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# Archaeology Southwest™

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## Collaborative Research in a Living Landscape: Pueblo Land, Culture, and History in West-Central New Mexico

*Andrew J. Duff, Washington State University; T. J. Ferguson, Anthropological Research, LLC;  
Susan Bruning, Southern Methodist University; Peter Whiteley, American Museum of Natural History*

**T**HE LARGO CREEK-CARRIZO WASH WATERSHED in west-central New Mexico encompasses a cultural landscape that occupies a prominent place in Western Pueblo history. This landscape has continuing importance in the oral history and traditional practices of Native Americans in New Mexico and Arizona. It is the home of Salt Woman and other deities who reside at the Zuni Salt Lake, and the region contains a rich record of ancestral land use spanning much of the last 10,000 years. The lands in this region represent a checkerboard of private, federal, and state ownership, and the area faces increasing development pressures ranging from resource extraction to the subdivision of former ranches.



*Research teams from Acoma, Hopi, Laguna, and Zuni met in 2007.*

each of the four Western Pueblos were able to visit prominent ancestral sites and key features of the cultural landscape in 2006. Project researchers followed up this fieldwork with further discussions of Puebloan history and management of heritage resources during visits to each of the tribal reservations, and in a meeting with all four tribes held at Acoma Pueblo in 2007. The Pueblo research colleagues we worked with acknowledge that the study area is important to other Pueblo tribes, as well as to Apache and Navajo groups, however, our current work concentrated on what this area means to the four Western Pueblos.

The four Pueblo research teams gained an archaeological overview of the region's settlement by visiting a sequence of ancient villages, beginning with sites occupied during the Chaco period and culminating with one of the region's large plaza-oriented pueblos occupied in the fourteenth century. Our days were loosely structured, and conversations were open-ended, designed to ensure easy communication. While in the field, we discussed traditional land use in the area, the meaning and importance of archaeological and natural resources, and tribal concerns about the region's future. A small group of students from Washington State University (WSU) working with Duff joined us

To complement Andrew Duff's ongoing archaeological investigation of Ancestral Pueblo community organization and settlement history in the area, T. J. Ferguson, Susan Bruning, and Peter Whiteley helped conduct research with the Acoma, Hopi, Laguna, and Zuni tribes. The goal of this collaborative project was to share the results of archaeological research with the descendants of the people who occupied the ancient sites in the area, and to discuss their contemporary concerns about the management of their heritage resources.

With generous support from the Christensen Fund, research teams from

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for meals in the evenings, giving the students a chance to talk with our tribal colleagues and learn first-hand what archaeological sites mean to living descendants. These students were excavating the Chaco period site of Cerro Pomo. The research teams that visited this site had an opportunity to see the work in progress and offer their personal interpretations and perspectives on the archaeological remains that had been exposed. We also visited landscape features and petroglyph sites, and viewed the Zuni Salt Lake from a distance. The Zuni Salt Lake is sacred to all of the tribes, and since we were not engaged in religious activities we showed our respect by not entering the volcanic crater that surrounds the lake.

Our discussions centered on the importance of this cultural landscape, its ancient and more recent history, threats to its preservation, and the concerns Pueblo people have for its long-term protection. We also asked how people felt about the process of collaboration and if they found it useful. As everyone involved had different experiences and interests, the topics of discussion varied widely among individuals and between research teams. We held a series of follow-up meetings at each Pueblo in the fall, where we revisited and had a chance to reflect on the fieldwork. The culmination of the project was a two-day meeting that brought each of the Pueblo research teams together. Held last June at Acoma, the meeting allowed research teams the chance to meet each other in person and to discuss their impressions of and concerns for the region. To further the discussion about the region's future, and to introduce land managers and the research teams to each other, we were joined by David Eck, archaeologist with the New Mexico State Lands Department, and Brenda Wilkinson, archaeologist with the Bureau of Land Management. They discussed their respective agencies' roles and constraints in managing lands under their jurisdiction and answered questions. The meeting produced a sense of resolve on the part of all of the individuals for continued communica-



*Top: Loren Maria and Santiago Riley from Laguna Pueblo pay their respects to Zuni Salt Lake. Bottom: The Hopi research team discusses history and archaeology with Andrew Duff during fieldwork.*

tion, and a desire to work together to learn more about and to protect the resources of this important region.

Our study area borders a proposed coal mine that became controversial when it was being developed several years ago. The four Western Pueblos and other tribes strenuously protested this mine because they thought it would damage Zuni Salt Lake and harm ancestral villages and graves; the development of the mine ceased before it was put into production. One of the goals of our project was to empower our tribal research colleagues by increasing their personal knowledge and experience of ancestral sites in the area, sites they would not otherwise have access to because of their largely unknown and remote locations. We also endeavored to introduce the research teams to the state and federal archaeologists responsible for cultural

resource management in the region to open new lines of communication that may prove useful if and when future developments are proposed in this environmentally sensitive area. In our two-day meeting at Acoma, the tribal researchers and land managers had an opportunity to openly discuss the respective values they place on heritage sites, as well as the challenges we all share in the common goal of protecting important archaeological sites and traditional cultural properties.

In this issue of *Archaeology Southwest*, we summarize our work with the four Western Pueblos. We start with a brief overview of the archaeology of the Largo Creek–Carrizo Wash watershed to provide the context of the research. Following this, we recap what each of the Pueblo research teams considers to be important and wants to share with the public about the land, culture, and history of the region. We also describe tribal efforts to protect this area, and several key issues in future management of heritage resources. Through the goodwill of the Christensen Fund and the Center for Desert Archaeology, each of the participating tribes is receiving 1,000 copies of this issue for use in tribal educational programs.

# Archaeological History in the Southern Cibola Region

**L**ARGO CREEK AND CARRIZO WASH, tributaries of the Little Colorado River, are south of the Zuni Reservation and north of the rugged Mogollon Mountains. Archaeologists call this area the Southern Cibola region. It is located at the transition between the Ancestral Pueblo region on the Colorado Plateau to the north and the Mogollon culture area in the mountainous zone to the south. Today, the region receives limited rainfall, making it a marginal area for agricultural production. In the past, however, during periods with more moisture, the Largo Creek–Carrizo Wash watershed was extensively occupied by agricultural groups.

Much of what we know about human occupation in this region comes from a multiyear project directed by J. O. Brew and other scholars at Harvard University in the late 1940s, and from recent cultural resource management (CRM) projects conducted to identify historic resources and mitigate the adverse effects of proposed developments. The Harvard project included extensive survey of the region and several adjacent districts by archaeologist Edward B. Danson, who was interested in the settlement patterns of ancient Puebloan agriculturalists. Danson documented a marked increase in residential settlement after A.D. 900, and the Harvard team selected a site from each major time period near Mariana Mesa for excavation. These excavations were reported in a series of Peabody Museum publications by William Bullard, Charles McGimsey, and Watson Smith. These archaeologists found that Mogollon Brown Ware pottery persisted in site assemblages through-

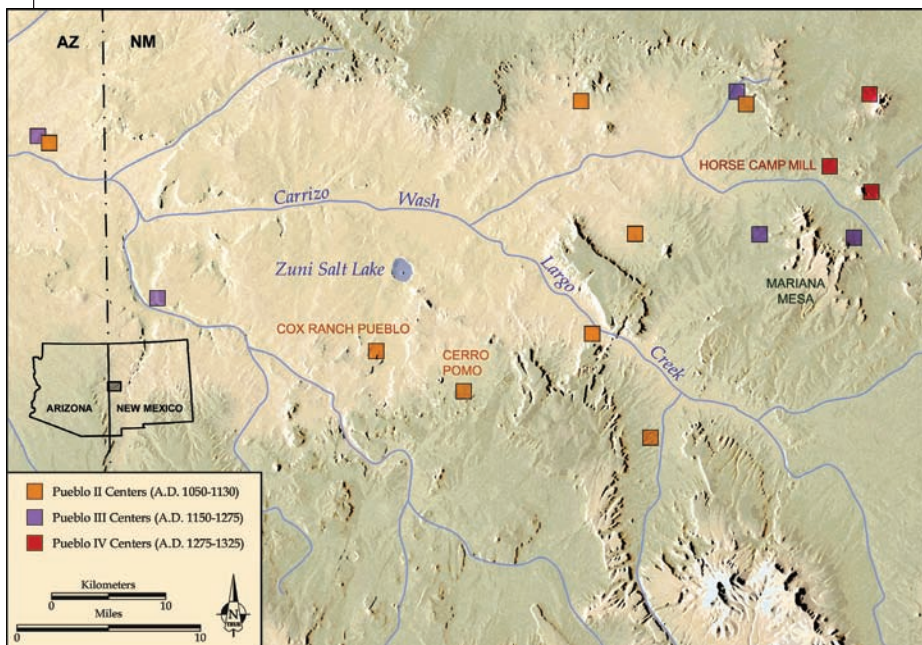
out the occupational sequence, indicating long-standing cultural ties with the Upper Gila area to the south.

Recent CRM projects have investigated a broader sample of the archaeological record, documenting sites dating from the Paleoindian to the Historic period. Much of this work was associated with Salt River Project's proposed development of the Fence Lake Mine (see page 21) and an associated coal haul railroad. For this project, archaeological surveys by the Bureau of Land Management (BLM), the University of New Mexico, and the Zuni Cultural Resources Enterprise were followed by excavations conducted by Statistical Research, Inc., and SWCA, Inc. This work demonstrates there are isolated finds of Paleoindian point fragments, and one site where Paleoindians made several Folsom projectile points. Regional surveys sponsored by the BLM have documented projectile points dating to the Early and Middle Archaic periods, indicating early and persistent use of the region by mobile groups of hunters and gatherers. Game was presumably attracted to the area by the salt at Zuni Salt Lake and by the water available in the numerous playas in the region.

About 4,000 years ago, farmers started growing maize in the area. Investigation of the Old Corn site, excavated by Statistical Research, produced radiocarbon dates of maize that cluster around 2100 B.C. Ed Huber, the archaeologist who directed the work at this site, points out that this maize is thus one of the earliest dated cultigens in the Southwest. The Old Corn site demonstrates that maize agriculture was adopted in the uplands of New Mexico at roughly the

same time that people began farming in the deserts of southern Arizona. Geoarchaeological research in the area has documented several stable soil horizons that date to this period, and these contain evidence for cultural activity that suggests several areas were used for early floodwater farming. Environmental data indicate that the climate during this period was moister than at present, and these environmental conditions would have been attractive to early farmers.

