

TRIBAL SOCIAL & CULTURAL INSTITUTIONS FOR LONG-TERM STEWARDSHIP OF HAZARDOUS SITESⁱ

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Memory & Cultural Practice in Producing Knowledge for Future Generations

The tribal social and cultural institutions discussed in this paper are used to reaffirm cultural practice and belief and to communicate knowledge about the spiritual, cultural, and historical significance for tribal peoples of specific places. This paper argues that such institutions should be integral to contemporary efforts in the “long-term stewardship” of persistent hazardous and nuclear wastes.ⁱⁱ We do not suggest that standard institutional controls are not necessary in the short term or that scientific inquiry and technology development are not essential pursuits. Rather, given the contemporary and future scope of the waste problem and given the community resources to be harnessed, we recommend a complementary focus on community development of social and cultural institutions.

Social and cultural institutions are especially useful for communicating knowledge precisely because they communicate that knowledge *through* cultural practice. Cultural practice is engaged in daily and reaffirms cultural knowledge substantively and consistently. Culturally specific knowledge is communicated in the vernacular of a people and should be accessible to the majority of individuals within a culture. Daily cultural practice is both formal and informal; it is adaptive. It is a promising stewardship strategy to think about infusing cultural practice in small ways with practical, basic, and culturally appropriate knowledge about hazardous sites.

Tribes are specifically noted for having land-based spiritualities that tie the political and cultural unit to a very specific place. In addition to place-based cultural traditions, tribes have unique legal relationships with the U.S. government that mandate tribal involvement in bureaucratic decisions affecting tribal resources and interests. As far as the federal government is involved in long-term stewardship activities,

ⁱ This paper, rather than being the product of in-depth research, suggests needed areas of inquiry for the development of tribal social and cultural institutions for long-term stewardship. The International Institute for Indigenous Resource Management is in the early stages of work in this area. Kicking off our efforts will be an October 2001 roundtable to be held in Rapid City, South Dakota and at the Badlands Bombing Range. The event will engage 30 tribal artists, elders, policy-makers, environmental professionals and others in three days of facilitated discussion. Participants will develop a suggested research, education, and artistic agenda for tribal and local development of social and cultural institutions for the stewardship of permanent contamination.

ⁱⁱ It has to be said that the term, “long-term stewardship,” will seem misleading or naïve to many communities who begin to engage in thinking on this issue. For civilization today and for all practical purposes, the timelines talked about in relation to the stewardship of hazardous and radioactive wastes are eternal.

tribes must have a voice. Scholars working within and without government have been discussing the fundamental ideas presented in this paper for many years. However, these ideas have not been embraced programmatically in government efforts or in our society's efforts more broadly to deal with permanent hazardous contamination (1). Tribal attachments to place and the legal relationship that requires meaningful tribal input present an ideal vehicle for testing and developing these ideas in practice.

That said, other cultures—especially if we take a global view—might also be inclined to use social and cultural institutions to communicate knowledge about hazards into the deep future. Therefore, we hope that the options discussed here will not be seen exclusively as options for tribal involvement in long-term stewardship efforts, but that they will also be seen as options for other local communities that have long histories of association with particular contaminated sites.ⁱⁱⁱ

Bringing the Past & the Present into Long-term Stewardship

In any discussion of cultural institutions as complements to the standard institutional controls proposed by government, responsibility for the waste legacy must necessarily be discussed. Discussions of responsibility for the waste legacy will be unavoidable and integral to the success of social and cultural approaches, whether tribal or other communities are involved. They will certainly preface all movements by tribes towards assuming any responsibility whatsoever for long-term stewardship activities. More broadly, it will be impossible to expect communities and peoples to consider the implications for their histories, future generations, cultural practice and beliefs without discussing responsibility for the problem at hand. For example, the application of tribal practice and philosophies to long-term stewardship efforts will begin with a reckoning that will involve both cathartic acts and acts of differentiation. Tribes will want to spend some time lamenting, engaging in memory, and setting themselves apart from a history that many Indian people find objectionable and oppressive. Solely future and information oriented approaches to stewardship cannot deal with responsibility for the past; they obscure the contemporary politics of contamination and waste management. But, given the need for tribes and local communities to discuss memories and political understandings of past activities, meaningful involvement of those communities is impossible without bringing into stewardship the past and the responsibility that goes with that.

