the world, *Idiwan'a* (the Middle Place). The people moved up the Colorado River and then up the Little Colorado River, periodically stopping and settling at locations along these rivers. At the junction of the Little Colorado and the Zuni Rivers, many of the supernatural beings, or *Koko*, came into existence. After a long search the Zunis located the middle of the world and settled there. The Middle Place is located in today's village of Zuni. From the Pueblo of Zuni, the *A:shiwi* continue to maintain very strong cultural and spiritual ties to the Grand Canyon, Colorado River and the Little Colorado River because of their origin and migration narratives.

The creation and migration narratives of Zuni (*A:shiwi*) are learned by rote, word for word, and passed on from generation to generation exactly as they were told hundreds of years ago. Anthropologists have collected portions of these narratives over the past hundred years, transcribing the oral recitation. In so doing, scholars have marveled at the fact that the narratives have remained virtually unchanged over so many years. These narratives not only describe the locations of shrines and especially sacred areas, but also explain why areas such as the Grand Canyon are sacred. Zuni prayers often contain long lists of sacred areas, shrines, springs and other places of religious significance to the Zuni people.

The practice of Zuni religion is not limited to one day a week. Zunis have an amazingly complex organization of clans, medicine societies, kiva groups and priesthoods; all interlocking and overlapping. Similarly, each part of the Zuni universe is interconnected. Plants, animals and colors are associated with the various cardinal directions. Minerals, clay, rocks, plants and water are used in prayers to the supernatural beings. Prayers are accompanied by offerings of prayer sticks, which are made with the feathers of many birds attached to carved sticks, which in turn are painted with ceremonial pigments. It is no wonder, then, that virtually the entire environment at the bottom of the Grand Canyon is sacred to the Zuni. The animals, the birds, insects, rocks, sand, minerals, plants and water in the Grand Canyon all have special meaning to the Zuni people.

Trails used by the Zunis for religious purposes have special significance and are cared for by means of particular blessings and prayers. The trail from Zuni to the Grand Canyon thus has a continuously important religious meaning to the Zuni people. Once a trail is blessed, it remains blessed permanently. The Zuni people have important concerns regarding the ancient Zuni trail from their village to the bottom of the Grand Canyon.

To a great extent Zuni ceremonial activity is carried out in order to ensure adequate rainfall. Zunis pray not only for their own lands, but for all people and all lands. Their prayers are especially aimed at bringing precipitation to the Southwest. In order to successfully carry out the prayers, offerings and ceremonials necessary to ensure rainfall for crops and a balanced universe, Zunis must collect samples of spring water, plants, soil, rocks and other materials from various locations. Samples of spring water from the bottom of the Grand Canyon carried in sacred gourds during Zuni ceremonials have special significance to Zuni religious life and a very special meaning to the Zuni people.

In summary, the Zuni River, Zuni Heaven (*Ko'tu:wala:wa*), the Little Colorado River, the Colorado River and the Grand Canyon have been important to Zuni culture and religion for many centuries. Zuni religious beliefs, narratives, ceremonies and prayers are intrinsically tied to the entire ecosystem of the Grand Canyon, including the Zunis' familial relationship with the birds, animals, soils, rocks, vegetation and water. The Grand Canyon is very sacred and the Zuni people are concerned with activities that may affect the resources in this sacred place. Similarly, the Zuni people are concerned about activities that take place within the Grand Canyon that may have an impact on Zuni.

#### TRADITIONS AND PRACTICES OF THE ZUNI PEOPLE (*A:SHIWI*)

The Zuni beliefs, customs and traditional values originated subsequent to the creation of the world during and after the emergence of the *A:shiwí* from Mother Earth's womb. Zuni culture through its religion exists to be in harmony with the natural elements of Mother Earth and to provide fertility and welfare for the Zuni people. Zuni traditional and religious leaders take on the responsibility of carrying out the intricate rituals and ceremonies that are the framework of Zuni traditions and practices, but only after many long years of preparation and training.

These traditions and practices have been handed down through oral teachings over many generations from the ancestors. The intricate rituals and ceremonials performed at present day Zuni pay reverence to these ancient ancestral sites, shrines and other sacred places in the context of spiritual associations. Even if these places are over a hundred miles away, they are no less significant than those within close proximity that are used on an annual, seasonal or intermittent basis.

All Zuni ancestors play a tremendously significant role in Zuni culture in that present day Zunis request assistance and guidance from them in the course of their daily life. Zuni ancestors, following their trails, travel to Zuni along with the rain clouds that provide the sustenance for all things that live on the earth. The homes, shrines and other materials of the Zuni ancestors must remain undisturbed so that they may fulfill the purpose for which they were placed on the landscape. Disturbance to burials, cultural items, and traditional cultural places disrupts the balance of the universe, Zuni traditional cultural values, and the ability of the Zuni ancestors to fulfill their important role.

#### ZUNI CULTURAL AFFILIATION

The Pueblo of Zuni claims cultural affiliation to all prehistoric and many historic properties throughout much of the Southwest region of the United States. Cultural affiliation claims to all prehistoric cultures and their properties are based on Zuni traditional history of ancestral Zunis migrating and settling throughout this geographical area in their search for *Idiwan'a*, the Middle Place of the world, which is now Zuni Pueblo (Statement of Cultural Affiliation dated July 11, 1995; revised 11/21/97). Thus, traditional history of the Zuni people provides the cultural context and basis for understanding Zuni traditional cultural properties (TCP's).

The *A:shiwí* (or Zuni) trace the search for *Idiwan'a* from the origin point, *Chimik'yana'kya de'a* (Ribbon Falls in Grand Canyon). The ancestral Zunis, collectively known as the *Enodekwe*, embarked from the origin point and left many markers of their passing. These markers consist of the trails, habitation sites, campsites, burials, sacred shrines and other offering places established during the migration epoch. During their ancient journeys, specific events occurred during which ancestral Zunis named mountains, buttes, springs and other natural landmarks. These places remain rooted in Zuni's traditional history and culture (i.e., songs, prayers, and ceremonies since time immemorial).

The *A:shiwí* began their journey throughout Arizona, New Mexico, Utah, and Colorado in search of *Idiwan'a*, the Middle Place of all oceans of the world, the middle of all heavens of the universe. They traveled and settled in the deserts and canyon lands of the Southwest leaving behind the archaeological sites and sacred shrines to which they claim affinity today. The *A:shiwí* settled in places for four days, four days meant four years. From the place of emergence, the *A:shiwí* journeyed to the top of the San Francisco Peaks and there they received medicinal plants to assist them in their search for the Middle Place. They continued eastward and settled for awhile at *Kumanchi an:ah:luk'a* (Diablo Canyon/Chavez Pass). This is the place where the *A:shiwí* separated into two groups.

At *Kumanchi an:ah:luk'a*, an ear of corn and two eggs were offered to the *A:shiwi*. Those that picked the macaw egg were given half of an ear of corn and followed the macaw southward in search of the Middle Place to the "land of the everlasting sun." They were asked to send word to the *A:shiwi* that picked the raven egg when they had indeed found the Middle Place, so that if one group found the Middle Place they would reunite. These people that journeyed south are the Zuni ancestors who reside in Mexico and South America and are known as *Che:be:ye:nule:kwe*. In part, these people also represent the cultures that are defined by modern day archaeologists as Hohokam, Mogollon, Mimbres and Salado. They are referred to by the *A:shiwi* as *Enoh:de:kwe ishatde:ma dek:kyt:na:kwin ahwakonna*, the "ancient ones that journeyed to the land of the everlasting sun." Today, Zunis do not divide the ancient ones into groups or cultures like archaeologists; rather, they are perceived as all one people as they were when they emerged from the womb of Mother Earth.

The *A:shiwi* (Zuni people) that picked the raven egg continued eastward crossing the Little Colorado River or *Kya:wana:ahononnai* (Red River). From there they journeyed eastward to *Denatsali im'a*, present day Woodruff Butte near Holbrook in northeastern Arizona. There they gathered more medicinal herbs and continued to *Ko'tu:wala:wa* at the confluence of the Little Colorado River and the Zuni River. *Ko'tu:wala:wa* is the place where the *Kok'ko* were created and this is the place where the spirits of the *A:shiwi* people go to live at the end of life. From *Ko'tu:wala:wa*, they traveled to the canyon of *Hantibinky* where Zuni clans received their names, and event memorialized in the petroglyphs still visible at the location (Ferguson 2007:385). From here, the *A:shiwi* moved into the Zuni River Valley, eventually finding the Middle Place and settling there.

The Zuni Tribe's cultural affiliation claims are not limited to specific and narrow regions because the boundaries and places of the migrations by these ancestral groups were not restricted to a narrow route but reflect an affiliation to an extensive cultural landscape.

## ZUNI TRADITIONAL CULTURAL PROPERTIES AND RESOURCES

Zuni traditional cultural properties or TCP's encompass a wide variety of cultural sites including, but not limited to, ancestral habitation (archaeological) sites, culturally significant archaeological/historic features, pictographs and petroglyph sites, collection areas for plants, water and minerals, natural landmarks, prominent topographic features (e.g., mountains, buttes, and mesas), shrines, sacred sites, and pilgrimage trails and routes. Below is a brief description of each of these categories of TCPs.

### *Archaeological Sites*

All archaeological sites, including but not restricted to pictographs, petroglyphs, habitation areas, artifact scatters, special use areas, and other archaeological manifestations are considered ancestral sites which imbue great cultural and religious significance to the Zuni people. For Zuni, these archaeological sites have never been abandoned, but continue to maintain life and spiritual forces significant to the *A:shiwi* people.

These archaeological sites are interconnected to one another by trails and these trails connect the sites to the Zuni Pueblo. As such, the sites and trails act collectively as spiritual umbilical cords between Zuni ancestors and present day Zunis; connecting the places that define and maintain the spiritual connection to Zuni cultural landscape. Trails also link other sacred areas, shrines and archaeological sites situated within the Zuni aboriginal territory, as well as to ancestral sites established during the migrations of the *A:shiwí* people.

The Zuni Heritage and Historic Preservation Office (ZHHPO) consider ancestral archaeological sites to be TCP's because these sites are tangible monuments validating Zuni emergence and migrations which play a fundamental role in sustaining Zuni individual and collective cultural identities. ZHHPO also asserts that archaeological sites are Register-eligible Zuni TCP's per the definition provided by Parker and King (1989) in *National Register Bulletin 38* (e.g., Ferguson et al. 1995:14-15; Anyon 1995; Dongoske et al. 1997).

### *Sacred Shrines and Offering Places*

Religious shrines are used by the Zuni to mark their land claim boundary and these shrines, today, are considered sacred. Shrines are also established at other places of significance within the Zuni cultural landscape. Natural landmarks that define Zuni land boundaries and other important locations are marked by the Zunis placing clearly visible War God Shrines, pictographs of masks, Zuni fetishes, prayer sticks, turquoise, shells, pottery or other materials clearly identifiable as Zuni. The Zuni people preserve and maintain these "markers" or locations by making regular visits or pilgrimages to deposit offerings and to ask blessings upon the land.

Describing the importance of shrines to the Zuni people, whether they are regularly attended to or not, Governor Simplicio (1985) wrote:

Both these shrines [located a top Mt. Graham] are within the traditional use area of the Zuni people and are consequently of importance to our well-being and culture. It is important that two aspects of these shrines are clearly understood. The first is that the location is central to the purpose of the shrines. Thus, to disturb or move the shrines would be incompatible with the essence of their location with respect to the areas and the people they protect. Second, these locations have religious significance to the Zuni people, whether or not they appear to have been used recently. Once established they continue to provide their protection in perpetuity.

Pandey (1995:20) points out that shrines and other sacred cultural markers act in Zuni culture like maps, charts, and other documents do in a literature society. The distribution of shrines on the landscape act as cognitive maps for the Zuni when visiting these places to reaffirm their cultural tradition and beliefs. Sacred shrines and offering places were utilized by the Zuni ancestors, the *Che:be:ya:nule:kwe* and the *Enoh:de:kwe*. Sacred shrines and offering places are often related to archaeological sites and are of great cultural and religious significance. These shrines and offering places are also imbued with life and spiritual forces. Shrines hold great significance to the Zuni and are considered sacred.

### *Landforms*

Landforms can be geologically and/or topographically prominent features on the landscape that are important in Zuni religion and culture. Landforms are natural landmarks such as specific mountains or specific geological formations, including waterfalls, caves, rock arches, etc. A landform may be part of an archaeological site, a shrine or an offering place, but it is a distinct geological or topographical feature that is imbued with cultural significance.

### *Trails*

The Zunis have many named places across their cultural landscapes that are interconnected with a series of trails. These trails often follow uplands where visibility of the surrounding landscape was enhanced. Trails are important to Zuni culture because they connect many different resource procurement and use areas of the Zuni throughout their aboriginal use area. Trails are also considered important because they act as spiritual umbilical cords that maintain strong and continuous connections between the heart of the Pueblo of Zuni and many culturally important distant places on the Zuni landscape.

Trails can often lead to shrines and offering places. Trails are blessed before their use, and once blessed, they are blessed in perpetuity. For the Zuni there are many prayers and offerings that are required to be made prior to a trip and during a trip, along the trail to *Chimik'yana'kya'de'a* and the Grand Canyon. The prayers provide those Zunis going to *Chimik'yana'kya'de'a* with guidance on what route is to be followed, and on the religious actions that are necessary along the trail. Whether travel was made by foot, horses, or burros, it was a very religious occasion and required serious preparations. Prayers and offerings were made at springs and shrines along the trail. The trail, the springs, and the shrine area are all sacred.