Following the Archaic period, there were no permanent agricultural settlements for many centuries, although we think that people probably continued to make regular visits to collect salt at the Zuni Salt Lake. Prior to A.D. 750, there were only a few small pit house sites in the region. Over the next two centuries,



Major Puebloan sites of the Southern Cibola region.



*Top left: Fidel Lorenzo from Acoma Pueblo stands in front of the opening of the great kiva-like structure at Cox Ranch Pueblo that aligns with Cerro Pomo in the distance. Top right: The Cerro Pomo cinder cone links two great houses through an astronomical alignment. Bottom: Summer solstice sunset over Cerro Pomo viewed from the archaeological site of Cerro Pomo.*

until A.D. 950, occupation remained sparse, with a few sites exhibiting pit structures, wattle-and-daub surface buildings, and masonry pueblos. After A.D. 1000, however, the region witnessed substantial population growth as groups migrated into the Largo Creek and Carrizo Wash drainages, apparently coming from areas both above and below the Mogollon Rim.

Several great houses from the Chaco era (A.D. 1050–1130) have been recorded, and sites from this period are found throughout the central part of the region. Several communities appear focused on great houses that exhibit an awareness of Chacoan style and construction techniques. The Chaco era has been the focus of Duff’s research for seven years, with full-coverage community survey and test excavations at two great house sites—Cox Ranch Pueblo and Cerro Pomo. Great houses in the Largo Creek and Carrizo Wash area are often situated in geographically prominent locations. They are larger than other contemporaneous sites, and surrounded by a dispersed community of residential room blocks.

At Cox Ranch Pueblo, excavations at the great house exposed core-and-veneer walls and an internal room block kiva. The Cox Ranch and Cerro Pomo great house buildings had some walls constructed with Chaco-style banded masonry, but did not use this technique throughout the entire structure. As mapped on initial archaeological surveys, many great houses in the region were thought to have been associated with great kivas. At Cox Ranch and Cerro Pomo, however, excavation showed that these features were unroofed structures or other forms of public architecture that differed from the subterranean kivas typically found at Chacoan sites.

The pottery assemblages at Chaco-era sites in the Largo Creek and Carrizo Wash area are dominated by Mogollon Brown Ware types. We interpret this to mean that many of the people living in these communities were

interacting socially with people who lived to the south, or were from these areas themselves. At the same time, a persistent presence of gray ware cooking jars, along with the Chacoan structures, indicates that community residents also maintained social ties with people living to the north. Studies by several Washington State University students demonstrate that all of the pottery recovered at the sites could have been made locally, using different technologies brought from the areas from which people migrated. We think the pottery thus provides evidence that the communities were a blend of groups with different histories and regional ties, a theme that is echoed in many Pueblo histories of the region.

The communities that occupied Cox Ranch and Cerro Pomo were linked to each other through public architecture and a prominent cinder cone for which the Cerro Pomo site is named. At Cox Ranch Pueblo, an un-



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*View of Cerro Pomo cinder cone. This recognizable feature appears to have served as a reference point in solstice observations at both the great house of Cerro Pomo (summer sunset) and with the public architecture at Cox Ranch Pueblo (winter sunrise).*

roofed, aboveground, great kiva-like structure appended to Room Block 2 (see map) has an opening to the south-east that frames the crest of the cinder cone. At the winter solstice, the sun would rise over this point when viewed from this structure. The great house at the Cerro Pomo site lies along the same axis through the cinder cone. At dusk during the summer solstice, the sun sets in a notch on the cinder cone. These astronomical alignments thus link the two great houses and their associated communities to one another.

After the Chaco era, settlement shifted to higher elevations near Mariana Mesa, probably in response to a drought from A.D. 1130 to A.D. 1180. The twelfth-century Puebloan settlements in this area often have several room blocks clustered together, one of which is larger than the others. None of these sites has been excavated in our study area, but they appear to be similar to post-Chacoan great houses in the Zuni region to the north. There, many of the architectural attributes of Chaco great houses continue to be important, suggesting continuity in social and ceremonial practices after the depopulation of Chaco Canyon.

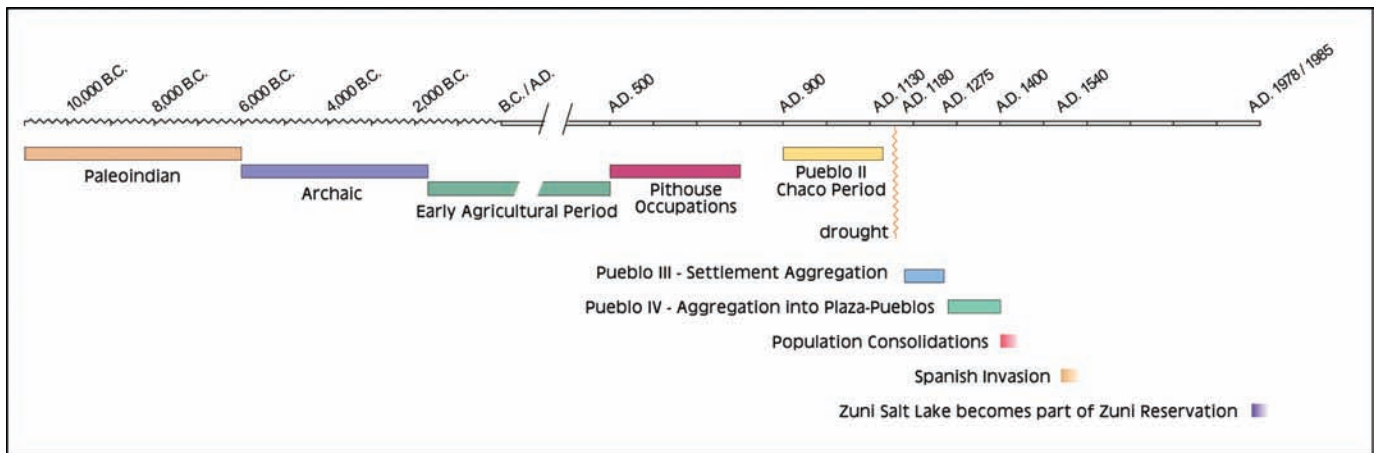


Top left: Gray and brown utility pottery at Cox Ranch Pueblo indicates northern and southern networks of social interaction. Top right: Map of the room blocks and midden areas at Cox Ranch Pueblo.

In the thirteenth century, occupation converged at three large plaza-oriented pueblos. These settlements, each containing 600 or more rooms, are bounded with an exterior wall. They are thus comparable to many other Pueblo IV period sites on the southern Colorado Plateau. Sometime in the mid-fourteenth century, people residing in the Largo Creek and Carrizo Wash area left to join friends and relatives living in other areas, probably including Zuni, Acoma, and Hopi.

Following the consolidation of population during the fourteenth and fifteenth centuries, and continuing to the

present day, the region was used by Pueblo and other Native American groups for hunting, gathering, and other traditional practices. After livestock was introduced in the seventeenth century, Zuni shepherders also grazed their flocks in this region. Hispanic and Anglo settlement began in the second half of the nineteenth century, when a number of cattle ranches were developed.



Timeline of Western Pueblo archaeology and history.

# Salt Woman and the Twins

**S**ALT WOMAN IS WELL KNOWN among the four Western Pueblos. At Zuni she is known as Ma'lokyattsik'i (Salt Mother), at Acoma and Laguna as Mina Koya (Salt Old Woman), and at Hopi as Öng.wùuti (Salt Woman). While each of the tribes has its own traditions about Salt Woman, there are several themes common to all the stories. Salt Woman undertook a long journey before she came to live at Zuni Salt Lake. During her migration, Salt Woman lived near each of the tribes for a time, and people can still point out her former home close to their pueblos. At Zuni, Salt Woman lived near Black Rock, at Laguna and Acoma she lived at Old Lady Lake, and at Hopi she lived near Second Mesa and near the Grand

Canyon. When she presented herself to the people, she would shed her skin, which the people began to collect.

They added the skin to their food and learned to appreciate its flavor and the health benefits it provided. Unfortunately, the tribes did not respect Salt Woman as much as they should have. Some people found her appearance unappealing and did not want her to stay. Other people began to pollute her home with trash and debris. Salt Woman grew tired of being treated this way so she left to search for a new home. In the



*Salt Woman looks over men collecting salt from her lake. Detail from a mural painted by Fred Kabotie in the Painted Desert Inn at the Petrified Forest National Park.*

Zuni version of the story, when Salt Woman left Zuni, she flew east on the back of an eagle. Along the way she met Turquoise Man, who had left the Rio Grande Pueblos because of a lack of respect, and was headed west to the White Mountains of Arizona. After talking with Turquoise Man, Salt Woman decided to turn south to find a new home. She flew through the crest of a mesa, leaving a window in the rock, and dropped a downy eagle feather from her headdress that turned into a large upright rock spire. These places marked her journey and can still be seen today. Salt Woman flew south and eventually landed at Zuni Salt Lake, where she continues to reside.

As time went on, the people began to miss Salt Woman and the condiment she had provided. They realized the mistake they had made by not showing her the respect she deserved. The people made prayer sticks, and started to search for Salt Woman by tracing the trail she had left on her journey. They were glad when they found her at the Zuni Salt Lake, and they promised to respect her in the future. Some people sought her forgiveness and asked her to return to their Pueblo, but Salt Woman declined, telling them



*A'su'wa, on the Zuni Reservation, where Salt Woman flew through the crest of a mesa on her way to Zuni Salt Lake, leaving behind an arch and a downy eagle feather that turned into a stone spire. Places like this provide a link between the Zuni Salt Lake and each of the Western Pueblo reservations. (Photograph by C. E. Dutton, 1885, USGS.)*

that by living at a distance, people would value salt more because it was harder to get.