This approach constitutes a significant departure from our society's current approach to long-term stewardship, which is to mistakenly hold the federal government solely responsible for the task. The U.S. Department of Energy (DOE) is preoccupied with transferring information (as opposed to knowledge) to future generations (2). However, there is a key difference between "knowledge" and "information." Knowledge is grounded in experience—often shared experience—that must come from the past to the present. Information provided out of context and experience is not powerful and is easily forgotten. DOE's efforts, in particular, have largely failed to address the idea of historical responsibility and underplay contemporary conflicts over waste management. This approach undermines DOE's credibility today and most importantly, compromises the knowledge that should be passed to future generations. On the other hand, a social and cultural approach based in common cultural practice and the knowledge to be had will help refocus attention on past responsibilities and contemporary conflicts. It lends itself to innovative and effective stewardship actions that can be crafted at tribal and community levels and that can increase the effectiveness of our society's overall stewardship efforts.

ⁱⁱⁱ In advocating tribal leadership in the construction of social and cultural institutions for long-term stewardship, we are in no way attempting to preclude the application of tribal scientific and technical expertise to existing scientific policy-making and technology development efforts.

Long-term Hazards, Short-term Solutions

Weapons development, mining, nuclear energy and industrial process have resulted in contamination that will last thousands of years. During World War II and the Cold War, the United States federal government built and operated a vast network of weapons research, production, and testing facilities. As a result, our society is today burdened with extensive radioactive and chemical waste contamination of the environment. There are over 100 such sites in 30 U.S. states and one U.S. Territory that contain hundreds of thousands of acres of contaminated soils, ground and surface water, sediments, and contaminated buildings (3). While expensive cleanup projects are underway at many sites and research on new cleanup technologies is underway, the financial and technological capabilities of our society are presently outstripped by the complex nature and extent of contamination.

Governments must necessarily focus on how to safeguard current and future generations from contaminants that may be in place for tens to thousands of years. A common approach, despite the “long-term stewardship” label, is to emphasize the construction of physical barriers and deep geologic storage and to develop regulations and security systems to govern site access. These are controls that will not endure nearly as long as wastes are hazardous. Such controls have shown themselves fallible in the short to mid term and so their reliability in the very long term is highly suspect. For example, regulations on community access to hazardous sites may be forgotten or re-interpreted as generations or even a few years pass. Love Canal is an infamous example. A 1953 deed from Hooker Chemical to the town school board stated that the site was used for chemical disposal. The next year, a school was built over the landfill (4). In 1951 when the DOE Rocky Flats site became operational, the boundaries of the Denver and Boulder metropolitan area were a safe distance from the site boundary. However, from 1940 to 1990, the metro area underwent a nearly five-fold population increase. Suburban residential development now abuts the site (5). Federal agencies admit that it is impossible to guarantee that any physical barrier or geologic repository will last as long as some wastes will last. They acknowledge that it will take constant attention in order for measures imposed today to remain effective for as long as residual contamination presents risks and that it will be difficult to assure that level of attention over time (6).

In response to these uncertainties, federal agencies focus on basic science, applied science, and technology research. They bank on new technologies and scientific breakthroughs to decrease the likelihood of stewardship failure. Seeking out and applying new knowledge is often advocated, but it is scientific knowledge that is solely privileged in the federal recommendation (7).

