

SAA Activity Submission Form

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Title of Activity: Stakeholder Meeting Simulation

Briefly describe the activity in such a way that another instructor can implement it:

In this hypothetical scenario, multiple stakeholders are asked to weigh in on a proposal to allow hydraulic fracturing in an area rich with cultural resources. Students are assigned the roles of stakeholders, and are given time to research their roles before participating in a simulated stakeholder meeting.

What are the intended educational outcomes of this activity-what does it enable students to do or to know?

The goal of the activity is to introduce students to the diverse perspectives people may have about cultural resources and to demonstrate the role that stakeholders play in shaping the management and study of cultural resources. The exercise was designed to complement the "public archaeology" component of an introductory archaeology class, but it can easily be modified to suit more advanced undergraduate or graduate students and to emphasize specific themes.

What kinds of courses is this activity appropriate for?

Lower-level undergraduate

Upper-level undergraduate

Graduate

For how many students is this activity designed?

24

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How long does the activity typically take?

Variable. Typically hand out the background materials in class, give students one week to prepare, and then conduct the simulated meeting in a single 70-minute class session. It could easily be expanded into several sessions, or simplified to work within in a shorter class period.

What (if any) additional materials are required?

None.

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Stakeholder Meeting Simulation

The U.S. government considers archaeological sites to be unique and nonrenewable cultural resources. Thus, laws exist to manage these resources so that present and future generations may continue to have access to and/or knowledge about sites significant to their cultural heritage. But, whose cultural heritage is this, and who decides how these sites should be managed? Rather than providing a simple answer to this complicated question, I will give you the opportunity to learn for yourself what it means to engage diverse members of the public in decisions about how to manage our collective past.

In this exercise, you will participate in a simulated “stakeholder” meeting. Representatives of different interested parties (stakeholders) have been invited to participate in the first of many hour-long meetings hosted by the Bureau of Land Management (BLM) to discuss possible hydraulic fracturing (fracking) activity in an area known to be rich in cultural resources. I will represent the BLM and will serve as the mediator of this meeting, ensuring that each group has the opportunity to speak. Each of you will be assigned to one of the seven groups that will be attending this meeting, and you will be provided with background information about your group. You will have 10 minutes to meet with the other members of your group before the meeting is called to order. Once the meeting begins, each group will have 5 minutes to introduce themselves and to present their opinions and concerns regarding the construction project. Assuming that everyone stays within their allotted time, there should be time to discuss these opinions and concerns before the meeting concludes.

Following the meeting, you will write a 500-word response paper about the activity, and will upload the document on Canvas by the end of the week.

The scenario

Dool Oil and Gas Company (DOGC), a multinational corporation, would like to drill for natural gas in an area of shale deposits southwest of the New Zagros Mountains in the (imaginary) state of Dolorosa. This area includes federal land managed by the Bureau of Land Management (65% of the project area), portions of the Odwalla Indian Reservation (27%), and allotment lands owned by Odwalla tribal members (8%). The company has been working with the Odwalla tribal government on developing the project, and has approached the allottees about leasing their surface and mineral rights. The lands owned by the allottees are adjacent to the Malditos Conejos National Historical Park (MCNHP), a park well known for its archaeological resources, and the park is concerned that this project will have a negative impact on the numerous prehistoric village sites located within the park. Members of the Kaiela tribe, whose small reservation is located northeast of the much larger Odwalla reservation, have also expressed significant concerns about the impact of this project on cultural and natural resources. The project has received considerable news coverage in Springfield, a small city in Dolorosa located adjacent to the Odwalla reservation and near the project area. Some Springfield residents are excited about the employment opportunities and potential for economic development that this project represents; others are concerned about potential negative impacts on the environment, public health, tourism, and cultural resources. The BLM is the lead federal agency on this project and is responsible for granting leases to the minerals on federal lands. As part of this process, they will be putting together an environmental impact statement (EIS), laying out project proposals and alternatives, and conducting meetings about these proposed actions.