The Pueblos started making religious pilgrimages to Zuni Salt Lake to pay homage to Salt Woman and collect salt. Some of these pilgrimages are associated with initiations into religious societies; other pilgrimages are conducted to bring the rain needed for crops. Upon returning home, the men who make salt pilgrimages share their bounty with their relatives and friends. In some villages, the men are greeted by their paternal aunts, who ritually wash their hair and prepare a feast, at which are recounted the adventures experienced by the men during the journey to Zuni Salt Lake. Zuni salt is pure, with excellent taste and culinary properties. These attributes, along with its spiritual value, make this salt precious. Consequently, Zuni salt is highly valued, and the home of Salt Woman is revered as a sacred place.

Salt Woman is often associated with the Twins, sometimes referred to as War Gods. These Twins are powerful and mischievous, and their heroic exploits are the subject of many stories told around the hearth during the cold winter months. At Zuni, Acoma, and Laguna, the elder Twin is called Uyuwewi, and the younger is Ma:a'sewi. At Hopi, the twins are known as Pöqangwhoya and Palöngawhoya. These twins accompanied Salt Woman to Zuni Salt Lake, where they live in one of the two cinder cones at the southern edge of the lake. At Hopi, Salt Woman

and the Twins also have a home in the Grand Canyon, but that is a story for another time.

*This lady, the Salt Lady, belonged to the Parrot Clan. That's the story we're told, you know. So us people from Laguna, we can't just come out here to get salt. We have to make some prayer sticks and we take it to a people that belong to Parrot Clan and they pray for it. Then when we get down below at the volcano, we go out there and go back down in there, and leave part of the prayer sticks and the other one down below. And then that's when we get the salt. We're not allowed to get any salt there after September.*

—Santiago Riley, Pueblo of Laguna

*When they make prayer feathers for Salt Lake and for Öng.wüuti [Salt Woman], it's the same thing. She left her body at the Salt Lake—that's what the salt is. There is a different place that is the shrine for Kookyangsowuuti [Spider Grandmother]. After Öng.wüuti left Sowiki and Palamotstapi for the Salt Lake, the Pöqangwhoyas [Twins] returned to their other Grandmother, Kookyangsowuuti, at Pöqangwawarpi [War Twins racetrack, near Orayvi]. After initiation, they bring their male initiates to the salt lake, to be made Hopis.*

—Wilton Kooyahoema, Hopi Tribe

*Just because we're Zunis doesn't give us the right to go in there. We have to take prayer sticks, offerings before we even think of going in there.*

—Octavius Seowtewa, Pueblo of Zuni



*Zuni Salt Lake is a geological marvel, situated in a volcanic crater with two cinder cones at its southern edge. Pure salt naturally forms as a crust on the surface of the lake.*



# Zuni Salt Lake Sanctuary

**T**HE ZUNI SALT LAKE SANCTUARY presents an interesting issue for heritage management. The sanctuary is an area extending about ten miles around Zuni Salt Lake, in which tribes have traditionally refrained from violence of any kind out of respect for Salt Woman. The sanctuary was identified as a traditional cultural property by the Zuni and Acoma tribes during studies conducted for the proposed Fence Lake Mine (see page 21). The New Mexico State Historic Preservation Officer, however, disputed this finding, claiming that the sanctuary was a behavior rather than a property. The issue was important to the Pueblo of Zuni, and the tribe decided to nominate the sanctuary for inclusion on the National Register of Historic Places (NRHP). During the research needed to complete the nomination form, Governor Roland E. Johnson of the Pueblo of Laguna pointed out that the sanctuary is like a bowl that encompasses all the land that is visible when one stands on the crest of the crater surrounding the lake.

The escarpment of the Zuni Plateau and other landforms that surround the lake define the sanctuary as a place—essentially encompassing all the lands seen from Zuni Salt Lake. During the nomination process, the private landowners within the sanctuary objected to the Zunis' nomination, and without their permission the property could not be listed on the register. Nonetheless, the Zuni Tribe asked the keeper of the NRHP to make a formal determination of eligibility to establish that the sanctuary was indeed a significant traditional cultural property.

In order to evaluate the historic character of the property, the keeper of the NRHP and her staff made a field visit to Zuni Salt Lake. There the keeper was accosted by a group of hostile ranchers who had trespassed on Zuni property to confront her with their fears that if the sanctuary were listed on the NRHP, it would start an inexorable process of federalizing their land into a national park. The keeper tried

to explain the purpose of the NRHP and its foundation of respect for private property to allay the ranchers' fears, but this was to no avail. After her inspection, the keeper eventually determined that the sanctuary was indeed a traditional cultural property eligible for the NRHP. She con-



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*Zuni Salt Lake in early morning light. The main crater containing Zuni Salt Lake is more than a mile in diameter and 400 feet deep. Permission from the Pueblo of Zuni is needed to go inside the crater. The landscape surrounding the crater comprises the sanctuary.*

sidered it a single site encompassing 182,000 acres, including the Salt Lake, pilgrimage trails, and religious shrines. Interestingly, the keeper did not think the hun-

dreds of Ancestral Pueblo archaeological sites within the sanctuary were contributing elements to the historic property, even though the tribes consider them to be.

The keeper's determination means that there is now one very large site, measuring 285 square miles, within which are hundreds of other, distinct historic properties. The Western Pueblo men we worked with wondered how these nested historic properties are now being managed by the Bureau of Land Management (BLM). We asked the staff of the Socorro Field Office of the BLM about this, and they explained that it is not as complicated as it seems. The potential impact of every project within the sanctuary is

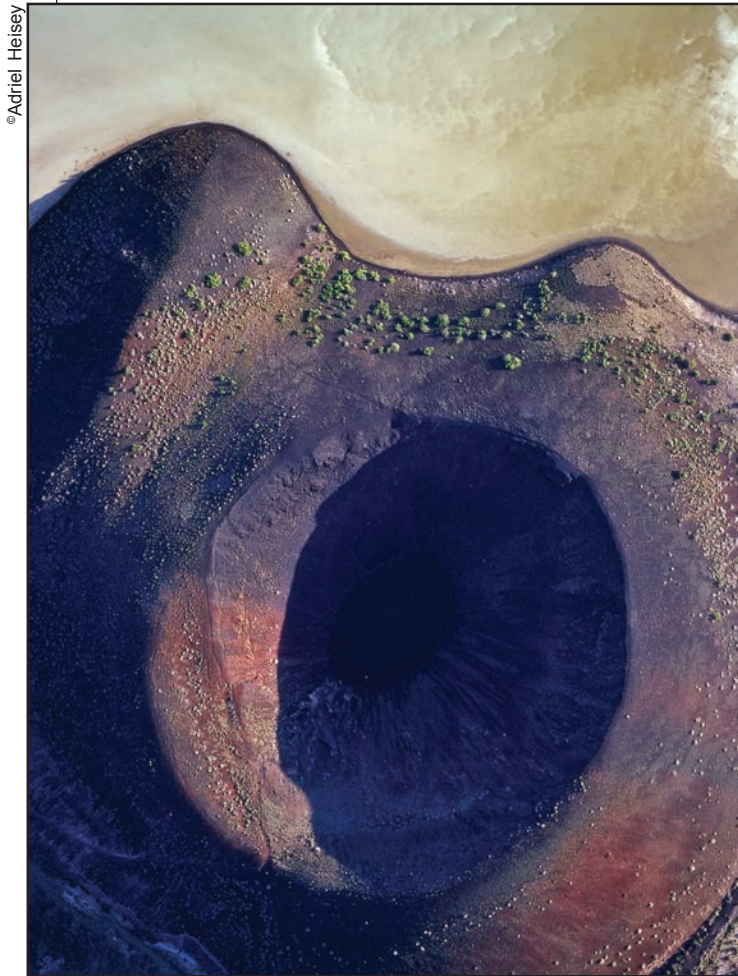
first assessed. Then, if there are other archaeological sites within the project footprint, the impact of the proposed undertaking on those properties is also considered. The biggest managerial constraint is that the Pueblo of Zuni considers the precise boundary of the sanctuary confidential information and asked the BLM not to include this area in its automated GIS database. This means that BLM staff must remember that the sanctuary exists as a property eligible for the NRHP, and then consult paper maps to determine if proposed projects lie within it. While not ideal in terms of modern management, this system is currently working.

## Respecting Zuni Salt Lake

**ZUNI SALT LAKE IS A SACRED SITE** that everyone should respect. Since 1978, the lake has been part of the federal trust lands of the Zuni Indian Reservation. Zuni land at the lake is fenced, and unauthorized entry constitutes criminal trespass. Visiting Zuni Salt Lake without the permission of the Zuni Tribe shows disrespect of the Zuni people, Salt Woman, and Western Pueblo cultural traditions. The Pueblo of Zuni acts as the guardian of Zuni Salt Lake,

protecting its sacredness and sensitive ecology. Native Americans who need access to Zuni Salt Lake for traditional religious practices should request permission by contacting the Governor, Pueblo of Zuni, P.O. Box 339, Zuni, New Mexico 87327; telephone (505) 782-7000. The Governor will dispatch tribal rangers to meet authorized visitors at the locked gate. These rangers will allow access to the lake, and not intrude on religious activities. They will ensure the gate is closed and locked after the party departs. No one should enter the crater surrounding the lake without permission of the Governor of the Pueblo of Zuni.

Octavius Seowtewa, one of the Zunis who worked on our project, points out that the phrase "getting permission" is an awkward way to refer to visitation because all tribal members with cultural traditions involving Zuni Salt Lake have the right to visit the sacred site. The Pueblo of Zuni is simply trying to ensure the protection of the lake by keeping track of visitors. This procedure facilitates identifying people who are trespassing. The Pueblo of Zuni has been working with the Bureau of Land Management to curb unauthorized visits. Unfortunately, unauthorized visits to the Zuni Salt Lake have increased over time, and this is distressing to Pueblo religious and civil leaders. Western Pueblo traditions recount how Salt Woman left her home near the Pueblos to go to Zuni Salt Lake, and tribal members are concerned that if people continue to show disrespect to Salt Woman, she may leave again. Native Americans who visit the lake show their respect by spiritually preparing for their visit, making prayer offerings, and maintaining proper decorum in the presence of Salt Woman. Other people show respect by not violating the sanctity of the lake through trespassing.