Beyond the Cultural Bias of the Current Approach

In recommending a new thrust towards integrating social and cultural knowledge into technical and regulatory programs, we must also acknowledge that *all* approaches to stewardship, including scientific and regulatory approaches, reflect cultural and social values (8). Cultural values about justice, about what constitutes worthy knowledge, and assumptions about who will retain power in the very long-term underlie every regulation, report, system, and physical construction of the current long-term stewardship effort. An illustration of such bias lies in the prioritization of the written word in regulations, in assumptions about the effectiveness of written messages placed on site markers, and assumptions about who should be warned. The written word is looked upon as more official and permanent than the spoken word. There are also assumptions about the objectivity of the written word as it is used in official documents. Building physical barriers and delineating boundaries with fences and other security measures also conveys cultural attitudes about appropriate standards for “clean,” which barriers are most effective, and which risks are most important. There is the assumption that the high-level governmental organization that is necessary to oversee regulatory controls and technology development efforts is more or less permanent. There are assumptions about citizen respect for what is perceived as official. There

are also assumptions about who will be placed in positions of authority as institutional controls are regulated and maintained.

Any approach is value laden. However, a social and cultural institutions approach acknowledges and *works with* values and transmits knowledge rather than information. In order for future generations to understand our present day context, they must receive cultural knowledge about our present day context. This includes knowledge that counters government unwillingness (or simple cultural blindness to the need) to address responsibility for the creation of the waste problem. Information that attempts—but can never succeed—to be culturally neutral simply falls short of the mark. Methods of transferring knowledge must be effective and meaningful. We recommend institutions that communicate memories and cultural practices including stories, songs, sculpture, monuments, culturally significant place names, and theater. These institutions contain representations that are especially powerful within specific cultural contexts. These communicate more expansive or complementary knowledge than the standard sources of non-politicized information about the history and practices that led to the creation of the hazardous sites with which we are dealing. Following are examples of social and cultural institutions and their effects.

Asserting Cultural Landscapes Today and for the Future

It is not the literal past—the facts of history, that shape us—but images of the past embodied in language. . . We must never cease renewing those images (9).

This quote is from the play, “Translations,” written by Irish playwright, Brian Friel. It is a well-known play in Ireland, originally performed in Derry by Field Day Theater Company. Field Day is a small organization, founded by actors and writers, that is dedicated to performance and publications that address Irish de-colonization. This particular play is about the British in 1833 undertaking a sweeping “administrative” process in which they anglicized from the Irish language the place names in County Donegal. The play demonstrates the ability of a government administration infused with one set of cultural norms to assert its cultural imprint on the landscape. What is instructive about this play is that the characters first see the process as purely administrative. However, as they realize the effect of the process in their daily lives, they understand that the British government action has actually been a radical colonial attempt to conceal or wipe out the Irish cultural imprint upon the landscape. Therefore, the “purely administrative” process has presented a risk to the cultural record of the landscape as carried in the place names of Donegal. In hindsight, the cultural dominance of one set of cultural values over another becomes obvious to the play’s characters.

Place names are written words. But, their greatest strength in carrying forth knowledge is that they are spoken daily in many contexts. Place names convey information that transcends the physical. If a place name is invested with the stories, history, and/or experience of local people, it constitutes an oral control and a resilient cultural institution in which a community is strongly invested. The “Old Woman Mountains,” for example not only describe the vision of an old woman that is said to reside in those mountains, but the name also signifies a spiritual place with a long history for the Chemehuevi people of California. For this tribe, the Old Woman Mountains are revered for their spiritual and historical significance and the tribe has a deep emotional investment there. Every time the name is spoken, there is ample opportunity for stories to be told that detail the tribe’s history in association with the mountains (10). Indian people and others use place names to connote our understanding of our natural surroundings. Therefore, tribes and other communities have the right and responsibility to ensure that their understanding of a landscape and its history are reflected in the images associated with that landscape. If such control is not asserted, valuable knowledge that may warn future generations of historical activities and potential dangers may fade from the historical record. Tribes must be able to name the places that are contaminated and integrate stewardship measures into their stories about the landscape.