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Odwalla tribal government

The Odwalla tribe claims to have lived in this area since time immemorial. Traditionally, they were semi-nomadic hunter-gatherers who also practiced some horticulture, and their range extended across several states. Their traditional territory surrounded and overlapped that of the Kaiela Nation, who practiced mixed agriculture along the rivers. The two tribes are traditional enemies, though there has been and continues to be intermarriage between them. Odwalla sites typically consisted of small, temporary campsites, though they sometimes built one-room masonry structures near horticultural fields. They also built many shrines across their traditional landscape, especially in places near water, high peaks, and stands of certain kinds of plant stands. In 1866, the Odwalla were confined to a reservation in western Dolorosa, downstream along the Murray River from the Kaiela reservation.

After winning a legal battle with the U.S. Government in 1978, the U.S. granted additional lands to the tribe. The tribe has also been purchasing lands around their borders in order to extend the reservation holdings and recapture traditional territories. Over the past 25 years the tribe has invested heavily in mining mineral resources, beginning with metals and then expanding into oil and gas. The reservation lands include shale deposits, which are rich sources of oil and natural gas. Despite these efforts, however, unemployment on the reservation is currently at an all-time high of 45%, 43% of whom live below the poverty line.

In developing this project, the Odwalla government has come to a cost-share agreement with DOG. They will pay \$25 million up front to develop wells and drills on their lands, and will receive half of the profits of any minerals recovered. The anticipated return on investment is 70:1, so the tribe expects to earn \$35 for every \$1 invested in the project. They have worked out an agreement with DOG that 50% of the labor force (working on pads on tribal lands) will come from tribal members, thereby boosting the local economy. Few tribal members have the experience or training to serve as engineers or inspectors, though, so most of these jobs will probably be relatively low-paying positions. DOG also promised to provide a \$10 million trust fund to the tribe to be used to upgrade community schools and expand services for the elderly. The current tribal chairman campaigned heavily on opening up tribal lands to mineral extraction; he is up for reelection in 3 years.

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Odwalla tribal landowners (allottees)

In 1887, the Dawes Act authorized the President to survey American Indian reservation lands and divide them into allotments for individual tribal members. After a 25-year waiting period, these lands could be sold by the private landowners, thereby allowing tribal land to pass into non-Indian hands. Concern over the consequences of allotment eventually caused the US government to end the program in 1934, but allotments granted before this time remained in Indian or non-Indian hands.

The Odwalla allotments that are of interest to this project are located in the so-called “checkerboard” portion of the reservation, where tribal lands are interspersed with private landholdings. Allotments that have remained in Odwalla hands have become highly fractionalized, as ownership of individual allotments has been divided among each subsequent generation. Consequently, many of these allotments have hundreds or even thousands of owners, most of whom live elsewhere on or off the reservation and many of whom are not in regular contact with other owners (or residents) of the allotment. Permission from a majority of the owners is necessary for mineral leases, thus DOG has invested considerable time and money into tracking down the owners to get the necessary approval.

The allottees who live on these lands are mostly elderly or unemployed, and employment opportunities are sorely lacking in this area. These allotments also lack infrastructure; the roads are unpaved, 45 percent of households lack electricity, and most families have to haul in water. Local efforts to improve infrastructure for these households have met with resistance from the nearby park (MCNHP). Most recently, Odwalla landowners have fought with park officials over the possibility of improving and paving the main access road to their lands, which also serves as the access road to the park. (The allottees wanted paved roads to improve access to their lands and encourage development within the area, while park officials feared that vibrations from increased vehicle traffic will damage cultural resources on the park.) Many of the allottees have signed mineral lease agreements with DOG, and expect to receive royalties (which will be divided among the allotment owners) once drilling begins. Some have expressed concerns about the environmental consequences of fracking, but worry that if they do not sign leases, DOG will get their gas anyway by drilling in horizontally from another location.