Most curing societies went to the Grand Canyon as part of their expeditions to Hopi, where they went to dance. A long time ago, according to Zuni elders, when travel was by foot and burro, Zunis took a traditional trail to the Grand Canyon and along the trail they had shrines. Even though the mode of travel was by foot, the Zunis had to plant feathers at streams and shrines along the way. These streams, shrines, and the trails themselves are sacred. *Heshodawe* ("house," i.e., archaeological sites) located along the trail are also sacred, being the homes of Zuni ancestors. The trail to the Grand Canyon is sacred and will also be used in the afterlife. Activities in the afterlife require use of trails made in this world.

### *Plants*

Plants are perceived by the Zuni as a vital part of the landscape. Plants are sacred to the Zuni people. All plants were given to the Zuni by the ancestral, celestial, supernatural beings. The Zuni view all plants as the off-spring of Mother Earth because it was she who gave the plants to the Zuni (Stevenson 1993:2).

Native plants at *Chimik'yanakya'de'a* are especially sacred as a result of their association with the Zuni emergence and migration. Zuni fraternities and esoteric groups consider these plants significant because of their past and present cultural importance and usage. These plants are collected and used for ceremonial, religious, subsistence and medicinal purposes.

Zunis use literally hundreds of plants for medicinal, cultural or religious purposes. Stevenson (1914) documented 123 plants used for various purposes. This amount vastly underestimates the true number of plants and their respective uses, because not all the uses of all plants are known to all Zuni people. General plant usage is commonly known by most Zunis for consumption or other every day use. Whereas, knowledge about some plants may be known to only the members of a particular religious or medicine society, or in some cases, specific esoteric knowledge by a particular Zuni individual.

Plants played key roles in aiding the Zuni during their search for the middle place as recounted in the Zuni emergence and migration narrative.

Today, even with the availability of modern hospitals and medical care, the Zunis continue to rely on medicinal plants, herbs, fetishes, and other remedies which have served them through the ages. Camazine (1978) indentified nearly 100 plants still used by Zunis for medical treatments. As a result of four previous monitoring trips through Grand Canyon, the Zuni elders preliminarily indentified 32 plants of cultural importance as a result of the season in which these trips were taken (Table 2).

Common Name	Zuni Name	Scientific Name	Major Use
Devil's claw	<i>Dashonchi</i>	<i>Acacia greggi</i>	Dye
Agave	<i>Ładewa:we</i>	<i>Agave sp.</i>	Medicinal
Prostrate Pigweed	<i>Wiwa</i>	<i>Amarantheus blitoides</i>	Religious, coloring
Goatshead	<i>Mowa dapba</i>	<i>Tribulus terrestris</i>	Religious
Fringed Sagewort	<i>A:ku</i>	<i>Artemisia frigida</i>	Religious, tea, folklore
Big Sagebrush	<i>A:ku</i>	<i>Artemisia tridentata</i>	Religious
Milkweed	<i>Labishsho</i>	<i>Asclepias sp.</i>	Edible
Fourwing Saltbrush	<i>Ke'ma:we</i>	<i>Atriplex canescens</i>	Medicinal, edible, religious
Fremont Barberry	<i>Datupts'i</i>	<i>Berberis fremontii</i>	Religious, folklore, dye
Blue grama	<i>Bets'i kowa</i>	<i>Bouteloua gracilis</i>	Brooms, brushes
Reed grass	<i>Showe</i>	<i>Phragmites sp.</i>	Religious
Parry Bellflower	<i>Yuda ti'anna</i>	<i>Campanula parryi</i>	Medicinal
Wholeleaf Indian Paintbrush	<i>Ts'uyan tsitsinakya</i>	<i>Castilleja integra</i>	Dye
Netleaf Hackberry	<i>Hala'du</i>	<i>Celtis reticulate</i>	Religious
Mountain Mahogany	<i>Dak'wi</i>	<i>Cercocarpus montanus</i>	Religious
Fernbrush	<i>Ibina</i>	<i>Chamaebatiaria millefolium</i>	Religious
Goosefoot	<i>Hadekya</i>	<i>Chenopodium sp.</i>	Edible, medicinal, folklore

Table 2. Plants of Zuni Cultural Importance in the Grand Canyon			
Common Name	Zuni Name	Scientific Name	Major Use
Rabbitbrush	<i>Hak'oha Łupts'ina</i>	<i>Chrysothamnus sp.</i>	Basketry, dyes
Buffalo gourd Pumpkin	<i>Mobali</i>	<i>Cucurbita foetidissima</i>	Edible, medicinal
Datura (sacred)	<i>Aneklakky</i>	<i>Datura meteloides</i>	Religious
Spectacle Pod	<i>Ha:k'olokda</i>	<i>Dithyrea</i>	Tea, medicinal
Hedgehog cactus	<i>Shunepba ts'ana</i>	<i>Echinocereus engeimannii</i>	Edible, textile
Mormon Tea	<i>Tsipbo'sho</i>	<i>Ephedra nevadensis</i>	Tea, medicinal
Scouring Rush (Horsetail)	<i>Dotchipba</i>	<i>Equisetum tacene</i>	Game call
Horseweed fleabane	<i>Ham udeyanne</i>	<i>Erigeron calvas Canadensis</i>	Medicinal
Wild Buckwheat	<i>Hasuski</i>	<i>Eriogonum sp.</i>	Medicinal
Wallflower	<i>Hasi'kyatdo:we</i>	<i>Erysimum sp.</i>	Medicinal
Spurge	<i>Ikwik'yakya</i>	<i>Euphorbia</i>	Medicinal
Winterfat	<i>Banashdu</i>	<i>Eurotia inata</i>	Medicinal
Barrel cactus	<i>Shunepba</i>	<i>Ferncactus sp.</i>	Edible
Ocotillo	<i>K'oshi</i>	<i>Fouquieria splendens</i>	Religious
Many flowered Gilia	<i>Hasilili</i>	<i>Gilia multiflora</i>	Medicinal
Gilia	<i>Ummok'yanakya</i>	<i>Gilia spp.</i>	Medicinal
American Licorice	<i>Banashdu (Chikwa)</i>	<i>Glycyrrhiza lepidota</i>	Medicinal
Broom Snakeweed	<i>K'yaha'bokk'o</i>	<i>Gutierrezia sarothrae</i>	Medicinal
Common Sunflower	<i>Omattsaba</i>	<i>Helianthus annis</i>	Medicinal
Hymenoppapus	<i>Ha:uheya:we</i>	<i>Hymenoppapus</i>	Medicinal
Leadtree	<i>Ummok'yanakya</i>	<i>Luecaena ericoides</i>	Medicinal
Flax	<i>Duna:w A:wan Ak'wanne</i>	<i>Linum spp.</i>	Medicinal
Puccoon	<i>K'ema:we</i>	<i>Lithospermum sp.</i>	Medicinal
Cardinal Flower	<i>Waya:siwulu</i>	<i>Lobelia cardinalis</i>	Medicinal
Deer Vetch		<i>Lotus wrightii</i>	Medicinal
Wolfberry	<i>K'ya:bu'li</i>	<i>Lyclusm sp.</i>	Edible, religious
Aster	<i>Kwimi Lokk'yana Hamobiya:we</i>	<i>Machaeranthera sp.</i>	Medicinal
Horse Mint	<i>Udeya ibitdo</i>	<i>Mentha arvensis</i>	Religious, edible
Stickleaf	<i>Mil'an ibatchikya mih'an</i>	<i>Mentzelia pumila</i>	Medicinal, folklore
Four O'clock	<i>Shikkwamu</i>	<i>Mirabilis officinale</i>	Medicinal
Catnip	<i>K'yashima Mattsa</i>	<i>Nepeta cataria</i>	Edible
Tobacco	<i>Anade</i>	<i>Nicotiana sp.</i>	Religious, clan name (A'na:kwe)
Bear Grass	<i>T'sishshuk howe</i>	<i>Notina microcarpa</i>	Religious
Evening Primrose	<i>Udeya:w K'ohakwa</i>	<i>Oenothera sp.</i>	Religious, medicinal
Hooker Evening Primrose	<i>Kwimi Shilowa</i>	<i>Oenothera sp.</i>	Medicinal
Prickly Pear	<i>Mek'yaba' Metdanne</i>	<i>Opuntia sp.</i>	Edible

Table 2. Plants of Zuni Cultural Importance in the Grand Canyon			
Common Name	Zuni Name	Scientific Name	Major Use
Whipple Cholla	<i>K'oshi</i>	<i>Opuntia whipplei</i>	Edible
Chinchweed	<i>Hambassa</i>	<i>Pectis papposa</i>	edible
Beardtongue	<i>Bok'yan Kwiminne</i>	<i>Penstemon sp.</i>	Folklore
Juniper Mistletoe	<i>Ohtibo'li</i>	<i>Phoradendron juniperinum</i>	Edible, medicinal
Common Reed	<i>Shodoyan:we</i>	<i>Phragmite sp.</i>	Religious
Pinyon Pine	<i>He'sho Datdanne</i>	<i>Pinus edulis</i>	Religious, edible
Ponderosa Pine	<i>Ashek'ya datdanne</i>	<i>Pinus ponderosa</i>	Religious
Western Clammyweed	<i>Asibitdo:we</i>	<i>Polanisia dodencondra</i>	Religious, medicinal
Bush Mint	<i>K'yashima mattsa (Ła:mattsa)</i>	<i>Poliomintha incana</i>	Edible
Fremont Cottonwood	<i>Bola</i>	<i>Populus fremonii</i>	Religious
Douglas Fir	<i>K'yatats'ilo ts'itdo:we</i>	<i>Pseudotsuga menziesii</i>	Religious
Paperflower	<i>Ha:ts'oktik'o</i>	<i>Psilostrophe tagetina</i>	Ceremonial
Scurf Pea	<i>Ha:ts'ana</i>	<i>Psoralea sp.</i>	Religious
Coneflower	<i>Yak'onakya</i>	<i>Ratibida sp.</i>	Medicinal
Squawbush	<i>K'ose Wotdanne</i>	<i>Rhus trilobata</i>	Basketry, ceremonial
Wild Currant	<i>Kelashi:wuna</i>	<i>Ribes sp.</i>	Edible
Dock	<i>K'wimi Idobanahna</i>	<i>Rumex sp.</i>	Edible, religious, medicinal
Willow	<i>Bila Ławe</i>	<i>Salix sp.</i>	Religious, cultural
American Bulrush	<i>Doselu</i>	<i>Scirpus americanus</i>	Religious
Buffalo Bur	<i>Mok'yachiba</i>	<i>Solanum rostratum</i>	Medicinal
Golden Rod	<i>Hachitdo:we</i>	<i>Solidago sp.</i>	Medicinal
Globe Mallow	<i>K'owi K'owhi</i>	<i>Sphaeraelcea sp.</i>	Medicinal, cultural
Grass Dropseed	<i>Bishshu'liya:we</i>	<i>Sporobulus sp.</i>	Weaving, religious, cultural
Desert Plume	<i>Kwimi Łupts'inna</i>	<i>Stanleya pinnata</i>	Medicinal
Common Cattail	<i>Owelu</i>	<i>Typha sp.</i>	Religious
Common Cocklebur	<i>Mok'yachiba Be:mok'yachiba</i>	<i>Xanthium sp.</i>	Medicinal, edible
Banana Yucca	<i>Ho:k'yaba</i>	<i>Yucca baccata</i>	Edible, religious, cultural
Narroleaf Yucca	<i>Ho:ts'ana</i>	<i>Yucca sp.</i>	Religious, cultural

### Minerals

The Zuni people do not differentiate between organic and inorganic materials, but consider all things to be living: the earth, the stones, and minerals, as well as the plants and animals. Thus, the collection of minerals is as important to the Zuni people as the collection and use of plants. Mineral sources are used to carry out religious activities, including the preparation of important ceremonial pigments.

Although Zunis may not have traveled specifically to the Grand Canyon solely for the purpose of collecting plants or animals, they did and do make numerous journeys there for the purpose of procuring minerals for religious ceremonies.

Edward Curtis (1922) documents the extensive trade in minerals between Zuni and the “. . . tribes near the Grand Canyon.”

“ Even in prehistoric times the pueblos of Cibola [Zuni] maintained constant communication with other and relatively distant people. A well-marked trail led eastward to the Rio Grande valley and the Tiwa villages, with a northerly branch to Zia. Another extended to the Hopi and on to the Grand Canyon.... The blue paint of the Zunis was famous, as were several other pigments. Groups of men would travel long distances from Zuni to trade their paints, turquoises, and skins for feathers and other paints. For instance, the trade with the Havasupai at the bottom of the Grand Canyon, probably involved, on the Zunis’ part, blue paint and stones found from the Zuni mine which was in Bluewater district of contemporary New Mexico, between Acoma and Zuni while the Havasupai had equally valuable items to trade in return.”

Parsons (1939) also mentions “certain sacrosanct stones” that Zunis believe had “. . . come up with the people.” The use of paint made from minerals brought from *Chimik’yana’kyade’a* in such a diversity of prayers and ceremonies signals the importance of these minerals in Zuni ceremonialism. Zunis have a tremendously developed and exact oral tradition, reflected in many prayers and ceremonies, that underscore the importance of mineral use from *Chimik’yana’kyade’a*. Table 3 lists the various minerals that derive cultural importance for the Zuni that are acquired from the Grand Canyon.