*A bird's-eye view of the small cinder cone located at the edge of Zuni Salt Lake.*

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# An Acoma Perspective on Preserving Land, Culture, and History

**T**HE NORTHEASTERN EDGE of the Largo Creek–Carrizo Wash region abuts the Acoma Culture Province—the aboriginal lands of the Pueblo of Acoma. Cinder cones and other prominent landscape features in this area are named boundaries for Acoma. The connection that the Acoma

occupied in the fourteenth century, located next to the Acoma Salt Trail. The canyon where Horse Camp Mill is located leads northeast towards Acoma, and southwest towards Mother Salt. Ron Charlie pointed out this is a good location for the ancestors. If they traveled west, the ancestors could make a pilgrimage to the Salt Lake. This pilgrimage would have included the Antelope, Badger, Moss,



*“This site feels familiar, more like home.” Ron Charlie at Horse Camp Mill.*



Deer, Pumpkin, and Parrot clans, and the field chief—all of the religious leaders who are important to Mother Salt. On their return, the youngest people would have run ahead and built fires to send smoke signals so the home folks could prepare for their return. In remembering his visit to this site, Mr. Charlie later told us, “It was like walking into a crowd or something. That’s the way I felt. I felt good that day.”

people have with this region is tangible, linked to the land, history, and use of Zuni Salt Lake. The Acoma men we worked with expressed deep ancestral ties to archaeological sites in the region.

*The cultural province is the boundary where people occupied and made use of the land. But there’s also a religious, theocratic boundary that takes us to Salt Lake, over here to our Mother. That tie is there, because of the Acoma Salt Trail and the route they used to take, going back. There is a big tie to the sites along there. They probably made use of them. In our language, that’s a visible sign that we occupied this place sometimes. Maybe not at all times, but it might be a place people would stay for a period of time...there were stopping periods along the way. There was use and reuse of the land.*

—Fidel Lorenzo, Pueblo of Acoma

For Acoma people, ancestral archaeological sites are sensitive and beautiful places, alive with the spirits of their ancestors and full of personal meaning. The Acoma who worked with us in 2006 said they learned a lot while visiting the ancient homes and villages of their ancestors. One of these sites was Horse Camp Mill, a plaza-oriented pueblo

*The oral histories say that, as people got old during the migrations, some couldn’t travel. So they made a site and they were like, “I want to die here”...the elders would say “they were left behind not to be left behind, but because they could not travel anymore,” and that is why these sites will always be alive.*

—Ron Charlie, Pueblo of Acoma

*As Pueblo people, we know they still live here, they’re still around here.*

—Fidel Lorenzo, Pueblo of Acoma

One evening in our field camp, while discussing Acoma history and answering questions, Fidel Lorenzo quietly told us that “your profession is very intrusive.” In saying this, he was highlighting the need for balance and sensitivity in collaboration. Mr. Lorenzo emphasized that all archaeological sites should be approached with the utmost respect. Despite his concerns about archaeology, Mr. Lorenzo said there is a need for Native Americans and archaeologists to work together to protect archaeological sites in a manner where everybody is a participant and partner in the process. In this regard, Acoma people find



so much culture history that is really untapped, especially here in the Southwest. The older people who had communal places like this, they really need protection.

—Fidel Lorenzo, Pueblo of Acoma

The Largo Creek–Carrizo Wash region is important, and the need to protect this area transcends the cultural differences that occasionally divide western scholars and Pueblo people. Leaders at the Pueblo of Acoma believe that they

The Acoma Salt Trail runs down this canyon, directly adjacent to the Horse Camp Mill site.

value in collaboration with anthropologists, both on this project and in other contexts. The Pueblo of Acoma has established an advisory board of traditional leaders to assist the tribe in the development of its tribal historic preservation office.

*If you go out to a place, let us know. We can prepare that place for you. You can go and find out information. That can also give us more information...I know our generation, they'll have questions: how do you know, are you a scientist? But the younger people, they'll say wow, I'm glad you're telling us this. These are our roots. That's who we are, those are our ancestors. I know what you're talking about now.*

—Ron Charlie, Pueblo of Acoma

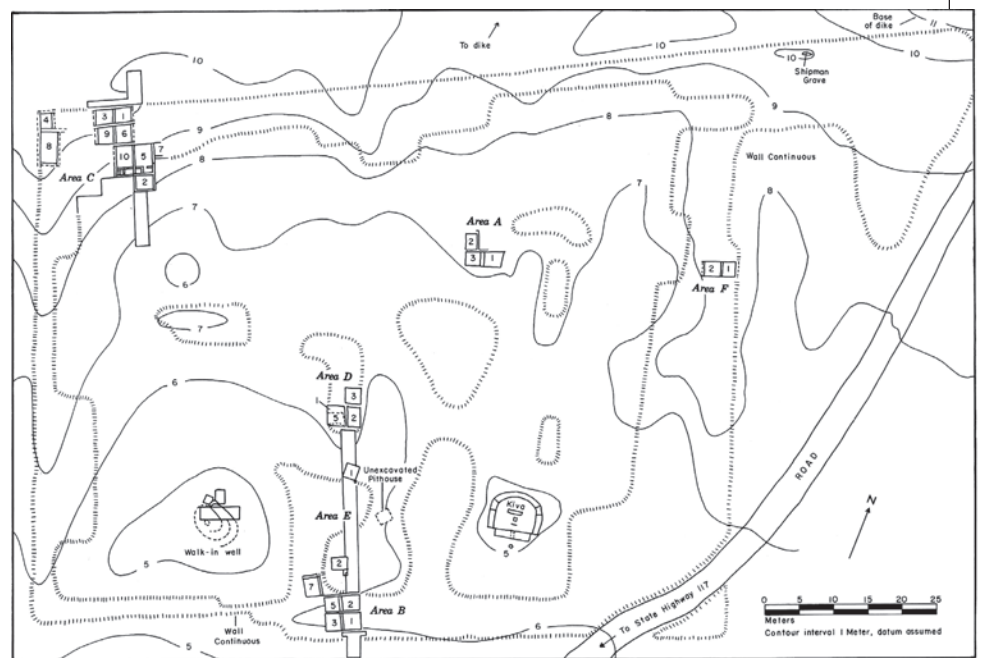
*As Acoma people we need to go back and talk to these sites even if it's from Acoma somewhere, you go to Salt Lake or Fence Lake, you go to Zuni Heaven, whatever these places are, we know them as Indian names, Acoma names, and that's how powerful it is to reconnect some of these things. I told the board that is why we take these field trips, it is why we go out there to observe and see what the experts have found, see how their descriptions are, all we need to do is ask as we go along...I wish there were a lot of Acoma young, young men, young women that would become archaeologists or anthropologists or historians. We don't have that. We need to entertain more about telling them who we are, it kind of like opens up your mind to who you really are. These areas are very important to Acoma. They are meaningful. As long as I work here, as long as I am one of the leaders, traditional leaders, I'll always protect the sites, whether they are outside our jurisdiction or not.*

—Ron Charlie, Pueblo of Acoma

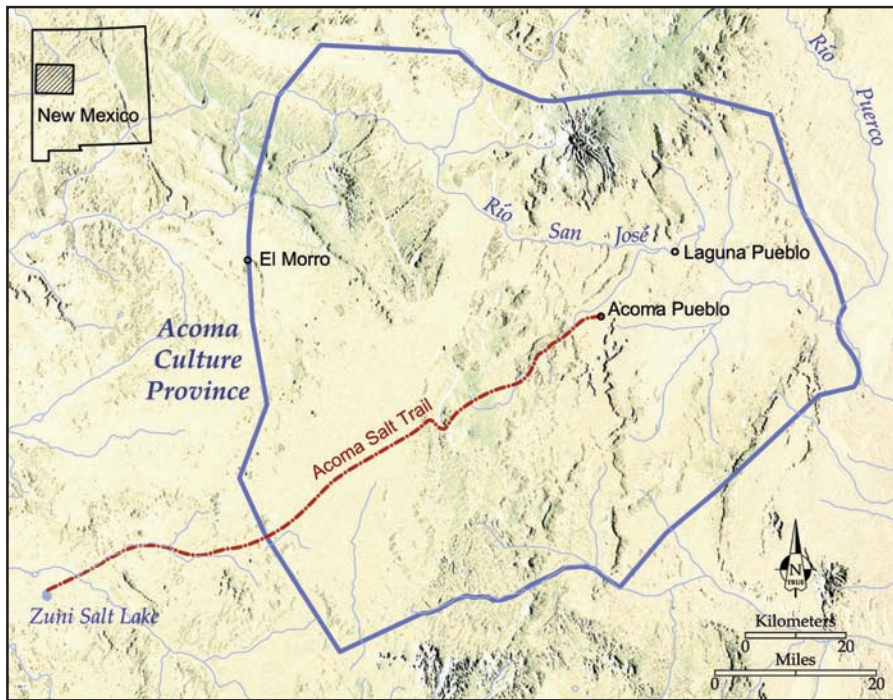
*As Pueblo people, we know they still live here, they're still around here...There's*

need to work with other tribes, anthropologists, government agencies, and the public to make sure that sensitive landscapes and archaeological sites are protected from damage as the region is developed. As Ron Charlie said, knowing that companies want to use natural resources here requires us “to put our foot down.”

*This is one of our sacred places. Zuni Salt Lake is one of our shrines, and it's tied to where Acoma Pueblo is now. Different societies come here to get salt for the Acoma people and themselves, too. There are certain societies from Acoma that are in charge traditionally of the Salt Lake. This is one of the trails used back in our ancestral times. Even during these times we talk about that...We still are part of the Mother Salt here. We call it Mother Salt from Acoma—it's just like referring to Mother Earth. We do not own the Salt Lake but we ask permission to come here to gather, to pray. We actually pray for the whole world, not*



The Horse Camp Mill site. (Map from Mariana Mesa: Seven Prehistoric Settlements in West-Central New Mexico, by Charles McGimsey, 1980.)



The Acoma Culture Province, encompassing the traditional lands of the tribe and the Acoma Salt Pilgrimage Trail, provides the historical context for discussing Acoma ancestors and archaeology.