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Kaiela tribal elders

Like the Odwallas, the Kaiela Tribe claims to have inhabited this region since time immemorial. Traditionally, they practiced mixed agriculture and lived in permanent villages while occupying temporary camps while gathering resources. Their traditional territory includes areas covered today by the Odwalla reservation and Malditos Conejos National Historical Park (MCNHP). The Odwallas and Kaielas are traditional enemies (though there has been and continues to be intermarriage between them), and over the past century the two nations frequently have come into conflict over rights to land and natural resources and control over cultural properties. Kaiela village sites (including the famous village sites at MCNHP) typically consist of masonry-walled structures loosely organized around public courtyards that were used for civic and ceremonial purposes. These villages were connected to each other and to important resource procurement sites by an extensive system of trails. Their ancestors also produced petroglyphs at significant places that are referenced in songs used to heal illnesses, record and transmit their history, and maintain spiritual balance. Many of these village, trail, and petroglyph sites are located today on BLM and Odwalla lands. As a sedentary, village-based population, the Kaiela Tribe suffered heavy losses from epidemic diseases after the region was colonized by Europeans. In 1860, the Kaiela Tribe was confined to a very small reservation located in the foothills and along the river valley.

The Kaiela Tribe received some additional lands in a government settlement in 1983, but their reservation is far smaller (and less populated) than the neighboring Odwalla reservation. Their reservation lands are not particularly rich in precious metals or other minerals, but they do contain good agricultural lands along the river valleys and timber resources in the foothills. Following a water rights settlement in 1991, the US agreed to build a dam and reservoir near the headwaters of the Murray River in the mountains east of the reservation. The dam produces hydroelectric power, of which the Kaiela receive a portion, and the Tribe has profited from selling some of this power to the nearby city of Springfield. Meanwhile, the reservoir has provided the Tribe with the necessary water to pursue large-scale agriculture projects, and the dam has also provided some employment to tribal members. As a result of these projects, unemployment on the reservation has dropped down to 25 percent, 20 percent of whom live below the poverty line. These agricultural projects also provide food subsidies for tribal members. While the dam and reservoir have mostly benefited the Kaiela, the damming of the river has had negative impacts on fisheries and wetlands within the Odwalla territory, limiting the available game in that area.

The Kaiela tribal government was approached by DOG, who wanted to purchase reservoir water from the tribe to use for fracking; however, the Tribe voted against this sale. The tribal elders (who are attending this meeting) are strongly opposed to drilling activities because they believe it will irrevocably damage their traditional cultural properties (sites, trails, petroglyph sites) on BLM and Odwalla tribal lands. They are also concerned about the possible environmental consequences of fracking activities, and especially the potential for toxic chemicals to enter the water table. The Kaiela Tribe historically has a good working relationship with MCNHP, and has contributed to a cultural display at the park's museum. MCNP allows semiannual pilgrimages by Kaiela elders to traditional sites on park lands, and the elders do semiannual interpretive programs at the park in return for a small stipend.

SAA Activity Submission Form

Malditos Conejos National Historical Park (MCNHP)

MCNHP was created as a national monument in 1907, and expanded several times in the following decades as private land owners deeded or sold their lands to the monument. Archaeological expeditions to the area began in the 1920s, and the resulting publications are the foundation of the region's culture history. These publications also attracted the public's interest, and tourists began to flock to this remote region in order to visit the remarkably well preserved village sites that were thought to represent prehistoric occupation of the area by the ancestors of the Kaiela Tribe. In 1980, recognizing the richness (and tourism appeal) of cultural resources in the area, the monument expanded again to become a National Historical Park. In 1986, the park was designated a World Heritage Site by UNESCO.