The Written Word: Regulations, “Official” Documents, and Creative Texts

Long-term stewardship efforts rely heavily on the written word. However, it is a narrow range of the written word that is actually brought forward. For example, “DOE’s Report to Congress on Long-term Stewardship” summarizes standard institutional and engineered controls, summarizes hazards that will remain after cleanup, and discusses who is responsible for stewardship activities. There are federal environmental laws such as the National Environmental Policy Act (NEPA) that set out the requirements for environmental impact statements and the Resource Conservation and Recovery Act (RCRA) that governs the treatment, storage, and disposal of hazardous wastes at sites including those in need of long-term stewardship. But, we should expand our thinking on how the written word is defined in “institutional controls.” Creative texts will also be valuable in long-term stewardship efforts.

For example, Marilou Awiakta, a Cherokee poet, tells a story in her 1993 book, *Selu, Seeking the Corn-Mother’s Wisdom*, about a spiritual belief that guided Cherokee respect for the white deer whose spirit would track a hunter and cripple him if that hunter failed to ask the deer’s spirit for its pardon. Awiakta calls the deer a symbol of reverence for nature and she relates this story held by her tribe and handed down through many generations to the contemporary need for humanity to revere appropriately and respect the power of the atom (11).

Awiakta tells this story in relation to the Cold War activities that occurred in her childhood home of Oak Ridge, Tennessee. The way in which she relates tribal stories and the wisdom contained therein to long-term stewardship issues is a powerful example for writers, policy-makers, and communities. Awiakta makes plain how culturally relevant stories and values can be used to frame historical knowledge in order to substantively evaluate that history from a culturally specific standpoint. From this standpoint, Awiakta discusses the environmental degradation, the activities and technologies that led to such degradation at Oak Ridge. Perhaps most importantly, she describes personal links through her father to the historical activities of Oak Ridge. She conveys her personal investment in understanding that history and assumes a responsibility dictated by that Cherokee story to understand—within her particular cultural values—the power of nature and the atom. Finally, she discusses her reverence for that power in relation to the culture of those who worked and lived near Oak Ridge during the Cold War. She reconstructs a rich understanding of the mixing of cultural perceptions by retelling memories and stories as they were told by her elders—both Cherokee and non-Cherokee—about the activities that occurred at Oak Ridge.

Awiakta’s powerful story demonstrates that wisdom can be had not only from mythic renditions of the distant past, but in stories about the activities of tribal people in recent history and today. Such stories carry cultural understandings of activities that led to contamination. They may be vitally important for Cherokee people, for the people of Oak Ridge, and for society more broadly as long-term stewardship progresses. These kinds of stories convey cultural values *along* with descriptions of the hazards with which we grapple. For most of us, such historical renditions are much more compelling than regulatory documents, reports, and environmental impact statements. Stories do not replace government documents, but they are complementary and they have the same—if not a better chance—of surviving generations.

Physical Barriers

The Yucca Mountain site is currently under evaluation by DOE to determine if it is suitable to host a repository for spent nuclear fuel and high-level radioactive waste that will remain highly radioactive for thousands of years. Scientists who study geology, hydrology, biology, and climate from around the world agree that the most feasible method for “disposing” of highly radioactive materials is to store them deep underground. Yucca Mountain has been referred to as one of the first “long-term solutions” to the environmental problem created by nuclear weapons and nuclear energy production (12). But, how long will Yucca Mountain remain a solution?