*just for Indian people or Indian country. We pray for the whole universe.*

—Ron Charlie, Pueblo of Acoma

*The damage that in the future can happen here is like taking away part of history, of religion...Managing this system has to be a cooperative effort because this is so significant to a lot of Pueblos, and to a lot of other people even in the non-Indian world, who look at this place and see it as a special place that should be protected.*

—Fidel Lorenzo,  
Pueblo of Acoma

Protecting the land in this part of New Mexico will require diligence and concerted work. In thinking about this, Ernest Vallo, one of the Acoma advisors, explained that we “need to make sure the message of Pueblo opposition to development makes it to the right people.” Ron Charlie thought that one way to protect sites is to be able to demonstrate that they are culturally



Ron Charlie and Fidel Lorenzo from the Pueblo of Acoma discuss masonry room outlines at Cox Ranch Pueblo with Susan Bruning and Andrew Duff.

affiliated with modern Pueblo groups, thus invoking the Native American Graves Protection and Repatriation Act (NAGPRA). In implementing NAGPRA, the work of anthropologists can help the tribes. Everyone needs to work together to protect the land and its history.

*It is good for many Pueblos to get to know the sites of our ancestors...somewhere along the line we Pueblos are going to have to join together...we are the link for our tribes, our Pueblos. Zuni Salt Lake, Mt. Taylor, San Francisco Peaks—all are issues to address. We need to band together, help each other, to be a team.*

—Ron Charlie, Pueblo of Acoma

*We still have problems. With NAGPRA you have to prove that this was yours...I don't have a book to say, "yeah, you know this is mine." I only can tell you my oral history...But doing these studies at these sites, that is how we can prove that...No matter how many people claim these sites...all Pueblo people will protect these sites. It is so true with our Mother Salt Lake we*

*all got together and said this is important to all of us. We need to be one solid group and come down and visit. We believe in the cultural properties we have, whether it is private, federal government, or state government land.*

—Ron Charlie, Pueblo of Acoma

*I think the big thing about it is being able to continue this movement forward in the collaborative approach as opposed to this whole thing currently where it's more divisive.*

*I think the end result of this process and the collaborative approach is good and we need to keep rolling that forward, not only with the tribes but also with the so-called professionals. The whole process of the collaborative approach we need to keep pushing forward. That includes everybody, not just the tribes or the working anthropologists, but even the federal agencies, the state agencies that have a play in this, a big play. As long as we can keep rolling the ball on this type of process, that's what I want to see out of it.*

—Fidel Lorenzo,  
Pueblo of Acoma

## Laguna Migration and Salt

**L**AGUNA TRADITIONS RECOUNT that their ancestors emerged from Shipapu. Following this, they started a southward migration. These ancestors initially crossed the Río San José and continued to the south. Eventually they realized they had bypassed their intended destination, so they stopped and turned back northward, returning to the Río San José. There they lived in several villages, eventually founding Laguna Pueblo on a low hill on the north bank of the river. While the Laguna people were living along the Río San José, Mina Koya (Salt Old Woman) appeared and lived for a time at “Old Lady Lake,” a few miles west of Laguna Pueblo. Eventually Salt Old Woman left her home on the Río San José and continued her journey westward to Zuni Salt Lake, where she resides today. Since then, Laguna people have made long journeys to visit the Salt Lake, pay homage to Salt Old Woman, and collect the precious mineral from the lake. The traditions of tribal migration, and the cultural beliefs and practices associated with Salt Old Woman, provided the context that our Laguna colleagues used to understand the archaeological sites and historical landscapes they visited along Largo Creek and Carrizo Wash.

*I would say this is where our ancestors were living at one time.*

—Loren Maria, Pueblo of Laguna

As they visited ancient pueblo villages, Loren Maria and Santiago Riley both remarked that they were not surprised that there were so many ancestral sites in the region. On an earlier project run by Statistical Research, Inc., their fellow tribal members Larry Lente and Victor Sarracino had visited archaeological sites within the transportation corridor for the proposed Fence Lake Mine. Upon their return to Laguna Pueblo, these men shared what they had seen with their associates in the tribe, explaining that the entire range and type of settlements was not represented within the mine project area. Fieldwork in 2006 allowed Laguna representatives to see some of the other sites in the region, including Chacoan period great houses and later plaza-oriented villages. The plaza-pueblo site of Horse Camp Mill, occupied in the fourteenth century, was familiar to the Laguna men we worked with because it is similar to some of their ancestral sites near Laguna Pueblo. Loren Maria explained that the pottery at sites along Largo Creek and Carrizo Wash are similar to the old pottery found at Laguna Pueblo and other sites on the Laguna Reservation. Mr. Maria said he thought Acoma tribal members would make the same observation, because the Laguna

and Acoma tribes have similar cultural and historical traditions.

The petroglyph sites we visited were more difficult for the Laguna to interpret. After looking at petroglyph photographs during a meeting at Laguna Pueblo, Larry Lente remarked that he thought the pecked images were not random, because “everything had significance.” He suggested that petroglyphs functioned as “landmarks for guidance and direction” before there were maps and compasses.

Loren Maria noted that archaeologists, like all specialists, have their own language and acronyms, and these can sometimes be hard for other people to understand. Visiting the sites in the field and experiencing them, however, was informative. Mr. Maria said he personally had learned a lot during his visit to Largo Creek and Carrizo Wash, telling us, “I feel good for coming today and grateful for you to take us around.” Mr. Maria said he would let other people at Laguna know what they had seen and learned, adding “it’s important to pass the information on so the next generation will know.” According to Larry Lente, archaeologists can help document the “footprints on the landscape” left by Laguna ancestors, and this is useful to Pueblo people.

Loren Maria’s visit in 2006 was the first time he had seen Zuni Salt Lake, although he had heard many stories about the lake when he was growing up on the Laguna Reservation. He thought the lake may be damaged if people do not know how sacred the area is for Native Americans, and any harm would be upsetting to the Laguna people.

*We can help to document the importance of the area. It is different when you are out there—you try to visualize our people being there, living in these homes. Whatever happens, they shouldn’t be disturbed...These are our ancestors and they should be protected. Our ancestors are buried here. Once put to rest, that should be it.*

—Loren Maria, Pueblo of Laguna

The Laguna group we worked with told us that federal and state agencies should consult the Pueblo of La-



*Laguna people think petroglyphs, like this image near Cox Ranch Pueblo, were landmarks for guidance and direction.*

guna about development in the area. In order to protect this area, Larry Lente suggested the tribes need to maintain vigilance about proposed developments, like the Fence Lake Mine, or other corporate interests will resurface in this sensitive area. The paramount concern is for the Zuni Salt Lake, because this sacred place is fundamental to the entire landscape.



Andrew Duff and Loren Maria discuss the similarity of pottery sherds at Cox Ranch Pueblo to those found on the Laguna Reservation.

*I think is very important that the area should never be disturbed. Because the water source coming from the Continental Divide goes west. Most likely that's what's serving the water itself into the lake, because no matter what you do, any little disturbance*

*could violate the stream, you know. It's very important that that Salt Lake continues because it's shared with several Indians from distant places, like Hopi, like Navajo, Zuni, Laguna, and Acoma and so forth. It's a very sacred place for them. It should never be disturbed...so I think it is very important that they continue to be undisturbed.*

—Victor Sarracino,  
Pueblo of Laguna

*Normally the Pueblos don't believe in any developments around sacred areas, they would rather just leave it natural, that's why it doesn't look developed. So some people say, "Why protect it because there's nothing there." But we leave it up to the creator for its natural wear and tear and existence.*

—Victor Sarracino, Pueblo of Laguna

## Hopi Footprints Linking Past and Present

**H**OPIS USE THE HISTORICAL METAPHOR of “footprints” in discussing their history. In a sacred pact with the deity who owns the world, the “Old Man,” the Hopi people agreed to act as stewards of his land. As they migrated to the center of the universe on the Hopi Mesas, the ancestors were instructed to leave behind “footprints” to mark the land in the form of ruined villages, pottery, stone tools, petroglyphs, and other things we now call archaeological sites. These footprints are proof that the Hopi people fulfilled their spiritual obligations, making the “Old Man’s” land Hopituskwa (Hopi land).

*We were all one; we left as one. We were told by the creator to circle this land and mark it for Hopi. We came up, we had corn and Hopi chose the shortest corn from the “Old Man” and he offered Hopi the planting stick, water, and corn, and he told them this is all I have, and if you want to live the way I do, you can live on my land. He told them he didn't give them the land, you're just to be the stewards of the land. So we're here now still practicing what he told us. It's not our land, we're just watching it for the “Old Man.” While they were on their migrations, whenever they met up with an animal, that is how they would get their clan. They might have come across a snake, that's why they're the Snake Clan. So that's how some people got their clans. That's why we still consider people, whether they're in Zuni or Acoma, if they're a Bear Clan, then we'd still consider them as our relatives—our uncles, our mothers, our sisters, brothers.*



Lee Wayne Lomayestewa points to the crater containing Zuni Salt Lake (visible below the Zuni Plateau) while standing with Raleigh Puhuyaoma in the unroofed ceremonial space at Cox Ranch Pueblo.

—Lee Wayne Lomayestewa, Hopi Tribe

*They, the people, their migrations came from all directions. At one point, we all came from one area in the south, from down in Central America or South America, at Palatkwapi. We left there because of the rising water and the flood, then we came to where the Arizona/Mexico border is, right there. And then from there, we all went into the different directions. Most of the people, they know each other but were told by the creator to get to the center of the universe, which is Tuuwanasavi. A lot of them came here, went to Orayvi, Awatovi, you know, other places. Some of them had their clans already and then from here, some of them went to the different areas also. Though we started out as one people, not everyone came to Hopi, some speak other languages and founded the other Pueblos.*

—Jim Tawyesva, translated by Lee Wayne Lomayestewa, Hopi Tribe



Left: David Mowa and Peter Whiteley discuss Hopi footprints at the Hubble Corner site. Above: David Mowa and Ian Buvit confer about excavations at the Cerro Pomo site.

Based on migration traditions—and the clan marks visible in the petroglyphs they saw along Largo Creek and Carrizo Wash—the Hopi research team concluded that at least fourteen clans migrated through this area on their way to Hopi. These include ancestors in the Bear, Bluebird, Butterfly, Coyote, Crane, Greasewood, Katsina, Parrot, Rabbit, Raven, Sand/Lizard, Snake, Tansy Mustard, and Tsa'kwayna clans. When they migrated to the Hopi Mesas, each of these clans brought something of value with them, such as a ceremony, a technology, or seeds, and this led to their being accepted into one of the Hopi villages. Along with their unique gifts, these clans brought knowledge about the natural resources in the areas in which they had previously lived, including knowledge about the Zuni Salt Lake, and the cultural rights to continue to use those resources.