Common Name	Zuni Name	Major Uses
Yellow Ochre	<i>Hehupts’ikwa</i>	Religious
Specular Hematite	<i>Tsuhaba</i>	Religious
Galena	<i>Hetsuhaba</i>	Religious
Red Hematite	<i>Ahok’o</i>	Religious
Salt	<i>Ma:k’ose</i>	Religious, edible
Land Snail Shells	<i>Ts’uwe, Shodo:we</i>	Religious
Obsidian	<i>Abats’ina</i>	Projectile points, tools
Turquoise	<i>łi’akwa</i>	Religious, fetishes
Azurite	<i>Akwati</i>	Religious
Crystal Cola	<i>Mataluk’o</i>	Religious
Clays	<i>Hekk’yacho</i>	Religious, ceremonial
Silt	<i>Hedeta</i>	Religious
Schist	<i>Asalala:we</i>	Religious, cultural
Sandstone	<i>A:we</i>	Cultural
Conglomerate	<i>Atashshi</i>	Religious
Basalt	<i>Upk’winnakya</i>	Religious, cultural
Quartzite	<i>Sayakuma</i>	Religious, cultural

*KYA:WE – Water, Colorado River, Springs*

From the Zuni perspective, the earth is circular in shape and is surrounded on all sides by ocean. Under the earth is a system of covered waterways all ultimately connecting with the surrounding oceans. Springs and lakes, which are always regarded as sacred, are the openings to this system (Bunzel 1932:487). All springs and sources of water are sacred to the Zuni because they provide the life-giving substance, water that is necessary to maintain life within the Southwest's harsh environment.

All water is deemed sacred to the Zuni, with springs "considered to be the most precious things on Earth" (Hart 1980: Vol. 1, 4). Springs within the Zuni territory are utilized among all religious groups for traditional and religious practices. Springs and seeps are also considered sacred to the Zuni. The Grand Canyon contains numerous springs that play an integral role in water collecting by the Zuni people for ceremonial use.

In the broadest sense, all sources of water are culturally important to Zuni. All springs, washes, ponds, pools, lakes, and rivers are sacred places in Zuni religious practice. This is because Zuni religion is focused on the blessings of water, a gift that is considered to be the ancestors themselves (Chimoni and Hart 1994:2). Zunis pray for water; they pray at water sources; and they use water in religious ceremonies. Cushing wrote, the Zuni "consider water as the prime source of life" (Green 1979:241). As Dickie Shack explained, "The whole world has water and it's all precious to us. We get it and bring it here for our religious stuff. We use it in paint for our prayer sticks-it's so important to get rain. So this water is precious to us. If I go to the Grand Canyon, I'll get me water there. I believe the rain is our fathers. Anywhere there are springs we hold out hand and say, 'come with us to Zuni village' and we pour the water on our heads." Mr. Shack added, "In my Rain Priest doings, we pray for all directions, to the ocean, to our grandfather, *Ko'lowisi*, the serpent, in all directions. We say prayers so that they'll help us with rain. So all this water around the world, even the ponds, it's very important to us, for us to say prayers because we need rain in Zuni (Colwell-Chanthaphonh and others 2010:36)."

The waters of the Colorado River are "definitely sacred," according to Alex Seowtewa. The aquatic life in the river is connected to the Zuni religious societies and orders-prayers are made for the animals that live there, and the animals' existence helps the Zunis in their prayers. Even in dry washes, such as the Paria, are important. The Zunis deem them "passageways" for water, whether or not water flows year-round.

Long before the Americans first ever saw and named the Colorado River, the Zuni named this watercourse *K'yawan' A:honanne*. The name itself speaks to a time before the American government dammed the river, when its waters flowed red from the crimson-hued soils its currents carried. This traditional cultural property begins in the Colorado Rockies and ends at the Sea of Cortez, and extends from bank to bank. Zunis feel a general sense of sacredness for this body of water. As Octavius Seowtewa explained, "Our respect, our heritage and traditions believe this river has significance for our religion and way of life."

The river is associated with the Zuni people's emergence and first migrations; it is home to aquatic life that is important to Zuni traditions; the water from the river is used in ceremonies; and the waterway is a literal trail and a metaphorical umbilical cord that is linked directly to the Zuni home area via the Little Colorado River (Hart 1995:8). Seowtewa continued, "My medicine society talks about all the water life; it's all mentioned in my prayers. So any disturbance of water life impacts my religion and way of life. I was taught to respect all life and now damming the river and pumping water [creates] ...a spiritual impact on our medicine practices. When you are a religious head you have to take care of even the lowliest form of life, even the stink bug, even the rocks, anything that is on the land." This statement parallels previously documented Zuni values of the river. As Dongoske and others (2010:135) have written, "The Colorado River itself is regarded as an important conscious living being that has feelings, and is expressive of calmness and anger. The river can offer happiness, sadness, strength, life, sustenance, and the threat of death. According to many of the tribal beliefs, if a land and its resources are not used in an appropriate manner, the Creator will become disappointed or angry and withhold food, health, and power from humans."

Further emphasizing the importance of all water life to the *Ne'we:kwe* Medicine Society, Seowtewa shared an excerpt from one of their ceremonial prayers:

*"When the world was created, within the four Great Oceans and waterways (North Pole, South Pole, and Atlantic, Pacific Oceans)  
Our Father that stayed behind and flourished  
The Feathered Serpent  
The Water Snakes  
The Fish  
The Turtle  
The Tad Poles  
The Toads  
The Frog  
The Water Boatman and all aquatic life . . . . .  
  
And all the protectors of the waters  
The Crain  
The Geese  
The Ducks  
The Coots  
The Grebes  
The Orioles  
The Mocking birds  
The Nut Hatch  
The Wren  
The Egrets*

*The Father Sun – Mother Moon*  
*The Creator*  
*These are the givers of the breath of life*  
*The Aged and the Wisdom*  
*The Water of Life*  
*The Seed of Life*  
*The belongings of life*  
*The Off springs of life*  
*The Strength*  
*And the rest of the givers of life*

*I ask for their breath*  
*If all goes accordingly and the breath of our feathers are respected*  
*We will all see our fathers rising and setting sun*  
*Arm in Arm*  
*Strength in connection*  
*We will all grow old in wisdom*  
*Now I ask the fathers for that Breath*  
*For the Breath of life for all.*

Speaking about Glen Canyon Dam, Seowtewa stated, "They put the dam in without consultation, and . . . the dam restricted the umbilical cord. It's like when you're in your mother's womb and there's a knot in the cord, then there's a problem (Colwell-Chanthaphonh and others 2010:54)."

#### *Animal Resources (Animals, Fish, Birds, Insects & Reptiles)*

Animals play a vital role in Zuni culture and religion. In the Zuni belief system, as Winston Kallestewa explained, "All animals are our ancestors that have come back to life in a different form- that's why all living beings, even the smallest insect, are important to the Zuni people." Dickie Shack explained that common animals such as lizards play a role in Ant Medicine Society prayers, prayers so ancient that they are spoken in Keresan language, learned when the Zunis were migrating with those people.

All animals came out of the underworld with the Zunis. They are all important because they have a purpose explained in Zuni religion and cannot be killed indiscriminately. Wild life animals are the spiritual beings of the ancestors for the Zuni people and are mentioned in prayers and songs.

#### **Birds**

Birds are incorporated into nearly every aspect of Zuni life (Ladd 1963). Because they are viewed as messengers from the ancestral celestial beings, their appearance is closely watched. Consequently Zunis are generally excellent ornithologists. In discussing the cultural importance of birds with Zuni cultural

advisors one becomes quickly amazed at the accuracy and consistency with which they distinguish closely related species, and are able to relate precisely the seasons when each species is present.

Throughout the migration of the Zuni people to find the middle place, they were also helped by birds: a raven took the bitterness away from the corn the Zunis had harvested and made it palatable; an owl helped them by making the corn which they had harvested soft enough to eat.

Common Name	Zuni Name	Scientific Name	Direction	Associated Color
Oriole <sup>1</sup>	<i>Onohi'kya</i>	<i>Icterus parisorum</i>	North	Yellow
Steller's Jay	<i>Maya</i>	<i>Cyanocitta stelleril</i>	West	Blue
Macaw	<i>Mula</i>	<i>Ara spp.</i>	South	Red
Black Billed magpie	<i>K'yade:dasha</i>	<i>Pica pica</i>	East	White
Barn Swallow	<i>Hel'onseido</i>	<i>Hirundo rustica</i>	Zeinth	All colors
Purple Martin	<i>K'yaw luki</i>	<i>Progne subis</i>	Nadir	Black

<sup>1</sup> Mis-identified by Stevenson (1915) as Yellow-breasted Chat.

Table 5 presents a list of all birds of Zuni cultural significance that inhabit the Grand Canyon. A note of caution about this and other lists in this section of the report: only a limited number of the hundreds of culturally important plants and animals in the Grand Canyon have been identified by Zuni cultural advisors. This disparity exists for several reasons: (1) Zuni cultural advisors have been down into the Grand Canyon for only a limited number of visits (5 river trips); (2) these previous river trips did not encompass all the different seasons when certain plants would be flowering (and thus more easily recognizable) or certain migratory birds would be present; (3) the past river trips stopped at a limited number of sites in the Grand Canyon; and (4) much Zuni religious knowledge is proprietary, and only a select few individuals possess certain bits of information and it may be considered proprietary. Because representatives from all the religious societies which might have knowledge about a certain plant, animal or mineral have not yet participated in a past river trip, many species undoubtedly have not yet been identified.

Common Name	Zuni Name	Scientific Name	Major Use
Pied Billed Grebe	<i>Haba' ochabekya</i>	<i>Podilymbus podiceps</i>	Religious
Great Blue Heron	<i>K'olokda</i>	<i>Ardea herpdias</i>	Religious, clan representative
White Faced Ibis	<i>Ts'uuya tana</i>	<i>Plegadis chihi</i>	Religious
Canada Goose	<i>Owa</i>	<i>Branta canadensis</i>	Religious, ceremonial
Mallard	<i>Eya</i>	<i>Anas platyrhynchos</i>	Religious, ceremonial
Northern Pintail	<i>Eya</i>	<i>Anas acuta</i>	Religious, ceremonial, Newekwe Society
Northern Shoveler	<i>O'do k'yaba</i>	<i>Anas clypeata</i>	Religious, Newekwe

Table 5. Birds of Zuni Cultural Importance in Grand Canyon			
Common Name	Zuni Name	Scientific Name	Major Use
			Society
Cinnamon Teal	<i>Eya</i>	<i>Anas cyanoptera</i>	Religious, Newekwe Society
Blue-winged Teal	<i>Eya</i>	<i>Anas discors</i>	Religious, Newekwe Society
Green-Winged Teal	<i>Eya</i>	<i>Anas crecca</i>	Religious, Newekwe Society
American Wigeon	<i>Eya</i>	<i>Anas Americana</i>	Religious, Ceremonial, Newekwe Society
Turkey Vulture	<i>Shu:ts'ina</i>	<i>Carhartes aura</i>	Ceremonial
Bald Eagle	<i>Ba'k'oha</i>	<i>Haliaetus leucocephalus</i>	Religious, ceremonial
Northern Harrier	<i>Shok'yabiso</i>	<i>Circus cyaneus</i>	Religious, ceremonial
Sharp-shinned Hawk	<i>Hachu ts'ana</i>	<i>Accipiter striatus</i>	Religious
Cooper's Hawk	<i>Anetawa</i>	<i>Accipiter Cooperii</i>	Religious
Red-tailed Hawk	<i>Bipbi</i>	<i>Buteo jamanicensis</i>	Religious, ceremonial
Golden Eagle	<i>Boshkwa</i>	<i>Aquila chrysaetos</i>	Religious, ceremonial
American Kestrel	<i>Tsililik'o</i>	<i>Falco sparverius</i>	Religious
Merlin	<i>Tsililik'o Łana</i>	<i>Falco columbarius</i>	Religious
American Coo	<i>Hilu'kya</i>	<i>Fulica Americana</i>	Newekwe Society
Killdeer	<i>Dolowa</i>	<i>Charadrius vociferous</i>	Religious
Sandpiper	<i>Homa k'ossa</i>	<i>Sandpiper spp.</i>	Religious
Mourning Dove	<i>Nishabak'o</i>	<i>Zenaida macroura</i>	Edible, religious
Greater Roadrunner	<i>Boyyi</i>	<i>Geococcyx californicus</i>	Religious, ceremonial
Great Horned Owl	<i>Muhukwi</i>	<i>Bubo virginianus</i>	ceremonial
Burrowing Owl	<i>Muhukwi ts'ana</i>	<i>Speotyto cunicularia</i>	ceremonial
Common Poor-will	<i>Mewishokk'wa</i>	<i>Phalaenoptilus nuttallii</i>	Religious, ceremonial
Common Nighthawk	<i>Awadi Łana</i>	<i>Chordeiles minor</i>	Religious, ceremonial
White throated Swift	<i>K'upchi k'o</i>	<i>Aeronautes saxatalis</i>	ceremonial
Broad-tailed hummingbird	<i>Tsu ya</i>	<i>Selasphorus platycercus</i>	Religious, ceremonial
Black-chinned hummingbird	<i>Tsu ya</i>	<i>Archilochus alexandri</i>	Ceremonial, religious
Calliope hummingbird	<i>Tsu ya</i>	<i>Stellula calliope</i>	Religious, ceremonial
Rufus hummingbird	<i>Tsu ya</i>	<i>Selasphorus rufuss</i>	Religious, ceremonial
Northern flicker	<i>Hokwisho</i>	<i>Colaptes auratus</i>	Ceremonial, religious
Lewis' woodpecker	<i>Hokwisho k'winna</i>	<i>Melanerpes lewis</i>	religious
Hairy woodpecker	<i>Dumdununu</i>	<i>Picoides villosus</i>	Religious
Downy woodpecker	<i>Dumdununu</i>	<i>Picoides pubescens</i>	Religious
Say's Phoebe	<i>Its'u wakkyia</i>	<i>Sayornis saya</i>	Religious
Cassin's Kingbird	<i>Its'uwakkyia Łana</i>	<i>Tyrannus vociferanus</i>	Religious
Ash-throated flycatcher	<i>Its'uwakkyia K'yade kon'ona</i>	<i>Myiarchus cinerascens</i>	Religious, ceremonial
Horned lark	<i>Silo</i>	<i>Eremophila alpestris</i>	Ceremonial, religious
Stellers' Jay	<i>Maya</i>	<i>Cyanocitts stelleri</i>	Religious, ceremonial