Night view of the starter tunnel to Yucca Mountain. *Sandia National Laboratories, March 1999.*

Technical controls and physical barriers will very likely not endure or maintain their current integrity as long as wastes are hazardous. Documents outlining dangers and regulations governing human access and intrusion to sites may be destroyed, forgotten, or misinterpreted as generations pass. Even the governments that oversee and enforce them may fall well before the wastes are no longer a danger. It seems to us today that a deep geologic repository could never be forgotten. But, more central and visible cultural icons have been forgotten before—only to be rediscovered hundreds of years later. In this century humans have uncovered entire communities, temples, and other structures from ancient Rome, China, and Java. Such finds have been buried under less than 2,000 years of political and topographical change. Keep in mind that civilizations able to gather the capital to build grand physical structures would have been highly developed and would likely have the same confidence as our own in its longevity and ability to transfer historical knowledge to future generations. Consider our society's similarly advanced efforts to build deep geologic repositories. In addition, consider that our advanced scientific and engineering practices are also coupled with a reluctance to develop accompanying stories and historical accounts of activities and responsibility for contamination. Now, fast-forward a millennium or two: The stories have not been told about historically monumental activities such as nuclear research and development during the era that we call the Cold War. What if an archaeological find uncovered is not an innocuous religious structure or simple ruin of a home or building, but a site of long-buried spent nuclear fuel rods?

The Spoken Word

The spoken word, as already emphasized in the discussion about place names, is an effective tool for passing knowledge about place and history to future generations. The spoken word includes such

effective forms such as song, theater, storytelling, and oral history. In the world of music, there are many examples of historical events being documented. In the tribal world, there are both ceremonial and social songs that can communicate specific information. For example, there are social songs called “forty-nines” that are sung in English against a backdrop of drum and more “traditional” style singing. These songs tell stories of love, of travel, and of socializing; some of them have been sung on the pow-wow trail and in other social events since the 1950s. While they have certainly not been affiliated with noble or ceremonial events and have not been considered culturally central, they do constitute an important art form. And while they have not yet been used to carry forth information about important events, for many Indian people, they are as persistent as are rock music classics for many Americans. The tribal musical repertoire in English is a relatively recent invention. However, many 49s have persisted for one-half century along with some of the most memorable phrases they carry. While 49s represent a new traditional art form, we also have longer-lived examples of songs and chants—religious and otherwise—that have survived and flourished over hundreds or thousands of years and that carry important historical knowledge.

While Marilou Awiakta engages in the written word, the stories she relates in *Selu* were originally told to her by her mother. To her mother’s stories Awiakta adds her own childhood experiences. Her father worked at Oak Ridge and she recounts for her readers the questions she asked her mother and father about the busy and mysterious activities at Oak Ridge. She conveys her father’s uncertainty about the exact nature of the activities there and she conveys her family’s awe for what were secretive and highly important activities. But, Awiakta’s is not the usual story of war and glory. She couples her descriptions of awe with her mother’s warnings of caution (based on Cherokee teachings and the deadly events at Hiroshima and Nagasaki) regarding human manipulation of the atom.

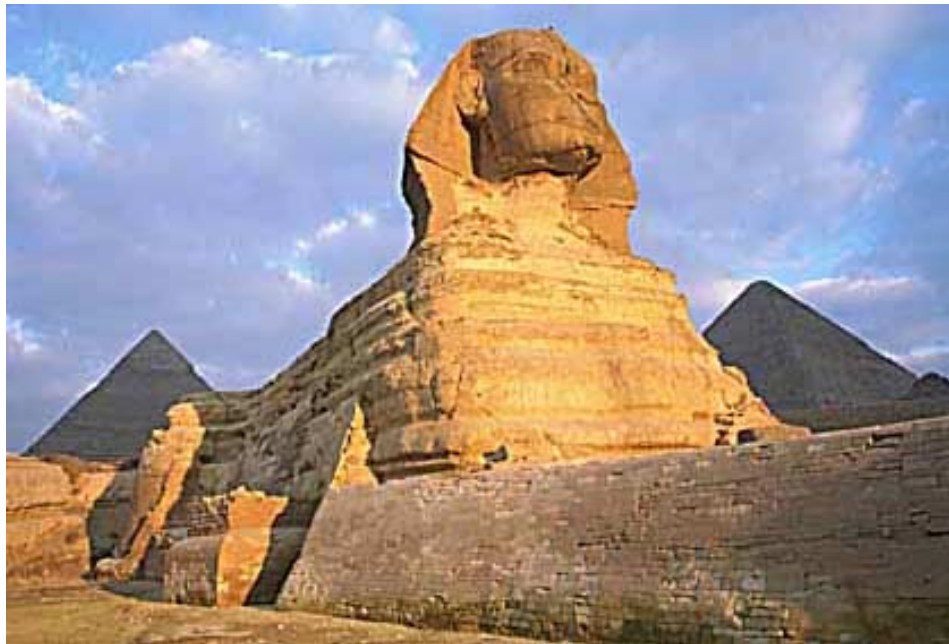
As we saw in the discussion of the Irish play, “Translations,” theater is another form of storytelling. Again, the play highlights the social and cultural response of local people affected by a colonial government’s decision that manipulated a cultural landscape. The play succeeds in communicating facts about governmental procedure as well as communicating a politicized story about how common people reacted to and viewed a government’s actions.