*We identified a lot of the clans that migrated to the area with the petroglyphs. It's called naatoyla, it's your clan markings—to mark that you've gone into this certain area and migrated.*

—Lee Wayne Lomayestewa, Hopi Tribe

The Hopi footprints in west-central New Mexico link the ancestors of the Hopi with their continuing use of Zuni Salt Lake. The Hopi research team thus expressed great interest in the archaeological sites they visited. The petroglyphs they saw have special significance because they express an iconography that resonates with contemporary meaning. The Hopis pointed out a spiral petroglyph, called *potaveni*, which symbolizes migration. David Mowa explained that when a spiral goes counterclockwise it represents life, and when it goes clockwise, it represents the end of life; both are needed.

*You see the sites with walls, with petroglyphs that record history. Those were left behind to hold the land. All the clan members move on, and left a petroglyph to indicate where our land boundaries are.*

—David Mowa, Hopi Tribe

After looking at the masonry architecture and pottery at the sites they visited, the Hopi research team decided that the ancient people who resided here were culturally affiliated with Hopi. Upon seeing the walls exposed in archaeological excavations at the Cerro Pomo site, Wilton Kooyahoema explained to us that this is the way that Hopi houses are built, with chinking stones to balance the wall stones, and make a stronger building.

*Because the Hopi was a chosen people to come over here to the center of the earth, to live where there's springs now at the village at all times. To make their homes built out of stones, so when it crashes down, it will be up like a brick pile.*

—Jim Tawyesva, Hopi Tribe

*We were instructed to build homes using rock so some day we could claim the land for Hopi. Also, with the petroglyphs; we were to mark out symbols with our clan markings on the walls. Whenever we left an area, we would break our pottery also, on purpose, to let people know that we were here. From there we would go to another place; there were different groups migrating. Whenever we went into an area we built we would replenish our supplies and leave. Then another clan would come and do the same thing. So there were a lot of clans that used that same area after we did.*

—Lee Wayne Lomayestewa, Hopi Tribe

The layout of Cox Ranch Pueblo, with numerous small residential structures surrounding a great house, prompted comparison to modern Hopi villages. David Mowa pointed out that villages contain homes, clan houses, and kivas. He suggested the small buildings were guardhouses surrounding the great house, occupied by warriors providing protection. The great house may have been the home of the *kikmongwi*, or village chief.

*People would surrender ceremonial goods to Kikmongwi when they arrived at the village, and they would be given lands. When invited to do ceremonies, ceremonial goods would be returned by Kikmongwi. If you do okay, then you become incorporated in the village. If you don't do okay, you have to leave and join others. You may return until you get it right, you can come back again.*

—David Mowa, Hopi Tribe

There is a small plaza attached to the great house at Cox Ranch Pueblo, and an unroofed, great kiva-like structure. These special architectural features inspired discussion of the ceremonies that probably took place when the village was occupied. The Hopis thought it was significant that the sun rises over the cinder cone of Cerro Pomo when viewed through the opening of the unroofed struc-



ture during the winter solstice. Jim Tawyesva noted that every village has a shrine that is used as a calendar to mark celestial events and associated ceremonies. Many of these shrines are used by observing the alignment of the sun with distant landscape features. Esoteric knowledge about these shrines is only shared with initiated men.

*This looks like a really big plaza for the time, the age. This is the same way we have it at home. The buildings face east. When men's society and women's society come out of the kiva—coming out is like germinating plants—then the Water Clan puts water on them to help them grow. Each clan has a role. When it matures, the Bear Clan feeds off first. Then it goes to feed every other clan, then it goes back to the kiva—the analogy is of corn growing as annual cycle of ceremonies over the year. At the winter solstice the sun would shine into the plaza; there would be renewal-of-life ceremonies, with people visiting between villages to receive prayer feathers and trade. This is the largest plaza. During that time, everyone traveled with the sun, moon and stars—that was their calendar.*

—David Mowa, Hopi Tribe

*Big ceremonies were held here at winter solstice. Our people traveled in clans with their ceremonies. If they couldn't gain admittance to a village, they would go back and build up their ceremony again, and then try again to get admitted. Mountains are always something that we use, and the solstice is also important. When the sun hits a certain point on a mountain, or another site, at the same time of year, that would mark the time for a certain kind of ceremony. It would be the same ceremony done here as at Songòopavi at that time of year. From Songòopavi, we look toward Musangnuvi during the summer, and then toward Nuwatukeya'ovi [San Francisco Peaks] during winter. When the three stars of Orion hit on a specific three-story house, right on a certain spot, this shows that the ceremony is finished, and we make sure to keep track of our calendar.*

—David Mowa, Hopi Tribe

Standing next to the large, unroofed great kiva at the Hubble Corner site, Wilton Kooyahoema told us that this was where people gathered for special ceremonies. He



Top: Raleigh Puhuyaoma inspecting the black-on-white painted pottery at Cox Ranch Pueblo. Bottom: Hopis interpret spiral petroglyphs, such as this one found near Cox Ranch Pueblo, as signs of migration.

thought the plaza at this site would have been large enough to hold people from several outlying communities. The Hopi research team was also impressed by the size of the nearby Horse Camp Mill site, where an exterior wall encloses plazas and kivas. However, they thought that a population as large as the one that occupied this village probably experienced social stress, and that community strife may have been a factor in causing people to eventually leave the village and migrate to other areas. The Hopis are familiar with this type of community strife, because they still remember the Orayvi split of 1906, when social life at the mother village on Third Mesa deteriorated and half the residents left to found new villages at Hotvela and Paaqavi.

Today, Hopi use of the Largo Creek–Carrizo Wash landscape is focused on religious pilgrimages to Zuni Salt Lake. Knowing that there are ancestral sites in the region around the lake reinforces the sense of history the Hopis feel when they make the long journey from the Hopi Mesas to Si'o'önga (Zuni Salt Lake). The Hopi pilgrimage is the culmination of the Wuwtsim ceremony, when boys are made into men by initiation into one of four esoteric religious societies. Villagers on First and Second Mesa journey to Zuni Salt Lake for this rite of passage; villagers from Third Mesa traditionally went

to the Hopi Salt Mine in the Grand Canyon for this ceremony. People from all three Hopi Mesas also make pilgrimages to Zuni Salt Lake to pray for rain during droughts. There are two major trails that connect the Hopi Mesas with the lake, one of these led directly to the lake, the other passed through Zuni Pueblo. These trails, marked with *tutukwmoles* (cairns), are associated with shrines where rituals related to the Wuwtsim ceremony are conducted, and where prayer feathers and other offerings are left. Salt pilgrimages are often commemorated with petroglyphs pecked into cliff faces along the route. Hopi religious practices at Zuni Salt Lake are sacred and esoteric, and not publicly shared with uninitiated people. Accounts of Hopi salt pilgrimages from the early twentieth

eth century describe long pack trains with burros leaving the Hopi villages loaded with pottery and other crafts. These items were sold at trading posts and given to friends in Zuni Pueblo on the way to Zuni Salt Lake, leaving the burros free to return to Hopi laden with heavy loads of salt. Now that the privately owned land along the route has been fenced, it is no longer possible to travel the old trails. Today, the Hopis make the pilgrimage to Zuni Salt Lake in pickup trucks, traveling along state and county roads. The Hopis we worked with emphasize the spiritual nature of their continuing journeys to Zuni Salt Lake, and the sacredness of the home of Öng wùuti, Salt Woman.

*The trail is where you leave your prayers on the way.*

—Wilton Kooyahoema, Hopi Tribe

*When you finish and leave Salt Lake, don't even look back. If you see good things on the pilgrimage that is a good sign for the future.*

—Raleigh Puhuyaoma, Hopi Tribe

Near St. Johns, Arizona, archaeologists have found Hopi Yellow Ware pottery at fourteenth-century sites near one of the Hopi trails to Zuni Salt Lake. This suggests that Hopis were making pilgrimages to the Zuni Salt Lake 700

years ago when Ancestral Pueblo peoples still lived in that area. We think that Hopis stopped at these villages along the trail to Si' o' önga, and left gifts of pottery, much as their descendants are known to have done at Zuni Pueblo centuries later.

The Hopis value the “footprints” that document their history in the region and want these archaeological sites protected so that future generations of Hopis can see where their ancestors lived in the ancient past. This will help young tribal members understand how their current cultural practices are a legacy from their ancestors. When sites are damaged or looted, the physical landmarks of Hopi history are diminished, and this bothers the Hopi people because their history is transmitted orally rather than through writing. Ancestral archaeological sites provide physical evidence visible on the landscape that both supports oral traditions and affirms that Hopi ancestors have fulfilled their spiritual pact with the “Old Man.” Lee Wayne Lomayestewa pointed out to us that documenting sites is the first step in protecting them. The Hopi research team expressed its gratitude about being able to work with archaeologists on this project to learn more about their ancestral sites and work towards their preservation.

*Now we are going to ruins, for what? We're not just going there because we want to, we're going there because we want to document our history...because the Hopi was a chosen people to come over here to the center of the earth, to live...I am glad and happy today that someone is coming around so that we can document our history and the ruins will never move. I used to be, you know, be against it; talking about my history. But now I figure that it is proper for us to talk about these things and document them.*

—Jim Tawyesva,  
Hopi Tribe

*The thing I'm pleased with is what you guys are doing. It helps to do the follow-up on everything, because I think that our goals are to support one another, so that we can use ourselves as part of this tool to document past boundaries. Hopefully this should help us.*

—David Mowa,  
Hopi Tribe



A Hopi pilgrimage to Zuni Salt Lake is illustrated in this mural by Fred Kabotie in the Painted Desert Inn at the Petrified Forest National Park. Springs and campsites are shown, as well as animals seen along the way. Men are shown collecting salt in the lake under the gaze of Salt Woman. The trail home leads past Zuni Pueblo, seen in the upper left corner. The feast prepared by Hopi women to welcome home their fathers and brothers is depicted in the center of the mural.