Table 5. Birds of Zuni Cultural Importance in Grand Canyon			
Common Name	Zuni Name	Scientific Name	Major Use
Scrub Jay	<i>Chaya' a</i>	<i>Aphelocoma coerulescens</i>	Religious, ceremonial
Pinyon Jay	<i>A' akkya</i>	<i>Gymnorhinus</i>	Religious
Clark's Nutcracker	<i>Lohaya Bo'ya</i>	<i>Nucifraga Columbiana</i>	Ceremonial
American Crow	<i>Kwa la shi</i>	<i>Corvus brachyrhynchos</i>	Ceremonial
Common Raven	<i>Kwa la shi</i>	<i>Corvus corax</i>	Ceremonial
Mountain Chickadee	<i>Danaya Wi'wishkya</i>	<i>Parus gambeli</i>	Religious, ceremonial
White breasted Nuthatch	<i>K'ohanna No'dekta banilen'ona</i>	<i>Sitta carolinensis</i>	Ceremonial
Red-breasted Nuthatch	<i>Shilowa' No'dekta Banilen'ona</i>	<i>Sitta canadensis</i>	Religious
Rock Wren	<i>Ts'ilisho</i>	<i>Salpinctes obsoletus</i>	Ceremonial
Canyon Wren	<i>Chalawisho</i>	<i>Catherpes mexicanus</i>	Ceremonial
Ruby-crowned Kinglet	<i>Ts'apba</i>	<i>Regulus calendula</i>	Religious
Golden-crowned Kinglet	<i>Bits'its'i</i>	<i>Regulus satrapa</i>	Religious
Blue-grey Gnatcatcher	<i>Its'uwakkya</i>	<i>Poioptial caerula</i>	Folklore
Black-tailed Gnatcatcher	<i>Its'uwakkya</i>	<i>Poioptial melanura</i>	Folklore
Western Bluebird	<i>Łaluk'o</i>	<i>Sialia mexicana</i>	Religious, ceremonial
Mountain Bluebird	<i>Łah lu ko'</i>	<i>Sialia currucoides</i>	Religious, ceremonial
Northern Mockingbird	<i>K'yaycho'wa</i>	<i>Mimus polyglottos</i>	Religious
Sage Thrasher	<i>Dasisho</i>	<i>Oreoscoptes montanus</i>	Religious, ceremonial
American Robin	<i>Kwi shabak'o</i>	<i>Turdus migratorius</i>	Religious, ceremonial
Yellow-rumped Warbler	<i>Tsap ba</i>	<i>Dendroica coronata</i>	Religious
Yellow Warbler	<i>Tsap ba</i>	<i>Dendroica petechia</i>	Religious, ceremonial
Wilson's Warbler	<i>Tsap ba</i>	<i>Wilsonia pusilla</i>	Religious
Grace's Warbler	<i>Tsap ba</i>	<i>Dendroica graciae</i>	Religious
Yellow-breasted Chat	<i>Tsap ba</i>	<i>Icteria virens</i>	Religious
Western Tanager	<i>Onohtikya</i>	<i>Piranga ludoviciana</i>	Religious, ceremonial
Lazuli Bunting	<i>Onohtikya Łi'anna</i>	<i>Passerina amoena</i>	Religious, ceremonial
Black-headed Grosbeak	<i>O'do Łana</i>	<i>Pheucticus melanocephalus</i>	Religious, ceremonial
Green-tailed Towhee	<i>K'ewiya</i>	<i>Pipilo chlorurus</i>	Religious, ceremonial
Rufous-sided Towhee	<i>Kewiya</i>	<i>Pipilo erythrophthalmus</i>	Religious, ceremonial
Brown Towhee	<i>Kewiya</i>	<i>Pipilo fuscus</i>	Religious, ceremonial
Lark Sparrow	<i>Ketakojkwa</i>	<i>Chondestes grammacus</i>	Religious
White-crowned Sparrow	<i>Ts'uts'u'a</i>	<i>Zonotrichia leucophrys</i>	Religious
Vesper Sparrow	<i>Wi'wishkya</i>	<i>Pooecetes gramineus</i>	Folklore
Song Sparrow	<i>Wi' wish kya</i>	<i>Melospiza melodia</i>	Folklore
Dark-eyed Junco	<i>Tsupiya</i>	<i>Junco hyemalis</i>	Folklore
Northern Oriole	<i>Onoh li' kya</i>	<i>Icterus galbula</i>	Religious, ceremonial
Western Meadowlark	<i>Da'chitchi</i>	<i>Sturnella neglecta</i>	Religious
Yellow-headed	<i>Bala'du</i>	<i>Xanthocephalus</i>	Religious, ceremonial

Common Name	Zuni Name	Scientific Name	Major Use
Blackbird		<i>xanthocephalus</i>	
Brewer's Blackbird	<i>K'etcho</i>	<i>Euphagus cyanocephalus</i>	Religious, ceremonial
Great-tailed Grackle	<i>Kya de dasha</i>	<i>Quiscalus mexicanus</i>	Religious, ceremonial
Lesser Goldfinch	<i>Tsu tsua</i>	<i>Carduelis psaltria</i>	Religious, ceremonial
House Finch	<i>Ts'uts'u'a</i>	<i>Carpodacus mexicanu</i>	Folklore
House Sparrow	<i>Wi' wish kya</i>	<i>Passer domesticus</i>	Folklore

#### Other Animals

Although birds are probably the most important animals to Zuni, they are far from the only animals that Zunis view as religiously or culturally important. All animals have their place of reverence in Zuni cosmology (Tyler 1964). As mentioned above, even if Zunis did not need to collect any of these animals, their appearance is emblematic and auspicious of natural events, or man's response to them.

During the Zunis effort to emerge and reach the upper world, they were helped by four small creatures: a locust who, like the three birds before him, attempted to reach the upper world, and a spider, and a water strider, who eventually direct the Zuni people to *Halona-itiwana*, the Middle Place.

Zunis have a special relationship with water creatures, and this stems from events during their search for the middle place. During the migration (probably across the Colorado River), many Zunis children were released by their parents into the river and turned into water snakes, fish, frogs, and other aquatic life. The fact that Zuni children turned into aquatic wildlife establishes a lasting familial relationship between contemporary Zunis and all aquatic life in the Colorado River and other water sources.

Common Name	Zuni Name	Scientific Name	Major Use
Pronghorn Antelope	<i>Mawe</i>	<i>Antilocapra Americana</i>	
Coyote	<i>Suski</i>	<i>Canis latrans</i>	
Rocky Mountain Elk	<i>Oh no' le</i>	<i>Cervus elaphus</i>	
Black tailed Prairie Dog	<i>Kushi</i>	<i>Cynomys ludovicianus</i>	
Javelina	<i>Kudebaidoh Bitsudi</i>	<i>Dicotyles tajacu</i>	
Porcupine	<i>Chibi</i>	<i>Erethizon dorsatum</i>	
Mountain Lion	<i>Hokdidasha</i>	<i>Felis concolor</i>	
Bobcat	<i>Debi</i>	<i>Felis rufus</i>	
Black-tailed Jackrabbit	<i>Bokya</i>	<i>Lepus californicus</i>	
White-throated Woodrat	<i>Kochi</i>	<i>Neotoma albigula</i>	
Mule Deer	<i>Tsi lu si</i>	<i>Odocoile us hemionus</i>	
Bighorn Sheep	<i>Haliku</i>	<i>Ovis Canadensis</i>	
Raccoon	<i>Wedasha</i>	<i>Procyon rotor</i>	
Cotton Rabbit	<i>Okshiko</i>	<i>Sylvialgus audonbonii</i>	

Squirrel	<i>Yashi</i>	<i>Tamiasciurus spp.</i>	
Badger	<i>Donashee</i>	<i>Taxidea taxis</i>	
Grey Fox	<i>Tlaniko</i>	<i>Urocyon cinereoargenteus</i>	
American Black Bear	<i>Anshi</i>	<i>Ursus americanus</i>	

Common Name	Zuni Name	Scientific Name	Major Use
Fishes	<i>Kyh' shida</i>		
Frogs	<i>Dok'kya</i>	<i>Anura Ranidae</i>	
Horned Toads	<i>Lahoohokyaba</i>		
Lizards	<i>Me'sho</i>	<i>Sauria Lacertidae</i>	
Rattlesnakes	<i>Chit'do'la</i>	<i>Crotalus spp.</i>	
Tadpoles	<i>Modolikya</i>		
Turtles	<i>Ed'dowa</i>		
Water snake	<i>Mi'kyali</i>		
Water Striders			

#### 2011 Zuni Colorado River Monitoring Trip Findings

The Zuni Colorado River monitoring trip occurred between 13 August and 22 August 2011. Twenty-eight (28) places along the Colorado River ecosystem through Grand Canyon were monitored by the Zuni cultural advisors. Impressions and reflections on the health of these places were recorded by the Zuni cultural advisors. Table 8 summarizes the places monitored during the Zuni Colorado River monitoring trip and the impressions by the cultural advisors on the condition of these resources. Each specific place visited during the monitoring trip is described in the narrative below which includes a detailed account of the Zuni cultural advisors' observations, comments, and concerns. Also provided are the Zuni cultural advisors' perspectives regarding the overall health of the Colorado River ecosystem and their personal viewpoints about visiting the sacred place of emergence and the associated migrations.

Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
13 August	Lees Ferry – Launch				
	AZ:C:6:3 (Soap Creek Rapid)	Pill sherd and lithic scatter	Natural and human	Zuni TCP associated with emergence and migrations	Restrict public access; ZCRAT work with NPS on aerial study.
	AZ:C:6:5 (Supai)	Petroglyph panel and	Direct	Zuni TCP	Zuni wants to

Table 8. Summary of Places Visited and Observations Made During the 2010 Zuni Colorado River Monitoring Trip					
Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
	Man Petroglyph)	directional panel to Zuni Pueblo ( <i>Idiwan'a</i> )	impacts from humans (vandalism)	associated with emergence and migrations	collaborate with NPS to protect this site
	South Canyon	Burial located here	Exposure of burial	Associated funerary objects separated from in-situ human remains	Zuni recommends NPS return associated funerary objects to burial and secure location.
	AZ:C:5:3 Stanton's Cave	Solution cave located within the Redwall Formation; archaeologically investigated in 1969 and 1970	Direct impacts from humans	Zuni TCP associated with emergence and migrations	Reduce hiker impacts; collecting artifacts
14 August	Vasey's Paradise	Dense vegetation watered by waterfalls emanating from groundwater emerging from upper cliff face.	Indirect impacts from erosion and humans	Zuni TCP; source of sacred water	Annual monitoring; no concerns
	Redwall Cavern	Alcove created by Colorado River			No concerns
16 August	AZ:C:9:1 (Nankoweap Granaries)	Multiple loci of alignments, artifacts, granaries, and other features	Direct impacts from erosion and humans (poor condition)	Zuni TCP associated with emergence and migrations; Zuni shrine located here requires protection and spiritual attendance	Restrict visitation
	AZ:C:9:28 (L-N): Kwahgunt	Over 10 rooms and features were	Site has been	Zuni TCP associated	Annual monitoring; Zuni

Table 8. Summary of Places Visited and Observations Made During the 2010 Zuni Colorado River Monitoring Trip					
Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
		encountered along with shrines, terraced gardens, and storage bins.	excavated; continuing human and natural impacts	with emergence and migrations; Zuni shrine located here requires protection and spiritual attendance.	interested in the prehistoric agriculture that was practiced at this site and want to work with NPS on research proposals to understand the past farming techniques.
	AZ:C:13:365 (Malagosa Canyon)	Semi-rectangular rock alignment and artifact scatter	Direct impacts from erosion	Zuni TCP associated with emergence and migrations; Zuni shrine located here requires protection and spiritual attendance	Annual monitoring and maintenance of Zuni shrine
17 August	Little Colorado River Confluence	Confluence of Little Colorado and Colorado Rivers	No concerns	Zuni TCP-Sacred place	Continue to avoid implementing mechanical removal; find alternative method for dealing with non-natives (i.e., trout)
	Hopi Salt Mine		No concerns		Zunis left offerings
	AZ:C:13:99 - Palisades Area (mineral collection)	Early-mid PII Anasazi habitation site	Poor condition due to natural (water)	Zuni TCP associated with emergence and	Annual monitoring; mitigate erosion. Zuni wants to be included in any