Oral history and oratory are also important ways in many communities of passing knowledge to younger generations. So often, I sit in tribal meetings, workshops, and conferences and elder participants, especially, contextualize their comments or presentations with a bit of history. Sometimes, the historical account is much more lengthy and prefaces the precise point being made. Or, the historical account *is* the point made. It is assumed that the audience will readily understand the intended message—how a particular historical event provides guidance for a contemporary challenge (13). In order to understand the intended message, one must understand the particular cultural assumptions and historical context of the teller of the story. This way of communicating ensures not only the articulation of argument, but simultaneously reaffirms the centrality of a particular culture, and passes historical knowledge within that particular cultural context.

Visual Representations: Large & Small

Sculpture, paintings, and etchings tell stories in physical forms and also provide a focus around which oral stories and histories are told. We are all familiar with paintings, drawings, and photographs of important political events, battles, and people, and renditions simply of daily life in particular historical time periods. But, we have also seen much more ancient depictions of animals, human figures, tools, and symbols that enable us to guess about the lifestyles, family structures, spiritualities, and migrations, of ancient peoples. On a much grander scale, we have contemporary and ancient monuments to individuals and civilizations. Not to downplay the exploitation (at least by contemporary standards) of labor and the violation of land rights, such forms can endure for millennia and carry important historical information

about the highly organized societies that undertook their construction. For example, what do the pyramids and the Sphinx communicate about labor practices, the presence of capital, the state of architecture and engineering, and the spirituality of ancient Egypt—at least that of the ruling class?



The Sphinx of ancient Egypt



Profile of Mt. Rushmore; www.areaparks.com

Also consider the 20th century U.S. American example of Mt. Rushmore National Monument that boasts the faces of four U.S. presidents carved into the mountain. The monument was constructed from 1927 to 1941 in the Black Hills of South Dakota. It is claimed that the monument will last for 500 generations or 10,000 years. This monument with its powerful iconography continues to be the topic of political and scholarly debate. While many people, including tribes, have objected to the construction of the monument for environmental, spiritual, and other political reasons, it is promising that the monument will carry knowledge over many generations (14). Mt. Rushmore may or may not communicate to far-future generations the particular American nationalist ideals that are the goal of the park service's promotional literature. Future observers will interpret history, stories, and memories (preserved orally or in print) and the physical presence of the monument according to future values, politics, and cultural standards. Likewise, the visage of the Sioux Chief Crazy Horse that is carved into a nearby mountain may lend itself to conflicting or even complementary interpretations as it is related to Mt. Rushmore.

Large-scale representations are good examples of how icons can communicate knowledge from generation to generation about the values and activities of societies. While such icons were constructed for different purposes they illuminate possibilities for communicating knowledge to the deep future. Not only can the icons themselves represent knowledge, but they can serve as focal points of local histories and stories that become mythologized and perhaps more enduring than official stories.