# Zuni Stewardship of Ancestral Villages and Sacred Land

**T**HE ZUNI PEOPLE are stewards of the villages and sacred lands their ancestors occupied in the Largo Creek and Carrizo Wash region. During our fieldwork,

in the twelfth century suggests that elements of kachina ritual may date to Chacoan times in the Southern Cibola region.

©Adriel Heisey



Aerial view of Cerro Prieto at sunrise. This butte is an important landmark for the Zuni and other Western Pueblo tribes.

the Zuni research team told us that the archaeological sites they visited provide physical evidence supporting the tribe's oral history about ancestral occupation and use of the Zuni Salt Lake and the surrounding area.

While visiting a petroglyph panel on a cliff face near Cox Ranch Pueblo, Octavius Seowtewa observed that there is a lot of recorded history at this place. He pointed to a spiral petroglyph that marks the migration of Zuni ancestors through this area in the past. According to Zuni traditions, the ancestors did not travel in a straight line from the emergence place in the Grand Canyon to the Middle Place at Zuni Pueblo. Instead, these ancestors migrated far and wide on a spiritual quest to fulfill their destiny. Other petroglyphs at this site represented the Koko, known to non-Zunis as kachinas. The proximity of the petroglyphs to the nearby great house occupied

*I think that what we might consider migration signs to identify individual groups or people who were there, just everyday symbols like you see in pots or the symbols that we use for our ceremonies. The Koko have this. The symbols on the masks themselves were up on those petroglyphs. So, just thinking of when those petroglyphs were put up to the present, there is a lot of history that is there that was never mentioned until we started going to all of these different petroglyph panels. Then we can associate them with the meaning of the symbols. Just looking at our Koko dancing, it looks like just symbols, but when you go to those sites and you associate those from the present to the past, we have a lot of history that was forgotten, was not recorded, or was not mentioned.*

*Because, I think that I did mention that our elders were very selective in who they wanted to relay this information to, and so that part of our history was almost lost. Some of those petroglyphs are just considered art—but it has a meaning to our people. It's not just a person going up there and doing this artistic work. He's telling the people that would come later that these were the people here, and these were the symbols that we used in our ceremonies and that will be used in future generations. That type of history was left behind for us by the ancestors.*

—Octavius Seowtewa,  
Pueblo of Zuni

*These petroglyphs were put there to record the things they saw on their journey.*

—Harry Chimoni,  
Pueblo of Zuni

*The petroglyph panels are important because our ancestors, in their travels and their journeys through those areas, they never had written language, so*



Petroglyph panel near Cox Ranch Pueblo.

*these are the symbols that were left behind to remind the people that they were there.*

—Octavius Seowtewa, Pueblo of Zuni

At Cox Ranch Pueblo, we discussed the artifacts recovered during archaeological excavations, which included the faunal remains of eagles, ducks, cranes, ravens, and hawks, as well as lynx, badger, fox, bighorn sheep, and turtles. Octavius Seowtewa commented that the feathers of all of these birds are today used in prayer feathers and ceremonies, and that Zunis also use the other animals in religious rituals. The Zuni research team thought the entire faunal assemblage, including a variety of bone tools, proves this site was occupied by Zuni ancestors.

The Zunis saw similarities between Zuni Pueblo and the archaeology of Cox Ranch Pueblo, and they think this correspondence demonstrates ritual and social continuity with Zuni ancestors. The research team pointed out that the layout of room blocks at Cox Ranch Pueblo is similar to how buildings are arranged at Zuni, and they thought the plazas in both villages were used to support a communal lifestyle. The Zunis envisioned the plazas at Cox Ranch Pueblo as being used for the public performance of ceremonies conducted by religious societies, much like similar spaces are still used at Zuni Pueblo today. In architecture and archaeology, the Zunis see a cultural affiliation with the ancient occupants of Cox Ranch Pueblo. Jerome Zunie told us that the “Middle Village” of Zuni Pueblo functions as a modern-day great house, similar to the great house at Cox Ranch Pueblo. Octavius Seowtewa, speaking for the entire research team, told us that the Zuni ancestors are still present at this site, and their spirits make it a special place.

The unroofed great kiva-like structure at Cox Ranch Pueblo that opens eastward toward the cinder cone of Cerro Pomo, where the sun rises during the winter solstice, resonated with the Zuni team. Octavius Seowtewa noted that the kivas at Zuni Pueblo have similar openings, where

sunbeams at dawn are used to predict the solstice and equinox. Important ceremonies are conducted at the time of these celestial events, so astronomical markers are of great consequence to the Zuni.



*Jerome Zunie touches the past at a petroglyph near Cox Ranch Pueblo.*

*We used to have a person who was given that responsibility of watching the sun. This individual didn't relay that information to his relatives so that part of our history, our culture, is no more. But we did have an individual who watched the sun. We have a shrine that probably has the same significance, they probably had an individual there that watched the progress of the sun and the moon, and this individual would have the knowledge of predicting when the winter and the summer solstice would be.*

—Octavius Seowtewa, Pueblo of Zuni

*Just looking at the sites themselves, these people were a communal type of people. They were centralized within one area instead of scattered in the different parts of that valley. And finding kivas there also points to the fact that we are culturally affiliated because we still have kivas here. The concept of people being centralized instead of everyone for themselves, is still practiced here in Zuni. I guess that's one of the main things that would lead us to the culture affiliation claim because they have the same structures, the same type of life that we still have here. And we'll always have that same concept of people helping each other.*

—Octavius Seowtewa, Pueblo of Zuni

The Zunis found the agricultural field houses in the Largo Creek and Carrizo Wash of interest because they represent the agricultural activities that form the cultural basis of the Puebloan lifestyle. These fieldhouses are today

reduced to low rubble mounds with sparse artifact scatters that can easily be missed if you are not looking carefully at the ground. At one of these fieldhouses, Perry Tsadiasi found a broken mano, the handstone used to grind corn on a metate, and this confirmed that the Zuni ancestors living in the area were farmers.

When they climbed to the crest of Cerro Pomo, the



*Left: The Zuni research team talks with Andrew Duff about the great house at Cox Ranch Pueblo. Right: Perry Tsadiasi, Eldrick Seoutewa, Octavius Seowtewa, and Andrew Duff stand at the edges of a small fieldhouse near Cox Ranch Pueblo.*



Zunis discovered several features that archaeologists would probably classify as enigmatic rock piles. To their expert eye, however, the morphology and placement of these stone features was sufficient to identify them as religious shrines. Given the importance of Cerro Pomo as an astronomical marker, the Zunis thought these shrines were used as receptacles for important religious offerings. On their hike, the Zunis saw an eagle nest and nearby they found a downy plume that had been naturally shed and was lying on the ground. This was taken as a good sign, and the feather was collected so that it could be used in religious activities at Zuni Pueblo. Finding this feather brought to mind that the Zunis have long collected eagles from rocky crags along Largo Creek and Carrizo Wash.

*And that's what is important to the Zunis, that we've always been using the eagles in our ceremonies. Now that's one of the most important areas that the Zunis, our ancestors, our forefathers went to collect the eagles for religious use.*

—Octavius Seowtewa, Pueblo of Zuni

After visiting archaeological sites surrounding Zuni Salt Lake, Jerome Zunie observed that these places make it possible to map oral traditions and place names onto the land, providing a geographical context for understanding Zuni history. This history connects the Zuni people to their ancestors and to other Puebloan tribes, and it provides the foundation for understanding the Zuni's continuing ritual use and concerns for Zuni Salt Lake. When Zunis visit the places named in oral traditions, they experience the legacy of their ancestors in a personal and meaningful way.

*When our forefathers were migrating down to find the center of the earth, those early inhabitants—the Puebloan people—situated around here came to an understanding that some people might have moved to the Rio Grande Pueblos, the Acoma and Laguna. The research on the areas that we visited and work done with other archaeologists indicates that these are early Zuni ancestral routes that have been established and that they left those ruins behind.*

—Harry Chimoni, Pueblo of Zuni

Zunis have long made pilgrimages to Salt Lake to pray for rain and collect salt for ritual and culinary use. These



*Perry Tsadiasi from Zuni Pueblo holds a mano fragment at a fieldhouse near Cox Ranch Pueblo, proof that his ancestors grew corn here in the ancient past.*

pilgrimages are one of the ways that young boys are taught the cultural knowledge they need to become Zuni men. The Zunis we worked with emphasized the importance of properly preparing for and conducting such an important religious journey. Harry Chimoni explained that you don't just come and walk in; ritual preparations must be made with the proper spiritual thoughts and reverence. Prayer sticks must be prepared and deposited as religious offerings to Salt Woman and the Twins for rain and blessings. Salt Woman must be shown respect, and the salt collected shared with relatives at Zuni Pueblo.

*Young boys are brought to Zuni Salt Lake when they are initiated. They are brought to collect salt for Salt Mother. Salt Mother is a nurturer; all Zunis are children of Salt Mother. Her "flesh" to us is the salt she provides. The participants in the pilgrimage and the initiates provide salt to their aunts and friends. People getting salt for the first time must give it away. Later they can collect salt for their own use. These practices continue because the Zunis are still conducting initiations.*

—Eldrick Seowtewa, Pueblo of Zuni

*For centuries people have been coming here for salt that is used for cultural purposes and everyday consumption. There are religious and cultural ties between Zuni Salt Lake and the Middle Village.*

—Harry Chimoni, Pueblo of Zuni

*A long time ago the leaders would make lots of pilgrimages with the rain priests. The pilgrimage took four days: two days to get to the Salt Lake and two days to return. The pilgrimage was to ask for rain, and was coordinated with summer religious events. There were specific ceremonies when people came here with an announcement to collect water for bringing rain. There is a four-year rain dance and other specific ceremonies that entail visits to Zuni Salt Lake. It is difficult to put a timeline on how many times this place is visited.*

—Octavius Seowtewa, Pueblo of Zuni

For centuries, the Zuni Salt Lake was within the aboriginal lands of the Zuni Tribe, and the Zunis and other tribes had unimpeded use of the lake for traditional religious practices. After the United States assumed sovereignty over New Mexico in the nineteenth century, however, the ownership of Zuni Salt Lake passed to the State of New Mexico, which leased the lake for a commercial

salt operation. Several generations of Zuni leaders tirelessly sought to have the lake restored to the Zuni Tribe, and in 1978, the Zunis finally convinced Congress to pass a law authorizing the federal government to acquire the Zuni Salt Lake and add it to the lands held in trust for the Zuni Tribe. Since Zuni Salt Lake was restored to the Zuni Reservation, the Pueblo of Zuni has taken the lead in protecting the home of Salt Woman.