Table 8. Summary of Places Visited and Observations Made During the 2010 Zuni Colorado River Monitoring Trip					
Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
			erosion	migrations; Zuni mineral collection area	future archaeological data recovery that may be planned for this site.
18 August	Tanner (camp area –north Tanner trail)	Zuni petroglyphs	No concerns		Zuni recommends that the NPS develop a research proposal that would generate a Zuni interpretation of the petroglyphs located here.
	AZ:C:13:339	Zuni petroglyphs	No concerns; site in good condition		
	AZ:C:13:92 (Lautiers' cabin)		Artifact piling by visitors		Zuni recommends the NPS increase public education and/or restrict access to site.
	Cardenas - Lookout Site	Single room feature with associated hearth	Visitors defacing Zuni shrine; Erosion	Zuni TCP associated with emergence and migrations; ceremonial structure and Zuni shrine	Zuni wants the NPS to educate all commercial boatmen to inform public not to deface the Zuni shrine; NPS should reroute trail away from Zuni shrine
	AZ:C:13:10 (Furnace Flats)	Large, multicomponent habitation site.	Fair condition with erosion affecting the site; Zuni shrine threatened	Zuni TCP associated with emergence and migrations; Zuni shrine nearby	Annual monitoring and protection; Zuni want NPS to integrate Zuni perspective into any archaeological

Table 8. Summary of Places Visited and Observations Made During the 2010 Zuni Colorado River Monitoring Trip					
Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
			by erosion		data recovery work planned for this site.
19 August	Unkar Delta (AZ:C:13:1)			No concerns	Zuni wants to assist NPS in revising the public brochure about this site.
	AZ:B:16:1 (Phantom Ranch)	PII-PIII roomblock, kiva, and artifact scatter	Good condition; human and erosion impacts	Zuni TCP associated with emergence and migrations	Annual monitoring; reduce visitor impacts
	Mile 117.6 – Salt Deposit (Zuni Salt Deposit)		Good condition	Zuni TCP	Zuni wants to assist NPS in naming this location
	Lower Bass Camp (AZ:B:15:1)	10+ rooms, thermal features	Erosion	Zuni TCP associated with emergence and migrations; Zuni shrine	Zuni recommends that NPS restrict access to portion of site that is away from the public camping area; close the trail.
20 August	Shinamu Creek			No concerns	
	AZ:B:10:1 & AZ:B:10:3 (Deer Creek)	PI-PII granaries and artifact scatter	Human impacts	Zuni TCP associated with emergence and migrations; Dutton Springs a Zuni TCP	Annual monitoring and protection
	Deer Creek Falls (spring & plant)	Zuni collection area for willow, tobacco, water, datura, and pigments	Human impacts	Zuni shrine	Facilitate Zuni privacy; protect spring
21	Havasus Creek	Havasus spring; Zuni	Human	Zuni TCP	Protect spring;

Table 8. Summary of Places Visited and Observations Made During the 2010 Zuni Colorado River Monitoring Trip					
Date	Places Monitored	Description	Impacts Identified	Zuni Cultural Concerns	Comments
August		collection of water	impacts and high visitation		reduce visitation
	Petroglyphs at Lava Rapids	New petroglyph site depicting Zuni emergence and migrations	Good condition	Zuni TCP associated with emergence and migrations	Zuni recommends that NPS restrict access to this site; Zuni will provide NPS with a name for this site
	AZ:A:16:1 (Whitmore Wash)	Multicomponent: late Archaic-BMII; PI-III Virgin Anasazi; and late prehistoric-historic Paiute	Erosion and human impacts	Zuni TCP associated with emergence and migrations	Annual monitoring and protection with cactus to keep visitors away. Restrict area.
	Hematite Mine (mineral collection)	Source for hematite collection; cave.	Good condition	Collection of traditionally important mineral (hematite)	Zuni does not want hematite mine closed by NPS.
	AZ:G:3:77 (Three Springs Canyon)	Pictograph panel of four figures	Fair to good condition	Zuni TCP associated with emergence and migrations	Annual monitoring
22 August	Diamond Creek-Take Out				

AZ:C:6:3 (Soap Creek Rapid)

Site description: This site is divided into two loci (A and B) and consists of a dispersed sherd and lithic scatter and the remains of two possible wall alignments eroding from the fourth terrace above the river. Artifacts are somewhat concentrated into three small areas at Locus A and two small areas at Locus B. Locus A artifacts include flakes and formal and expedient tools, shell, and ceramics. One rock alignment was recorded eroding out of a dune face. Locus B contains flakes, groundstone, sherds, and an ashly lens. A crude alignment of Supai cobbles and a slab may be the remains of a structure. Recorded artifacts indicate a PII Anasazi occupation (Fairley and others 1994:219).

Zuni Observations: This site is considered a product of the Zuni migrations shortly after emergence. The Zuni cultural advisors expressed concern about continued human and natural impacts to the site that will adversely impact its integrity. The Zuni cultural advisors recommend restricting public access by removing some of the trails that lead to AZ:C:6:3 and other archaeological sites. The Zuni cultural advisors are interested in collaborating with the National Park Service regarding the proposed aerial study, but the Zuni cultural advisors would like more information from the National Park Service about this study. The Zuni cultural advisors recommend that the National Park Service consult with Zuni regarding the aerial project and other proposed research for the Grand Canyon.

#### AZ:C:6:5 (Supai Man Petroglyph)

Site description: This site consists of a sandstone bedrock petroglyph panel with three pecked figures. The panel is approximately 1.6 m square. The petroglyph elements are in excellent shape, with minimal wind/water erosion. The figures include an anthropomorph, a pecked line, and an abstract element shaped like a flying "U" (Fairley and others 1994:219).

Zuni Observations: This site is considered a product of the Zuni emergence and subsequent migrations. According to the Zuni cultural advisors, the pecked line in the stone indicates the direction to the Pueblo of Zuni as confirmed by Mr. Seowtewa's global positioning system (GPS) and Mr. Yawakie's compass during the 2010 Zuni river trip. The pecked figure is interpreted by the Zuni cultural advisors as representing the individual who showed the Zunis how to get out of the underworld and directed them to Zuni. It represents a Zuni traditional cultural property that has been visited by Zuni cultural advisors during five of the past six river trips. The Zuni cultural advisors want the name of the site changed because they believe the site is directly associated with Zuni because it is markings left by Zuni ancestors. During their visit to the site, the Zuni cultural advisors found beer cans, hiker trash, and other garbage left behind by hikers and fishermen. Zuni cultural advisors are concerned about the continued human and natural impacts to this site that will, overtime, adversely impact the site's integrity. Zunis noted vandalism in the form of a newly pecked line next to the original pecked line. Due to vandalism, the Zunis want to monitor this site annually. Zuni cultural advisors recommend the National Park Service consider creating barriers to these sensitive places that will restrict access that will ensure that the Zuni evidence remains for another 500 years or into perpetuity. The Zuni cultural advisors would like to know how the National Park Service proposes to preserve these places as a portion of the World Heritage site. Zuni cultural advisors will provide the National Park Service with some Zuni names for parts of the Grand Canyon.

#### South Canyon and AZ:C:5:3 (Stanton's Cave)

Site description: The site is within a Redwall Formation solution cave that was investigated by a team of archaeologists, geologists, and biologists under the direction of Rober Euler, primarily during 1969 and 1970 field seasons. Archaeologically, the site is known as Stanton's Cave and is associated with split-twig figurines (i.e., split willow representations probably of deer and/or bighorn sheep) that were placed or cached in the cave, perhaps as some form of "imitative magic" ceremony. The figurines generally date to

the Late Archaic, ca. 3-4,000 years B.P. The cave was excavated and, in addition to more figurines, some cordage, a possible spindle whorl, shell beads, a scraper, and a mano were recovered, although none were in association with the figurines (Fairley and others 1994:217).



Figure 1. Stanton's Cave (Photo by K. Bowekaty 2010).

Zuni Observations: This site is considered a Zuni traditional cultural property because of its association with the emergence and subsequent migrations to find the Middle Place. The Zuni cultural advisors are still concerned about the continued impacts to the site from hikers who appear to be the cause of disappearing artifacts. The Zuni cultural advisors want the National Park Service to restrict access to the site by controlling day hikers. Day hikers must get National Park Service permits and must be required to sign contract with National Park Service to not collect surface artifacts. Site is being

compromised from hikers visitation. Some petroglyphs appear to be disappearing from either human activities or natural erosional processes. Zuni cultural advisors are concerned about National Park Service activities to enhance or reconstruct walls or create public spaces/features at archaeological sites that were not originally there. Zuni wants data recovery implemented at archaeological sites threatened with loss from erosion to document Zuni history and provide for the Zuni involvement in the data recovery to produce a Zuni voice of the past. There has been a lot of sediment lost in the Grand Canyon which justifies in the minds of the Bureau of Reclamation and the National Park Service the need for the high flow experimental protocol. This site has been visited and monitored by the Zuni monitoring program four times since 1997.

This area is a collection area for gypsum by the Zuni.

Zuni cultural advisors are concerned about the burial at South Canyon. The Zuni cultural advisors want the area of the burial to be stabilized and revegetated to retard erosion. Two vessels were recovered with the burial by the National Park Service who have placed the associated funerary objects in storage and have asked the Zuni cultural advisors how to manage these funerary objects. The Zuni cultural advisors recommend that the National Park Service return the funerary vessels back with the burial and ensure the security of the burial location from future human and natural impacts.

#### Vasey's Paradise

Site Description: Vasey's Paradise is an oasis 1.5 miles below Mile 30 Sand Bar on the Colorado River in Grand Canyon. In a semi desert environment it supports dense vegetation watered by a waterfall emanating from groundwater emerging from the upper cliff faces. John Wesley Powell characterized

Vasey's Paradise in writing ".fountains bursting from the rock high overhead, and the spray in the sunshine forms the gems which bedeck the wall. The rocks are covered with mosses and ferns and many beautiful flowering plants" (Belknap and Evans 2011:37).

Zuni Observations: The waterfall is considered a Zuni traditional cultural property and water is collected here by the Zuni cultural advisors. The Zuni cultural advisors believe the Kanab ambersnail is helping the Zunis preserve this place. The Zuni cultural advisors believe that Vasey's Paradise is in good condition. The Zuni cultural advisors are concerned about the proposed uranium mining on the north rim because the proposed mining has the potential to contaminate the spring. Recommend continued annual monitoring.

#### Redwall Cavern

Site Description: located at river mile 33.1, the Redwall Cavern is a very large alcove in the Redwall sandstone situated at river level. It is an amphitheater created by the Colorado River as it eroded away the limestone cliff walls and a popular spot for river rafters to stop and explore. John Wesley Powell said that he believed it could hold about 50,000 people.

Zuni Observations: The Zuni cultural advisors had no comments or concerns.

#### AZ:C:9:1 - Nankoweap (greater area and granaries)

Site description: AZ:C:9:1 consists of several loci of rock alignments, artifacts, and other features that were originally recorded by R. Euler and re-recorded by Grand Canyon River Corridor crews in the early 1990s. Loci A-C, however, were not re-recorded by the Grand Canyon River Corridor archaeological survey. According to Fairley and others (1994:219) locus G was re-recorded as sites AZ:C:9:51 and :52, locus H was re-recorded as site AZ:C:9:53, and locus D was re-recorded as site AZ:C:9:80. Loci E, F, I, and J were re-recorded using their original designations. Locus E consists of a sparse artifact scatter, primarily lithics with a few Paiute sherds, associated with an ephemeral charcoal-stained lens. Locus F consists of two granaries in a Muav cliff face. Locus I consists of a ridge slope with numerous rock alignments perpendicular to the slope and a few PII Anasazi sherds. Locus J consists of several rock alignments that form terrace-like areas. The site is considered mutli-component because locus E was interpreted and recorded as a Paiute use area, locus F attributed to PI-III Anasazi; and loci I and J are deemed mid-late PII Anasazi occupations (Fairley and others 1994:219).

Zuni Observations: The Zuni cultural advisors considered this site in poor condition. Hiking trails are still located within the site area and almost all surface artifacts are gone. The structures appear to be stable but have been disturbed by humans. A Zuni shrine is located on the eastern end of the site and is in need of protection and spiritual attendance. Only a few lithics were seen on the site. Granaries appear to be well preserved although visitation to them remains high. Archaeological sites that are off limits to visitation are still in good condition with many surface artifacts; however, sites where visitation is permitted there are less surface artifacts. The Zuni cultural advisors recommend monitoring the

structures annually or when National Park Service or Zuni monitoring river trips are conducted. Zuni cultural advisors recommend that the National Park Service restrict visitation because visitors often times bring inappropriate objects and photographs to these places. For example, the Zuni cultural advisors witnessed a photograph of a deceased boatman that was left in a granary at Nankoweap. Also, the Zuni cultural advisors identified a piece of turquoise that was also left in the granary, but was not deposited by the Zunis. Zunis recommend annual monitoring.

#### AZ:C:9:28 (L-N)- Kwahgunt Site

Site Description: This site is fairly new to the Zuni cultural advisors and the monitoring program. The site was first visited in 2001 when it was pointed out to the Zuni monitoring team by a river boatman. The site consists of over 10 rooms and associated features along with several shrines, terraced gardens, and storage bins. The site is located at the base of the first terrace from the river and may have been previously excavated.