Over 2,500 archaeological sites have been recorded within the Park's boundaries. The most famous of these sites are the large, prehistoric villages, but the archaeological sites also include small agricultural field houses and fields, resource procurement areas (lithic quarries, etc.), prehistoric and historic trail segments, petroglyph sites, and nomadic camp sites. Excavations have occurred at only 37 sites, 25 of which are prehistoric village sites. Because the village sites are the Park's best known resources, most of the interpretive exhibits at the Park focus on these sites and on the relationship between these sites and the modern Kaiela population. The Park has been less diligent (and less successful) in working with the neighboring Odwalla Nation to include their perspective on resources within the Park, including the camp sites and resource procurement areas that they consider to be traditional cultural properties.

The proposed drilling project does not affect Park lands, but well pads may be constructed on Odwalla allotment lands that are immediately adjacent to the Park. Park officials, especially the archaeologists whose job it is to manage and protect archaeological resources within the Park, are concerned that the vibrations from the drilling will affect the integrity of cultural resources within the Park, and that drilling will increase the potential for earthquakes within the area that could have catastrophic consequences for sites in the Park. These potential affects will be most pronounced on the prehistoric village sites, whose fragile masonry walls are unlikely to withstand these disturbances. DOG will also need to use Park roads to access some of their proposed well sites, and the Park may have to re-grade dirt roads in order to accommodate the additional wear and tear by construction vehicles. Road maintenance will likely impact additional cultural resources, which it will be the Park's responsibility to manage, and will have additional auditory, visual, and atmospheric impacts on the park. Immigration of engineering personnel to the area and improvements to access roads to the Park may increase Park visitation, which could be considered a benefit, but the Park is concerned that they don't have the staff to deal with an increase in visitation or with the impacts of drilling and visitation on natural and cultural resources. The Park's operating budget has been cut by 1 percent in each of the previous years as part of the federal government's efforts to reduce the deficit. They will receive no additional funding if the drilling project goes forward because the project technically does not involve them (even though it will impact them).

SAA Activity Submission Form

Dool Oil and Gas Company (DOGC)

DOGC is a multinational energy corporation that has been in operation for 63 years. The company began as a small business in eastern Oklahoma, and in its early days did a fair amount of drilling on tribal lands within that state. Presently, most of its operations are in England and on the east coast of the U.S., though it has a few smaller operations in Dolorosa and adjacent states. These wells are expected to run dry in the next few years, and thus the company is looking for new sources within the region. The U.S. government, under pressure to reduce its reliance on outside sources of energy, is increasingly supportive of domestic drilling projects, and is offering energy companies various economic incentives, including federal tax breaks. DOGC is poised to dominate the domestic energy market if this deal goes through. DOGC has invested heavily in the development of new fracking technology and horizontal drilling techniques that minimize the number of pads needed, and thus reduce the amount of surface damage. Their patented fracking solution (dubbed "WILCO") cost the company \$350 million in research and development costs over the last 6 years. Because the formula is patented, the chemical contents are unknown, but the company claims that the solution is safe and drilling will have no negative environmental consequences.

DOGC intends to establish a base of operation in the nearby town of Springfield, located east of the Odwalla reservation. DOGC expects to bring some of its current employees over from other project sites within Dolorosa, but will also need to hire locally in order to cover all positions for this project, which they expect to last at least 10 years. DOGC officials have met privately with members of the town council and presented their plans for the project publicly at a town council meeting. At these meetings they have communicated their intent to hire local workers for the drilling project, and have also promised to fund a local science fair for Springfield schoolchildren in order to encourage students to pursue careers in science and engineering.

Because 35 percent of the project is intended to occur on Odwalla tribal lands or allotments, DOGC has spent \$2 million on negotiations with the tribe and tribal landowners, and has promised, should the deal go through, to provide a \$10 million trust fund to the tribe to be used to upgrade community schools and expand services for the elderly. The current assistant project member and engineer for this DOGC project is an Odwalla tribal member, and she has worked hard over the past two years to build positive relationships with the Odwalla tribe and to encourage DOGC to support efforts like the \$10 million trust fund. While she will not benefit personally from this deal (neither she nor her family members are owners of any of the allotments), she believes that the project will benefit the Nation as a whole.