Visual representations on a smaller scale are also useful for communicating basic information. While they are less likely to serve as foci for mythology or the grand narratives about a culture, they are still capable of representing important details about earlier societies. They are also important in that they lend themselves to local control; it is possible for smaller-scale institutions to be developed by individual craftspeople, tribes, and communities without needing to leverage the resources of highly organized and/or wealthy institutions.



Crazy Horse in progress; www.crazyhorse.org

While smaller representations have also been created by highly organized and wealthy societies, they are not necessarily the purview of such societies. Representations such as the stone carving of 14th century Egyptian king, Akhenaten, (shown right) are works that are possible for individuals and local communities to create (15). This particular carving has a message written in three major world languages with accompanying pictorial translations, showing that the creators anticipated that future societies might be unfamiliar with one or more of the languages. As an example, imagine the power for tribal communities of producing carvings in a couple of local tribal languages, English and another dominant language, along with a pictorial translation that carries important knowledge about contamination.



Carving of Akhenaten, 14th century Egyptian king

Conclusion

This paper has argued that our society's approach to "long-term stewardship" should be viewed broadly and should encompass, in addition to standard institutional controls created by government, social and cultural institutions. In expanding our approach to stewardship, innovative opportunities will emerge for meaningful tribal and community collaboration in stewardship efforts at all levels.

The involvement of tribes in the development of social and cultural institutions is also important from a contemporary legal standpoint. The authorities of tribal governments are sanctioned by treaties, acts of Congress, and by the power inherent in tribal sovereignty. Tribal political authorities are exercised on reservation land-bases and ancestral lands that have important cultural and spiritual sites and that may host permanently contaminated sites. Tribal political (and I would argue, cultural,) survival is highly dependent on the retention of and governance over the land-base. Tribes have a political and cultural imperative to maintain a headquarters and community within the tribal land-base. Tribal influence extends to historical lands that may not fall within the reservation boundaries, but over which tribes retain some measure of decision-making authority in concert with the federal government.

While much of contemporary U.S. society is highly mobile, many tribal people are simultaneously mobile and permanently attached to particular land-bases. While individual Indian people are Americans who commute from reservation to urban areas to other reservations and nations and back again, we are also citizens of particular tribes with the tribal land-base and community as a reference point. It is likely that stories and oral histories about activities located within or near those lands will be carried through generations of tribal people. The persistence of tribes in place can be a valuable component in our society's long-term stewardship efforts. It will be especially important at sites at which tribes and individual Indian people have been in close proximity or have had a history of employment. Sites such as Los Alamos are surrounded by Pueblo communities and had high numbers of tribal workers. Currently there are several oral history and research projects funded by DOE that are attempting to document the experiences of tribal individuals as workers.

Finally, most tribes will argue that they did not make decisions to engage in weapons production and industrial activities that lead to the production of long-term contaminants. Many local communities will share such feelings. Nonetheless, tribes and others must define their future roles in relation to such waste or their roles will be defined for them. Tribes have too often been forced to simply react to the programs and policies of the federal government and others. Today, tribal representatives speak often about the need for greater tribal self-determination and self-sufficiency. Stewardship is integral to tribal self-determination. Tribes have very good reasons and practices that lend them to positively influencing the practice of long-term stewardship. Tribal leaders, professionals, activists, storytellers, artists, historians, and policy-makers, in considering the tribal role in long-term stewardship, may help redefine the very meaning of "stewardship" towards a definition that is fundamentally influenced by tribal values and perceptions of stewardship. By the very nature of the tribe as a *cultural* as well as a political entity, tribal definitions would not attempt to be culturally neutral and would not avoid discussions of responsibility. Responsibility (for both goods and bads) would be at the heart of tribal understandings of stewardship. Tribal stories and histories can also help maintain institutional memory, assert local control and build local investment. Tribal stories can also reaffirm for tribes today and for future generations cultural landscapes that will not be subordinated to a cultural landscape that reflects solely the bureaucratic decisions and underlying cultural assertions of the U.S. federal government.

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