Zuni Observations: The Zuni cultural advisors feel this is an important site that informs on the Zuni emergence and subsequent migrations and therefore, should be considered eligible to the National Register of Historic Places under criteria (a) & (b). The Zuni cultural advisors believe it is important to continue monitoring this site because it exhibits evidence of adverse human and natural impacts. The Zuni cultural advisors have identified shrines at this site that are in need of continued spiritual attendance and protection. The Zuni cultural advisors want to know if the National Park Service has a detailed plan map of this archaeological site depicting the terraced gardens because they appear to be similar to Zuni farming techniques employed at Zuni. From a Zuni perspective this type of farming began in the Grand Canyon by Zuni ancestors who then brought it to Zuni.

#### Malagosa Canyon (AZ:C:13:365)

Site description: This is a small limited activity area of unknown cultural affiliation that consists of a semi-rectangular rock alignment (F1), a sparse artifact scatter, and two FCR concentrations (F2 and F3), which are eroding from a dune bank. According to Fairley and others (1994:235), Feature 1 is at the north end of the site and measures 2.7 x 3 m and is a single course rock alignment with elements of unshaped limestone and sandstone cobble boulders of unknown function. Recorded artifacts at the site include tertiary flakes and a metate and mano fragment. The FCR concentrations each have 10-15 burned stone fragments, but no discernible charcoal staining (Fairley and others 1994:235).

Zuni Observation: There is an active Zuni shrine located at this site. The Zuni cultural advisors stop here to honor the shrine. Although the archaeological site is located approximately 200 meters west of the shrine, the shrine is still considered by the Zuni cultural advisors to be associated with this site. The shrine and site are recommended for monitoring on an annual basis. This location is also important for the Zuni cultural advisors as a hackberry collection area.

#### Little Colorado River Confluence (61.7 mile)

Site Description: Here, at river mile 61.7, the Little Colorado River confluence with the Colorado River marks the terminus of Marble Canyon and the beginning of the central Grand Canyon. When the Little Colorado River (LCR) is not in flood stage, this milky blue stream contrasts dramatically with the green-brown waters of the larger Colorado River. The confluence is more than just water moving downhill. It represents a crossroads of nature, history, and culture. The confluence of the Little Colorado and the Colorado rivers is also a critical habitat for endangered fish species, primarily the humpback chub.

Zuni Observations: Here the Zuni cultural advisors discussed the near shore ecology research project and the humpback chub with scientists of the research team. Zuni cultural advisor, Ben Kallestewa, mused that if the humpback chub has survived in the Colorado River in Grand Canyon since the beginning of time as the scientists indicate, then why is the federal government trying to save them when it seems like they have been doing just fine. The Little Colorado River's confluence with the Colorado River represents a direct Zuni connection to the Grand Canyon that is facilitated by the spiritual umbilical connection of the Zuni River's confluence with the Little Colorado River and the Little Colorado River's confluence with the Colorado River in Grand Canyon.

#### Hopi Salt Mine (AZ: C:13:3)

Site Description: The site consists of two main areas (referred to as adits) where abundant salt within shallow alcoves has been mined by the Hopi and perhaps the Havasupai. The largest of these adits is 4 m in depth, 1.5 m in height, and 8 m in length. The second is 7 m in length, 1-2 m in depth and less than a meter in height. Salt is forming in many areas along the Tapeats cliff, but appears to have been actively removed primarily from these two areas. The adit to the north has 25-30 red hematite pictograph elements above it. Below this same source area, towards the river's edge, is a long Tapeats slab with four ground, shallow basins along the top of it (Fairley and others 1994:225).

Zuni Observations: The Zuni cultural advisors determined that this site and the salt looked to be in good shape. The Zuni cultural advisors collected salt here and deposited offerings. The Zuni cultural advisors expressed appreciation for the National Park Service's decision to close this site off from public visitation.

#### AZ:C:13:99 – Pallisades

Site Description: The site consists of two loci (A&B) of fire-cracked rock features, buried or collapsed structures, and artifacts extending over an area covering approximately 25 x 40 meters. According to Fairley and others (1994:228) locus A includes several charcoal lens and burned rock features, and an artifact concentration. Many of these features are eroding out of a sand dune-like area being cut by an arroyo. Several sherds and Redwall chert flakes are present including ceramic artifacts that suggest an early-mid PII Anasazi occupation. Locus B consists of at least one masonry structure constructed of undressed sandstone and limestone river rocks. Another possible structure or roasting feature is being heavily eroded in the southern portion of Locus B (Fairley and others 1994:228).

Zuni Observations: This site and the greater area were visited by the Zuni cultural advisors where they collected azurite. In past monitoring trips, the archaeological site was observed to be in poor condition by Zuni cultural advisors because archaeological features have substantially eroded due to several

drainages that are down-cutting through the site area. The site and the greater area are considered by the Zuni cultural advisors to be Zuni traditional cultural properties eligible for listing on the National Register of Historic Places under criteria (a) & (b) because the archaeological site represents physical evidence of Zuni ancestors' presence in the Grand Canyon and their associated migrations and because it is a location for the collection of important minerals. In addition, this site is where a round kiva-like structure was identified and according to the Zuni cultural advisors may represent a Zuni medicine society house. The Zuni cultural advisors are concerned about the effects of erosion at this site because runoff from precipitation events can initiate and/or cause adverse impacts at this site. As Octavius Seowtewa expressed it "Nothing is stronger than water!" The Zuni cultural advisors expressed their desire to have the National Park Service continue to monitor this site and to implement mitigative strategies if the erosion should threaten the archaeological resources located here. The Zuni cultural advisors also wanted the National Park Service to engage the Zuni in any planned mitigative activity and to utilize Zuni archaeologists on this site and any other archaeological sites that are slated for excavation.

#### Tanner (camp area north of Tanner trail)

Zuni Observations: At this location the Zuni cultural advisors examined a petroglyph panel that contained a lot of information for the Zuni to interpret. According to Mr. Octavius Seowtewa the petroglyphs may represent a trail map of the Colorado River. The Zuni cultural advisors stressed that all Zuni trails are considered Register-eligible traditional cultural properties (TCPs). The Zuni cultural advisors suggested that a research proposal should be developed for funding consideration that would produce a detailed Zuni interpretation of the petroglyphs located here. According to the Zuni cultural advisors, Zuni ancestors specifically made these petroglyphs because they knew contemporary Zunis would someday be reconnecting with the Grand Canyon and the Zuni ancestors want the Zunis today to understand the importance of trails and their long and important connection to the Grand Canyon.

#### AZ:C:13:339 (West of Beamer Trail)

Site description: AZ:C:13:339 is an artifact scatter with several associated features that are assigned to the mid-late PII temporal period. There is a burned rock midden with sparse lithics and ceramics on the north side of the site eroding out of a cutbank. Feature 2 is a two-meter diameter rock alignment (structure), possibly storage related, with elements aligned and imbricated in a semi-circle open toward the cliff (upslope) side. Feature 6 is a rock alignment visible in the arroyo wall. There are also at least two or three cists, perhaps as many as five (Fairley and others 1994:232).

Zuni Observations: This site is considered by the Zuni cultural advisors to be a traditional cultural property eligible for listing on the National Register of Historic Places under criteria (a) & (b) because it represents evidence of the Zuni ancestors' presence in the Grand Canyon after emergence and their historic migration within the Grand Canyon as a result of searching for the Middle Place. The spirits of ancestral Zuni still reside at this place. Communication between the Zuni cultural advisors and the

ancestral spirits provides the advisors with a sense of whether the Colorado River ecosystem and this archaeological site in particular are healthy or not. This site is considered in good condition.

#### AZ:C:13:92 (Lautiers Cabin)

Site description: This is a multi-component site consisting of a historic habitation camp, and a prehistoric artifact scatter. The main historic feature is the remains of a small, rectangular foundation/tent platform constructed of driftwood and 2-3 inch thick hard-hewn pine planks. About 5 m to the east of this is another possible foundation of beams and driftwood. There is a possible sandstone outhouse foundation about 50 m east. There are few historic artifacts on the site. Remains include the bulk of a small, cast-iron stove, a three-inch-long piece of half-inch rod with a threaded end; numerous wire-cut nails; and a single fragment of an opaque, aqua glass bottle. To the north, on a talus slope, is a small, sparse, prehistoric artifact scatter of sherds and lithics. The historic component is probably late nineteenth to early twentieth century; the prehistoric component appears to be Late PI-early PII Anasazi.

Zuni Observations: A Zuni shrine is located here and it was determined by the Zuni cultural advisors to be in stable condition. The Zuni cultural advisors determined that the archaeological site was in good condition with heavy build up of alluvial soils. The Zuni cultural advisors also collected quartzite and chert rocks here. The Zuni cultural advisors noticed that surface artifacts had been collected and arranged in piles by previous visitors to the site. The collecting and piling of artifacts by visitors disturbed the Zuni cultural advisors and they recommend to the National Park Service to increase public education about not disturbing surface artifacts on archaeological sites or restrict visitation at this site. Additionally, the Zuni cultural advisors recommend that this site is in need of more extensive protection and annual monitoring by the National Park Service.

#### Cardenas: Lookout Site

Site Description: This site is situated on a hill top overlooking the Colorado River and is across the river from Furnace Flats (AZ:C:13:10). The site consists of a single stone room oriented in a north-south direction that measures 10 x 5 meters. A thermal feature (hearth) is located in the center of the room.

Zuni Observations: The "Lookout" structure is considered by the Zuni cultural advisors to have been used for ceremonial purposes by Zuni ancestors during their migrations within the Grand Canyon. The Zuni cultural advisors also stated that the Zuni migrations within the Grand Canyon were a peaceful period and there was not a need to have a lookout; thus, the Zuni cultural advisors believe this feature is inappropriately labeled. This interpretation is further supported by the presence of a Zuni shrine near the structure. The ceremonial function for the stone room and the presence of the Zuni shrine make this site a traditional cultural property according to the Zuni cultural advisors. The Zuni cultural advisors noted that people have been placing rocks on the Zuni shrine causing a defacing of the shrine by morphing it into a rock cairn. The Zunis removed the rocks and discovered turquoise offerings left in the shrine area; left there by the Zuni ancestors. The Zuni cultural advisors want the National Park Service to

inform commercial boatmen that this Zuni shrine is not a rock cairn and should be respected by all visitors to this site. The Zuni cultural advisors want the National Park Service to instruct all commercial boatmen to keep their people from adding rocks to this Zuni shrine. Additionally, the Zuni cultural advisors recommend that the National Park Service move the trail away from the Zuni shrine and encourage the public to utilize the other trail that circumvents the shrine.

#### AZ:C:13:10 (Furnace Flats)

Site Description: According to Fairley and others (1994:226), this is a large, multi-component habitation site that was divided into three "locales" by A.T. Jones, who supervised testing at this location in 1984. Locale 1 was previously recorded by R. Euler and W. Taylor in 1965; whereas, locales 2 and 3 were added after being discovered on a 1983 monitoring trip. Five structures and 21 features were assigned to locale 1, including a pithouse, several 1-2 room masonry structures, a pueblo, cists/hearths, and rubble/wall alignments. Four structures and 16 features were noted at locale 2, including rooms and rubble piles. Locale 3 contained two structures and five features, including a shelter, cists, wall/room remains. Results from testing suggested that the site may have had from 2-3 occupations, including use by PI Cohonina and PII Anasazi; ceramics also suggest a late prehistoric-early historic Hopi presence (Fairley and others 1994:226).

Zuni Observations: The Zuni cultural advisors consider AZ:C:13:10 to be a Zuni traditional cultural property that is in danger of being lost. The Zuni shrine located at this site is threatened by falling into the arroyo. The Zunis are concerned that this shrine may be lost due to erosion which would intensify the Zuni loss here because the Zunis have already lost a shrine at this site due to erosion. Additionally, the Zuni cultural advisors believe that this site is a Zuni ancestral site because of the fetishes discovered here during the archaeological excavations in 1968. The Zuni cultural advisors also want the National Park Service to integrate the Zuni perspective into any archaeological research or data recovery that may be proposed for this site in the future. According to Octavius Seowtewa, based on past Zuni river trips, a petrified Zuni War God was identified at Furnance Flats and the Zunis did not inform the National Park Service of the War God's presence. During a subsequent Zuni river trip, the Zunis discovered that the War God was gone and that was when they decided to provide more information to the National Park Service about Zuni observations and concerns so incidents like the missing War God won't happen again.

#### Unkar Delta (AZ:C:13:1)

Site Description: This is a large delta complex with numerous habitation, storage, and agricultural features that was partly excavated by Douglas Schwartz and others in 1967 and 1968. During two seasons of field work 52 sites and two distinct occupations were identified. The two occupations consisted of an early Cohonina presence around A.D. 900 followed by a Western Anasazi occupation between A.D. 1050-1150 (Fairley and others 1994:225).

Zuni Observations: The Zuni cultural advisors consider this site to be an ancestral Zuni habitation. At this site multiple styles of construction techniques are exhibited indicating that perhaps more than one cultural group inhabited this site. The Zuni cultural advisors interpret this as evidence that the Zuni ancestors constructed this site because the Zuni have always been an open and accepting people and the two distinct building techniques demonstrate the Zuni openness and compatibility was also practiced in the past by Zuni ancestors. It is the Zuni cultural advisors' understanding that the National Park Service wants to revise the public brochure for this site and incorporate more Zuni information into the message provided to the general public. The Zuni cultural advisors think that this is a positive step for the National Park Service to take and recommend that they begin by dropping the use of the term "Anasazi" and begin utilizing the term "Ancestral Puebloan."