SAA Activity Submission Form

Springfield town council

Springfield, a community of around 30,000 individuals located just east of the Odwalla reservation, was founded in 1905 as a mining and lumber town and the residents have a long history of working in these industries. Many of the local residents were previously involved in silver mining operations on the Odwalla reservation, and have suffered from a lack of employment opportunities since those operations shut down. The unemployment rate within the town is 12 percent, but many of the employed residents only work seasonally or part time, thus 20 percent of the town's population live below the poverty level. Some of the employed residents work seasonally for the Park (MCNHP).

The town council has met with representatives of DOG to discuss their proposal to base their operations in Springfield, and council members are very supportive of the project. They expect that the project will result in improved employment opportunities for underemployed residents of the town, both directly as employees of DOG and indirectly as employees of companies providing services (food, sanitation, etc.) to the project workers. Council members also anticipate increased tax revenue and real estate income from current employees of DOG who are expected to move with the company to Springfield. Revenue generated by the project is expected to stimulate the local economy, perhaps resulting in the creation of new businesses and services. The increased tax base is expected to alleviate some of the financial struggles experienced by the local school district, which, in turn, should result in increased education opportunities for the youth. DOG's promise to sponsor a new science fair for local schoolchildren is also celebrated by members of the town council, who see education in STEM fields (science, technology, engineering, and math) as a way for their children (and community) to improve their economic standing.

SAA Activity Submission Form

Conservation consortium

A collection of local groups dedicated to conservation, public health, environmental sustainability, endangered species, recreation, hunting, and agriculture (yes, agriculture) have come together to oppose the proposed fracking activities. These groups include the Dolorosa Collective for Social & Environmental Justice (concerned about threats to public health from heavy metal poisoning), the San Nepomuceno County Birdwatchers Association (concerned about threats to endangered bird species), the Murray River Rafting Company (concerned about the diversion of water from the river for fracking), the Marijuana Growers Association (concerned about the reduction and polluting of irrigation water), the San Nepomuceno County Bowhunters Association (concerned about the reduction of game), the Springfield Historical Society (concerned about the impact on archaeological sites), members of the Springfield State University Student Association (concerned about the environmental impact), and various other organizations (Nature Conservancy, Sierra Club, Ancient Aliens Society (AAS), Autoban, Kramer F. Suzanne Fund for Research into Testicular Cancer, Leukemia and Lymphoma Society).

This group's priorities and motivations are diverse, but they have some concerns in common. One major concern is that the patented formula for fracking ("WILCO") might contain toxic chemicals, which might leach into the ground water and poison local water tanks and wells. This could result in serious health problems within the community, especially in rural areas where families survive on well water.

Contaminated water would also negatively impact local wildlife, domesticated animals (including cattle and sheep), and agricultural crops (mostly alfalfa fields, which are harvested and sold as fodder). There is also a concern that the large amounts of water needed for fracking will dry up the wetlands, destroying these habitats for endangered species (a species of horny toad, a water snake, and a local minnow) as well as for wild game. Use of water is also likely to result in the reduction of the minimum flow through the Murray River, which will negatively affect recreation along the river (fishing and rafting) by reducing or eliminating the season. For various reasons, members of the consortium are concerned with the overall impact of development on the landscape. Members have argued that the dust and noise will discourage tourists from visiting the park (MCNHP), which will result in a loss of revenue from tourism. At least one of the wackier members of the group said something about the destruction of ley lines and the resulting loss of the natural healing properties of significant convergence sites located on the park. Finally, several endangered species of birds (a barn owl, hummingbird, and pigeon) are known to nest in areas that are likely to be developed into well pad sites, and the construction of well pad at these sites will destroy these po