Today, the Pueblo of Zuni is fully engaged in historic preservation through the activities of the Zuni Heritage and Historic Preservation Office and the Zuni Cultural Resources Enterprise. The tribe engages traditional leaders willing to work with archaeologists to advance mutual goals of sharing knowledge and of protecting important heritage sites. In working with us on this project, our Zuni colleagues sought to document the historical importance of their traditional lands and share what they have learned about the archaeology of the region with young tribal members. This issue of *Archaeology Southwest* is a step towards those ends.

*Zunis can learn their roots from archaeology. They can learn where their ancestors came from.*

—Jerome Zunie, Pueblo of Zuni

*We are learning from each other, working together to educate one another to preserve what's left behind.*

—Harry Chimoni, Pueblo of Zuni

*This is a part of our history, we don't have a written history book of our people making travels within this area. That is something, those areas, to be protected for future information of our ancestors' travels; because once they are destroyed a part of our history is lost. The same thing with petroglyphs—it's part of our history and if those areas are lost then the void of our history would be there. We want people to know that we're here on the Zuni Reservation but that we have those other areas too, off the reservation, that our ancestors lived. We need those areas protected. With this type of information we can start educating people that it's not just a place to look at, it's a place where our people had the chance to worship and practice our culture. Hopefully, we can have that information out there for generations to come.*

—Octavius Seowtewa, Pueblo of Zuni

## Challenges in Heritage Management: Past, Present, and Future

FOR YEARS, the archaeological legacy of the Western Pueblo ancestors in the Largo Creek and Carrizo Wash area faced little threat. The region remained a tranquil, rural corner of New Mexico, with low population density and an economy based on cattle ranching. The great houses, village sites, and petroglyph panels bore quiet testimony to the past as Native Americans continued to make pilgrimages to the Zuni Salt Lake to pay homage to Salt Woman. This situation changed in the 1990s when the United States began to expand mineral extraction on public lands to support increased production of energy. To facilitate this effort in western New Mexico, the Bureau of Land Management sponsored a number of surveys to document historic properties in areas of potential coal and gas development. This work greatly increased our knowledge of the regional archaeological sequence.

Salt River Project (SRP), a political subdivision of the State of Arizona, provides electricity to more than 900,000 customers in the Phoenix metropolitan area. One of the power plants operated by SRP is the Coronado Generating Station, located along the lower Carrizo Wash near St. Johns, Arizona. To supply coal for this power plant, SRP started to develop the Fence Lake Mine several miles east of Zuni Salt Lake. Archaeological surveys of the propos-

ed mine documented hundreds of archaeological sites within the footprint of the mine, and along a proposed transportation corridor along Carrizo Wash connecting the mine and the power plant. SRP took its environmental responsibilities seriously, and invested substantial funds to support scientific studies, including ethnographic research with Zuni, Hopi, Acoma, and Ramah Navajo people that identified numerous traditional cultural properties potentially affected by the development of the mine.

A public outcry developed in opposition to the Fence Lake Mine. Tribes and environmental groups were concerned that a strip mine would impinge on the aquifers that supply water to Zuni Salt Lake, and that dust pollution from the mine would contaminate the salt crust. Traditional leaders explained that when Salt Woman is not respected, she departs to find another place to live, and that if she left Zuni Salt Lake, traditional cultural prac-



*New subdivisions create managerial concerns for the future.*

tices would be irreparably harmed. Tribes were also concerned because the mine would destroy scores of Ancestral Pueblo sites and disturb an untold number of graves that would need to be excavated to move ancestors out of harm's way. After the New Mexico Mines and Minerals Division approved a state permit for the mine, the Pueblo of Zuni, assisted by other tribes, sought to legally block the permit through an administrative law hearing. Scientists testifying at this hearing presented contradictory evidence, some arguing that the mine would have no impact on the hydrology of Zuni Salt Lake, and others arguing that it would. After the state permit was upheld, the New Mexico congressional delegation wrote letters expressing concern about a federal permit, and environmental groups sponsored protests at SRP's headquarters in Phoenix.

*Yes, we worked with Zunis not to have the mine—we were worried about salt, access to salt. We worry about water. We knew there would be disturbances. Salt Lady moved here to get away from disturbance.*

—Santiago Riley, Pueblo of Laguna

*That's why the Zunis fought so hard to protect Zuni Salt Lake. If she leaves again, then we might not find her again. She may leave the country.*

—Jerome Zunie, Pueblo of Zuni

The issue was resolved in 2003 when SRP abandoned the proposed Fence Lake Mine when it secured less expensive and higher quality coal from the Powder River Basin in Wyoming, delivered via already existing railroads. Zuni and the other tribes were elated that they had successfully defended Salt Woman and her lake from a potential threat.

Ironically, the same week that SRP announced it had stopped development of the Fence Lake Mine, the Bureau of Land Management opened the area for oil and gas exploration. While one threat was averted, another potential threat to heritage resources was developing. Fortunately for those interested in historic preservation, there are no plans at present to develop oil and gas in the Largo Creek and Carrizo Wash area, but this may change in the future.

In the meantime, there are other threats to archaeological sites and heritage resources. These include pothunting, especially along the lower Carrizo Wash in Arizona, and the subdivision of ranches into smaller residential properties. The development of home sites in the region will substantially increase the number of people living there, and increased water use will potentially affect the aquifers that are integral to the ecology of Zuni Salt Lake. In addition, with more people moving into the area, recreational use of public lands will increase, along with inadvertent impacts to fragile archaeological sites from activities such as four-wheeling and off-road vehicular traffic. The Western Pueblo men we worked with all expressed concern over any activities that adversely impact the archaeological sites where their ancestors are buried. They think these sites are integral in maintaining tribal heritage and cultural practices.

*All our history will be eliminated through vandalism and outright site destruction related to development. We don't have any written books of our history but we have these petroglyphs and sites to tell us where our ancestors were.*

—Octavius Seowtewa, Pueblo of Zuni

*Salt Lake is kypaptsitiwa, "to be respected." So nobody should interfere with the lake and its resources.*

—Raleigh Puhuyaoma, Hopi Tribe

## Stewardship and Preservation

David Eck, New Mexico State Land Office

**T**HE STATE LAND OFFICE is the agency administering New Mexico's trust lands, which were set aside from federal holdings by actions of the U.S. Congress beginning in 1850. By the time of New Mexico's statehood, 13 million acres of such land had been identified, and the income from leasing was dedicated to the support of 21 public institutions. Today, the majority of that income is obtained from oil and gas leases, and the majority of the distribution is made to the state's common schools. The trust, including lands in the Largo Creek–Carrizo Wash watershed, is administered to generate the highest possible sustainable revenue while also safeguarding and

preserving cultural, economic, and environmental assets alike. Stewardship of trust assets is a major component of the Land Office mission, as well as a mandatory part of the responsibilities of every lessee, each of whom is explicitly charged with the protection of all trust resources within his or her leases.



*David Eck discusses management of heritage resources while Ron Charlie takes notes during a meeting with the Western Pueblos in 2007.*

# Finding the Balance

Brenda Wilkinson, Bureau of Land Management

**T**RYING TO FIND the delicate balance between resource protection and resource use is the constant challenge facing the Bureau of Land Management (BLM), which manages about a third of the surface acres in the study area and even more subsurface, or mineral estate. The mission of the agency is to provide for a variety of public land uses (including energy development) without compromising the health and diversity of the land, and without sacrificing significant natural, cultural, and historical values.

BLM lands within the area managed by the Socorro Field Office contain coal, oil, and gas resources. The BLM needs to provide opportunities for energy development, and finding the balance in this area was one of the issues addressed in the BLM's Resource Management Plan Revision (RMPR), now in the final stages of completion. This plan provides the framework for all land-use decisions for the next 15 to 20 years on BLM lands in the area managed by the Socorro Field Office.



*A petroglyph near Cox Ranch Pueblo bears testimony to the past.*

The BLM is still able to partner with researchers and tribes for the benefit of cultural resources in the region.

The bureau has supported Duff's research since 2002, providing financial as well as in-kind support, while gaining valuable data about past settlement and land use critical to the BLM's management of prehistoric sites and communities in the study area. These data were invaluable in helping to define areas designated for special protection under the RMPR.

In another partnership effort, the BLM has been working with Native American tribes on a project to protect Zuni Salt Lake. The approach uses a combination of public awareness and physical protection measures to deter unauthorized access and damage to the lake, which have increased dramatically in recent years. These partnerships, and the perspectives they bring, are essential to helping us find the balance between resource protection and use, and something that benefits all involved.

See the Center for Desert Archaeology website for more information: <<http://www.cdarc.org>>

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# Building a Coalition for Preservation

**I**N THE FUTURE, we hope that tribes, ranchers, environmental groups, and governmental agencies will find a way to work together to protect the heritage resources of the Largo Creek and Carrizo Wash region. All of these groups have a role to play. Tribes have been using the Zuni Salt Lake for centuries, and their respect for nearby ancestral sites provides a foundation for wise management. Ranchers are concerned about the health of their land, and as stewards they can help protect archaeological sites from looting. The public has a powerful voice when it participates in reviewing and commenting on resource management plans and serves as a watchdog for protecting public lands. Finally, the employees of governmental agencies are hard-working public servants who put policy into practice. We think land-use plans that protect heritage resources are commensurate with the traditional values of ranching in west-central New Mexico. If all of these groups work together with mutual respect, the rural character and historic properties that make the Largo Creek and Carrizo Wash area a special place can be preserved for the benefit of future generations.

*An aerial view of the Red Hill volcanic cone, looking to the east in the evening light, shows the undeveloped, rural character of the study area.*



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Center for Desert Archaeology  
Archaeology Southwest  
300 E. University Blvd., Suite 230  
Tucson, AZ 85705

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