#### AZ:B:16:1 (Phantom Ranch)

Site Description: AZ:B:16:1 is a well known, excavated site dating to the mid-late PII-early PIII Kayenta Anasazi period and consists of a use area/plaza (F1), a roomblock of four contiguous rooms (F3-6) and a single room (F2) on the northeast end of the block abutting and partially sharing a wall with the northeastern most room of the roomblock, and a detached kiva (F8) with an attached room-like feature (F7). According to Fairley and others (1994:206), three of these rooms have firepits; the fourth room is smaller, probably used for storage. The single room on the northeast corner also has a firepit. Southeast of the roomblock is a deep, square kiva with an L-shaped wall attached on the northeast end that forms another room with a firepit. All rooms appear to have been dug into the terrace. The walls are of unshaped local schist, blocky and tabular in form, and wet-laid. A light gray chert projectile point tip that was not very well thinned was recorded adjacent to the roomblock (Fairley and others 1994:206).

Zuni Observation: The Zuni cultural advisors consider this archaeological site to be a Zuni traditional cultural property that is in fairly good condition with only minor disturbances from erosion and human induced impacts. This area receives high visitation from recreational hikers descending from the south rim and annual monitoring is recommended by the Zuni cultural advisors. The Zuni cultural advisors also appreciate the National Park Service's changing of the public interpretive signs to include the Zuni perspective.

#### River Mile 117.6 (Zuni Salt Deposit; N4007296, E368978)

Site Description: This area is a newly identified site by the Zuni for acquiring salt from the Grand Canyon that is located north of Elves Chasm. Salt forms and is exposed within the crevices of the western wall of the Canyon.

Zuni Observation: The Zuni cultural advisors stopped here and collected salt. The Zuni's believe the salt deposits here produce a better salt than that found at the Hopi Salt Mines. According to the Zuni cultural advisors, the National Park Service identified a small brown ware ceramic bowl at this stop years ago. The National Park Service didn't know why this ceramic vessel was located at this site until they realized that it was a salt collecting location. The Zuni cultural advisors recommend that the National

Park Service consider assigning a proper name to this location and the Zuni cultural advisors will offer a name for the Park's consideration. When the Zuni cultural advisors provide the National Park Service with this name they want the Park Service to understand that this name is considered confidential and should not be distributed to commercial river runners or others.

#### Bass Camp/AZ:B:15:1

Site Description: According to Fairley and others (1994:202), this site was originally recorded by R. Euler in the summer of 1962 and is comprised of three separate loci: A, B, and C. Locus A is a set of habitation features constructed from stone materials and incorporating natural bedrock outcrops. Of the five features at locus A, two appear to have been excavated, one is naturally deflated, one remains buried, and another (previously labeled Room 5) is a collapsed cist or storage space. Locus B consists of a single curved rock wall under a shallow overhang on a bench 40 m above Room 4 at locus A and appears to have been a storage space that has fallen and eroded since Euler's initial visit. Locus C consists of a structure in a smoke-blackened overhang and a possible wall alignment 10 m east; few artifacts remain. The initial ceramic analysis of the site's material culture revealed a mix of Virgin and Kayenta Anasazi wares, dominated by Moenkopi Corrugated. A schist cobble tool with a used edge and a possible Rose Spring projectile point were also identified. This site has been assigned to a PI-III Anasazi temporal and cultural affiliation (Fairley and others 1994:202).

Zuni Observations: Site is in stable condition. All surface structures are in good condition. Site contains about 10 or more surface rooms with 5 thermal features, and one Zuni shrine. Site is also an area for the collection of schist. The Zuni cultural advisors left an offering here at the shrine. This site appears to be a popular camping spot for river runners. The Zuni cultural advisors want the National Park Service to know that this place is considered sacred by the Zuni and they would like the National Park Service to restrict access to that portion of the site that is away from the camping area by closing off the trail. The Zuni cultural advisors also recommend protection and annual monitoring for this site.

#### Shinamu Creek

Zuni Observations: The Zuni cultural advisors observed the National Park Service releasing Humpback chub into the Shinamu Creek. The Zuni cultural advisors were provided with a brief informative talk by National Park Service personnel regarding the translocation of Humpback chub by the National Park Service.

#### Deer Creek (AZ:B:10:01) and Deer Creek Falls

Site Description: According to Fairley and others (1994:194), AZ:B:10:01 is a PI to early PII Formative storage area consisting of seven granaries, a few sherds, and pieces of twine/cordage (found in Structure 1). The site is in a shallow overhang but visible from the river. The granaries vary in size, construction, and integrity, and are generally built of wet-laid and dry-laid Tapeats sandstone slabs, with

walls often 4-5 or 6-7 courses high. In some instances, it appears that recreational river runners and/or visitors have re-laid or newly laid additional stone elements as topmost courses.

Deer Creek Falls is a 100-foot-high waterfall that cascades out of a sinuous Tapeats sandstone tributary, creating an oasis on the lower Colorado River at mile 136.75. Recreational river runners often stop here to hike around the falls to Deer Creek Narrows, along a trail barely wider than a footstep, suspended high above the rushing creek waters. This area is known by the Zuni for the collection of willow, yucca, tobacco, water, datura, phragmites and pigments.

Zuni Observations: Located above Deer Creek Falls is Duton Springs which is considered a traditional cultural property by the Zuni because water is generally collected here and a known shrine to the Zuni cultural advisors is repeatedly visited. During this river monitoring trip, the Zuni cultural advisors observed rock climbers who were rappelling into the spring area, near "patio waterfall." The Zuni cultural advisors request that the National Park Service assist the Zuni cultural advisors in having privacy during Zuni visitation to this spring. The Zuni request for privacy from the National Park Service was also made in the 2010 Zuni river monitoring trip report. The Pueblo of Zuni requests that the location and the importance of Duton Spring to the Zuni remain confidential and privileged information by the National Park Service. Additionally, the Zuni cultural advisors want to further investigate the archaeological site (AZ:B:10:01) that is located here and that will require spending a full day of Zuni investigations for the purpose of generating additional recommendations to the National Park Service.

#### Havasu Creek (Zuni TCP)

Site Description: Havasu Creek starts out above the Canyon wall as a small trickle of snow run-off and rain water. This water meanders on the plains above the canyon for about 50 miles (80 km) until it enters *Cataract (Havasu) Canyon*. It then reaches *Havasu Springs*, where an underground river feeds the creek. This spring can be accessed by heading upstream when the creek is first encountered. The water stays at about 70 °F (21 °C) all year around. The creek is well-known for its blue-green color and distinctive travertine formations that result from large amounts of calcium carbonate in the water that formed the limestone that lines the creek and strongly reflects its color. The creek runs through the village of Supai, and ultimately confluences with the Colorado River.

Zuni Observations: The spring is a Zuni traditional cultural property and it is a location for the Zuni cultural advisors to collect water. The spring is also very popular with recreational river runners and hikers whose impacts on this important place are a concern for the Zuni cultural advisors. The Zuni cultural advisors heard additional information about the Humpback chub here from National Park Service personnel.

#### Petroglyphs at Lava Rapids

Site Description: This is a new petroglyph site that was identified in July 2010 by Octavius Seowtewa during a river trip with the *A:Shiwi A:wan* Museum. The petroglyphs apparently depict a migration outline consisting of a circle with a wiggly line descending from the circle, a reptile-appearing

anthropomorph, and a modern human form. The three petroglyphs are located side-by-side on a small boulder. According to Mr. Seowtewa, the petroglyphs depict the evolution of Zuni after emergence when Zuni begins in a reptile form that transforms into the modern human shape. Alongside these two petroglyphs is a depiction of the migration route from the Grand Canyon to the Middle Place of Zuni (the circle with the wiggly line).

Zuni Observations: The Zuni cultural advisors recommend that this place not be visited and remain a private Zuni visitation area. The cultural advisors believe that this is an extremely important place for the Zuni and they recommend annual monitoring and visitation. The Zuni cultural advisors recommend that the National Park Service consider including a Zuni representative on their annual river monitoring trips for the purpose of collecting specific Zuni information about this site and perhaps have Zuni provide a proper name for this location.

#### AZ:A:16:01 (Whitmore Wash)

Site Description: According to Fairley and others (1994:187), the site consists of two extremely shallow rockshelters at the base of a Tapeats sandstone cliff with associated perishable artifacts and nearby pictographs located approximately 30 m from the Colorado River. This is a multi-component site with evidence of late Archaic-Basketmaker II, PI-III Virgin Anasazi, and late prehistoric-protohistoric Paiute occupations, and remnants of a historic visitation in the late 1950s. The pictographs are located southwest of the shelters along the cliff face. There is one main group of hematite pictographs, and several smaller ones that are partially obliterated, but painted in white. The main shelter area consists of a deeply stratified midden exposed by a small gully about 1 m deep. Considerable amounts of charcoal, animal bone, cordage, corn cobs, and matting are visible; some vandalism (i.e., pothunting) has impacted the site. The site was recorded and recommended for excavation by R. Euler in 1960. The midden (locus A) was partially excavated in May and June of 1984, and a rock retaining wall was built as a management action to retard erosion. A prominent historic addition to the site were the words "Wilson Austin – Surveyors, Casa Grande, Ariz.," which were painted in white on the cliff face on the downstream side of the site (Fairley and others 1994:187).

Zuni Observations: This site is important to the Zuni cultural advisors because it depicts the Zuni history of emergence, the evolution of the Zuni form through previous worlds, and the final emergence into this the Fifth World from Ribbon Falls. The Zuni cultural advisors recommend that the National Park Service plant cacti in front of the pictographs to keep visitors far enough away. The Zuni cultural advisors believe it is very important to protect this site and keep wind/water erosion to a minimum and they recommend restricting public access to this area. The Zuni cultural advisors also want the National Park Service to know that the Zuni advisors are willing to hike into Whitmore Canyon for the purpose of assisting the National Park Service in any and all restoration and protection activities at this site.

#### Hematite Mine

Site Description: Mine where tribal river trips stop to collect hematite. The National Park Service strongly encourages the recreational river running public not to stop here.

Zuni Observation: The Zuni consider this site to be sacred and the Zuni use and association to this place was historically documented by Frank Hamilton Cushing in the nineteenth century. The Zuni cultural advisors are concerned about a Hopi request to the National Park Service to stop the collection of hematite from this mine. The Zuni cultural advisors believe that the request was made because other Hopis have collected large quantities of hematite from this site for the purpose of commercial sales. The Zuni cultural advisors want the National Park Service to know that the Zuni defend their collection of hematite from this location because it is used in ceremonies and is never for sale. Zuni cultural advisors recommend annual visitation to this mine and consider it to be in good condition.

#### AZ:G:3:77 (Three Springs Canyon)

Site Description: The site consists of a single pictograph panel with four hematite figures on a vertical face under a shallow Tapeats overhang that was recorded by the Colorado River Corridor Survey (Fairley and others 1994:249). The vertical rock face is approximately 0.8 m in height by 1.6 m wide with the four hematite figures being confined to a 0.4 by 0.6 m area. The depicted hematite figures include (from south to north) a corn plant, a corn plant/anthropomorph, an indistinguishable faded hematite blob, and a V-like figure that may be a remnant of a Cave Valley-style anthropomorph. Other cultural remains present are two oval grinding slicks within the Tapeats sandstone ledge located approximately 3 m east-southeast of the pictograph panel. The slicks are parallel and adjacent to each other and measure 1-2 cm in depth. A third possible grinding basin was noted on a vertical slab of Tapeats sandstone located west-northwest of the panel. According to Fairley and others (1994:249), cultural and temporal affiliation for this site is indeterminate.

Zuni Observations: Zuni cultural advisors interpret the function of this site to have been agricultural. The Zuni cultural advisors collect phragmites, willow, tobacco, and water here. The Zuni cultural advisors recommend annual monitoring and collecting.

#### Summary of 2011 Zuni Monitoring

As stated above the purpose of these river trips are to monitor Zuni ancestral sites (i.e., archaeological sites) and other traditional cultural properties within the Grand Canyon that may be affected by erosion (both natural and human induced), and to identify, if possible, direct impacts related to the operations of Glen Canyon Dam. During the 2011 Colorado River monitoring trip, Zuni cultural advisors monitored 28 places of traditional cultural importance. Of these 28 places, 18 are considered to be Zuni ancestral archaeological sites that are labeled as traditional cultural properties for their association with the Zuni emergence and the subsequent migrations that are part of Zuni traditional history, 9 represent Zuni collection areas, 3 contain Zuni sacred springs, 8 contain Zuni shrines that require protection and spiritual attendance by Zuni religious leaders, 3 places contain resources of Zuni traditional importance, and one is considered a uniquely sacred place (Little Colorado River confluence).

During the monitoring trip the Zuni cultural advisors also assessed the condition of these 28 places and concluded that 3 sites were experiencing impacts from erosion and other natural forces, 5 sites were receiving impacts from natural and humans forces, 8 sites were experiencing negative impacts directly related to human visitation, and that 10 sites were stable and Zuni had no concerns. Thirty one percent (31%) of the places monitored by the Zuni cultural advisors were determined to be experiencing adverse (negative) impacts as a result of human visitation that manifest in artifact piling, loss of surface artifacts, threats to Zuni petroglyphs, or defacing of Zuni shrines. The Zuni cultural advisors would like the National Park Service to more effectively monitor and control recreational visitation to these areas by non-Indians.

### Presence in the Canyon

For the Zuni, their connection to this cultural landscape is what differentiates them from other tribal peoples, and what differentiates them from the dominant colonialist society. The Grand Canyon is a significant place that contributes to the Zuni collective and individual identities. Experiencing the Grand Canyon through these monitoring trips allows Zuni individuals to transcend time, provides them an immediate connection to Zuni ancestors, and reinforces and reaffirms their connection to the emergence event, the migrations of the *A:shiwi* ancestors, and the creation of medicine bundles.

Experiencing the Grand Canyon links the present with the past and the Zuni cultural advisors' individual identities with their respective medicine societies, kiva groups, and kin groups. What the Zunis know about the Grand Canyon flows through them from the 'echo of generations,' and their knowledge cannot be universalized, that is, placed in quantitative terms that can be understood through a scientific paradigm, because they arise from the Zuni epistemological experience of this sacred place (see Kovach 2009:61). For the Zuni, experiencing the Grand Canyon and the validation of their associated historical traditions provides comfort and grounding and offers the warmth of reinforcing the strong spiritual umbilical connection between the Grand Canyon and the Pueblo of Zuni (*Id'iwanna*).

Being in the Grand Canyon reaffirmed the Zuni interconnection with their cultural landscape and how that forms the Zuni way of knowing. That is the Zuni epistemological interrelationship between the Grand Canyon and Colorado River, the Zuni language, the rocks, plants, and animals, and the Zuni knowledge of the ecosystem. The key to Zuni knowledge of maintaining harmony with the universe is, in part, based on insuring this relational balance with the ecosystem. The Zuni cultural advisors also felt that it is important to have all Zuni religious leaders experience a river trip through Grand Canyon because this location is where it all started and it needs to be seen and experienced by the Zuni religious hierarchy. George Yawakie stated "we have songs we sing that speak of the Grand Canyon and our ancestors. If all our religious leaders see this place our people and our religion will be stronger."

### Springs and Animals

During the river trip, the Zuni cultural advisors encountered 58 bighorn sheep, 5 deer, 2 beavers, 47 ducks, 9 cranes, 14 ravens, 6 osprey, 1 redtail hawk, and 1 snake of cultural importance in the Grand Canyon. Ronnie Cachini commenting on seeing these animals thought that they were a blessing for them, because they were in the Zuni ancestors' homeland and that the Zuni cultural advisors must acknowledge these animals so they can spiritually keep with them even when they return home. The other Zuni cultural advisors added that their seeing many forms of wildlife during the river trip was a good sign, it meant they were being watched by Zuni ancestors and that the Zuni ancestors were glad they were here.

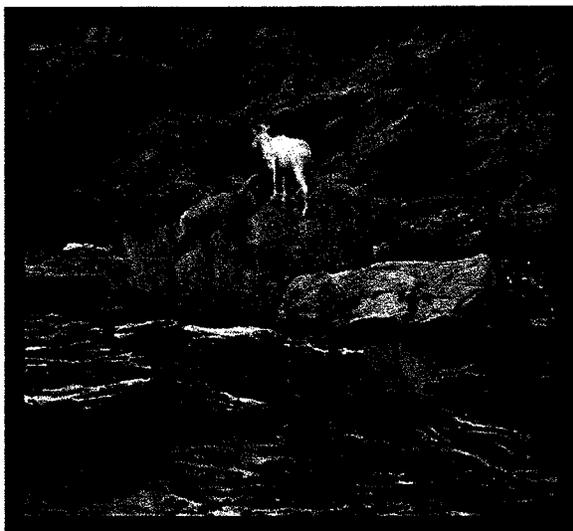


Figure 2. Bighorn sheep (*Ovis Canadensis*; *Haliku*) observed during river trip (photograph by K. Bowekaty).

Moreover, the Zuni ancestors understood that the Zuni cultural advisors were here as a pilgrimage to collect and this is why they were blessed with the plants that they collected and how easy it was to find all those things. The animals the Zuni cultural advisors saw will also bless their use of the materials collected.

George Yawakie thought the water from the spring at Vasey's Paradise would be used for the cleansing ceremony, but not all of it because some would be saved for the medicine bowl.

## Conclusion and Management Recommendations

Between 13 and 22 August 2011, the Zuni Heritage and Historic Preservation Office, on behalf of the Pueblo of Zuni, conducted a monitoring river trip on the Colorado River through Grand Canyon from Lees Ferry to Diamond Creek. The purpose of this river trip was to provide the Zuni religious leaders and cultural advisors an opportunity to inspect the health of the Colorado River ecosystem through Grand Canyon as part of the long-term monitoring program that is associated with the Glen Canyon Dam Adaptive Management Program (GCDAMP). Ten (10) Zuni representatives participated in the 2011 Zuni monitoring river trip representing 7 medicine societies, 4 kiva groups, and the Bow priesthood. During the 2011 Colorado River monitoring trip, Zuni cultural advisors monitored 28 places of traditional cultural importance. Of these 28 places, 18 are considered to be Zuni ancestral archaeological sites that are labeled as traditional cultural properties for their association with the Zuni emergence and the subsequent migrations that are part of Zuni traditional history, 9 represent Zuni collection areas, 3 contain Zuni sacred springs, 8 contain Zuni shrines that require protection and spiritual attendance by Zuni religious leaders, 3 places contain resources of Zuni traditional importance, and one is considered a uniquely sacred place (Little Colorado River confluence). Overall, the Zuni cultural advisors feel that the Colorado River ecosystem through Grand Canyon is in good condition. The Zuni cultural advisors did not detect any effects, positive or negative, from the operations of Glen Canyon Dam. The majority of

impacts detected by the Zuni cultural advisors are related to visitor impacts at important Zuni cultural sites.

As a result of the Zuni monitoring trip the following thirteen management recommendations are provided to the Bureau of Reclamation and Grand Canyon National Park. The first three recommendations are directed toward the Bureau of Reclamation and the broader Glen Canyon Dam Adaptive Management Program. These recommendations are then followed by ten management recommendations that are directed to the Grand Canyon National Park Service regarding the management of natural and cultural resources located within the Grand Canyon.

#### Recommendations to the Bureau of Reclamation

- The Zuni cultural advisors want the Bureau of Reclamation to continue to not implement the mechanical removal management action. The Zuni cultural advisors expressed their concern that if the mechanical removal begins again it will have negative consequences for the Zuni people. Mechanical removal is viewed by the Zuni as a poor, if not confounding, solution to an environmental problem that has been solely created by the federal government's nature disrupting actions over the past 83 years. In fact, the Zuni cultural advisors expressed the following sentiment to the Bureau of Reclamation: ***"We, the Zuni, have been taught by our elders that life is sacred and this includes the life of animals, plants, all living beings. We continue to ask for help from our living brothers and sisters to sustain our lives. In return, we give our voice to protect and honor these sacred beings. Since our concerns over the fish removal and treatment within the Colorado River were heard and respected, we have seen an increase in rain fall in the Zuni aboriginal areas. A blessing from our ancestors."***
- The Zuni cultural advisors recommend the Bureau of Reclamation consider funding the development of an educational program that is focused on teaching Zuni youth within the elementary and secondary school district at Zuni about the Grand Canyon and its importance in Zuni history, culture, and contemporary life and the Zuni Tribe's participation in the Glen Canyon Dam Adaptive Management Program.
- The Zuni cultural advisors recommend the Bureau of Reclamation in collaboration with the Grand Canyon National Park Service design and fund an educational program that will allow for the Zuni cultural advisors (and other tribal elders/representatives) to inform and sensitize recreational river guides, boatmen, National Park Service personnel and other researchers who spend a great deal of time in Grand Canyon about the importance of the traditional issues outlined in this Zuni monitoring report and enlist their assistance in the protection and appropriate management of culturally important places and natural resources within Grand Canyon.

#### Recommendations to the Grand Canyon National Park Service

- The Zuni cultural advisors want to work with the National Park Service in providing Zuni place names for important locations within Grand Canyon.
- The Zuni cultural advisors recommend to the National Park Service to restrict public access by removing some of the trails that lead to AZ:C:6:3 and other archaeological sites. The Zuni cultural advisors are interested in collaborating with the National Park Service in the proposed aerial study, but require more information about the study and the Zuni involvement.
- Zuni cultural advisors recommend the National Park Service consider creating public barriers to the petroglyphs located at AZ:C:6:5 that will restrict access thereby ensuring the Zuni evidence remains here forever.
- The Zuni cultural advisors recommend the National Park Service restrict access to AZ:C:5:3 by controlling day hikers who the Zuni believe are the cause of disappearing artifacts.
- The Zuni cultural advisors recommend the National Park Service return the South Canyon associated funerary objects to the in-situ human remains (burial) and ensure the security of the burial location from future human and natural impacts.
- The Zuni cultural advisors recommend the National Park Service restrict visitation at AZ:C:9:1 (Nankoweap) because visitors often leave inappropriate objects/items at this place.
- The Zuni cultural advisors recommend the National Park Service develop and fund a research proposal that would produce a detailed Zuni interpretation of the petroglyphs located at the Tanner camp area north of the trail.
- The Zuni cultural advisors recommend the National Park Service increase public education about not disturbing or piling surface artifacts at AZ:C:13:92. If this recommendation is not effective, then the Zuni cultural advisors recommend the National Park Service restrict visitation to this site.
- The Zuni cultural advisors recommend that the National Park Service inform commercial boatmen that the Zuni shrine at Cardenas "Lookout site" is not a rock cairn and visitors should not place rocks on the Zuni shrine because it is considered a form of defacement by the Zuni. Additionally, the Zuni cultural advisors recommend the National Park Service move the trail away from the Zuni shrine and encourage the public to utilize the other trail that circumvents the shrine.

- The Zuni cultural advisors want the National Park Service to know that AZ:B:15:1 (Bass camp) is considered sacred by the Zuni and recommend that the National Park Service consider restricting access to that portion of the site containing the Zuni shrine by closing off the trail.

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APPENDIX A

ZUNI GLOSSARY  
FOR THE  
GLEN CANYON DAM  
ADAPTIVE MANAGEMENT PROGRAM

## ZUNI GLOSSARY

(Adopted from the work of E. Richard Hart)

- Apithla:shiwanni.* Bow Priests.
- A:shiwanni.* Rain Priests.
- A:Shiwi.* The Zuni name for themselves in the Zuni language.
- A'witentehula.* The Fourth Womb or level of the Zuni underworld.
- Akwathle.* Azurite.
- Chimik'yana'kya day'a.* Located on the Colorado River, in the Grand Canyon, willows, herbs, sands, clay and water are collected here. This is the original point of origin in the Zuni origin and migration narrations. It is visited by the Galaxy Fraternity.
- Da:biliyanku.* Located east of Denatsali Im'a, this is a site near the Little Colorado River mentioned in the migration narratives.
- Da:kwe.* Mountain Mahogany.
- Denatsali Im'a.* Woodruff Butte, located near the Little Colorado River; this is a very sacred place mentioned in migration narration. It is also a place in the Kyaklo prayer.
- Hanathlipinkya.* Place on the migration route, southwest of Witch Wells.
- Hatin K/ya:kwe.* "Listening Spring" or "Whispering Spring" is found near the base of Korkokhi Mountain, near the confluence of the Little Colorado and Zuni Rivers.
- Hetsupapa.* Iron pyrite.
- Ibina.* Salt bush.
- Itiwa Kyana.* A sacred spring along the Zuni River on the trail to Kolhu/wala:wa.
- K/ya:kwe.* "Water Place" in the Zuni language.
- Kiatuthlanna.* North of St. Johns, stopping place on migration route.
- Kokko.* The supernatural beings who inhabit Kolhu/wala:wa and are responsible for the well being of those living in this world.

- Kolhu/wala:wa.* A location near the confluence of the Zuni and Little Colorado Rivers. The home of the supernatural Kokko, and the place where all Zunis go after death.
- Kolowisi Kyakwe.* Sacred spring and shrine mentioned in migration narratives, on Zuni River.
- Kuhnis.* Havasupais.
- Kumanche an A'lakwin.* Canyon Diablo ("Commanche Rock Drawer"), near Two Guns, Arizona.
- Kyana Bathlta.* A sacred spring along the trail to Kolhu/wala:wa and near the Zuni River.
- Kyana Itiwana.* A sacred spring near the Zuni River along the trail to Kolhu/wala:wa.
- Ma/ettude.* A place along the trail to Hopi, located on the Puerco River at Manuelito Canyon.
- Mahko Se'naye.* Salt Seeps at Navajo Springs, on the trail from Zuni to Hopi and the Grand Canyon.
- Mathlaluco.* Malachite.
- Nawisho An Kyana.* A spring of the Kokko called Nawisho is found near Kolhu/wala:wa.
- /Oh/emm/a.* A location north of the Puerco River along the trail to Hopi that was a campsite.
- Onnane.* "Road" or "Trail" in the Zuni language.
- Prayermeal.* Offerings made for the Kokko and Zuni ancestors, consisting of cornmeal, ground shell and turquoise.
- Prayerstick.* Prayersticks are constructed as offerings. Their length is usually the distance from the tip of the middle finger to a spot on the wrist of the person making the prayer and prayerstick. Feathers and sometimes corral or turquoise beads are tied to the stick, which is offered in prayer to the sun, moon, ancestors, and Koko, depending on how it is constructed.
- Sipocho.* Mormon Tea.
- Sunha: Ky'yaba:chu Yalanne.* San Francisco Peaks.
- Tsitowe.* Generic term for evergreens.

*Tsuhapa.* Specular hematite used as a pigment.

*Uwannami.* The Zunis' ancestors when they are above the clouds acting as beings to bring rain to Zuni and the earth, in response to prayers that are made by Zunis to the Kokko and the ancestors.

*Wanuadina.* Jacob's Well

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Note on Orthograph: :=elongated vowel

' or// = glottal stop

ł or hl=thl