

4.4 Cultural Resources

Cultural resources include the locations of human activity, occupation, or usage that contain materials, structures, or landscapes that were used, built, or modified by people. They also include the institutions that form and maintain communities and link them to their surroundings. Cultural resources consist of prehistoric and historic archaeological resources (e.g., sites and isolated finds), historic buildings and structures (e.g., buildings, structures, objects, and districts), and properties of religious and cultural significance, including Traditional Cultural Properties (TCPs). Historic properties, as defined by 36 CFR 800, the implementing regulations of the NHPA, are a subset of cultural resources that consists of a district, site, building, structure, artifact, ruin, object, work of art, or natural feature important in human history that meets defined eligibility criteria for the NRHP.

For the purposes of analyzing cultural resources, the ROI for the Proposed Action is defined by the Area of Potential Effects (APE), which includes areas containing the Navajo Mine SMCRA Permit Area and Pinabete SMCRA Permit Area, the FCPP Lease Area, and the four associated transmission lines, along with defined buffer extensions around these project components (see Section 4.4.2).

4.4.1 Regulatory Compliance Framework

The proposed Project is subject to the requirements of Federal, state, and tribal regulations established to guide management of cultural resources.

4.4.1.1 *Federal Regulations*

Federal regulations include NHPA Section 106 and its implementing regulations (36 CFR Part 800), NEPA, the Archaeological Resources Protection Act of 1979 (ARPA), and the Native American Graves Protection and Repatriation Act (NAGPRA).

NHPA Section 106 and NEPA

The proposed Project is considered an “undertaking” under NHPA (16 USC 470 et seq.) Section 106, as amended, which requires that any Federal or Federally assisted project or any project requiring Federal licensing or permitting take into account the effect of the undertaking on historic properties listed in or eligible for the NRHP (described in further detail below). The regulations that govern NHPA implementation allow for a parallel NEPA and Section 106 process in an effort to streamline the environmental compliance process. OSMRE is the Lead Federal Agency for the Section 106 process for the proposed Project.

Section 106’s intent is for Federal agencies to take into account the effects of a proposed undertaking on any historic properties situated within a proposed APE and to consult with the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), Federally recognized Indian tribes, other Federal agencies with concurrent undertakings as a result of the project, applicants for Federal assistance, local governments, and any other interested parties regarding the proposed undertaking and its potential effects on historic properties.

This regulation established a process of identifying historic properties that may be affected by the proposed undertaking; assessing the undertaking’s effects on those resources; and engaging in consultation that seeks ways to avoid, reduce, or mitigate any effects on NRHP-listed or eligible properties. Effects include, but are not limited to, destruction or alteration of all or part of a property; isolation from or alteration of its surrounding environment; introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting; transfer or sale of a Federally owned property without adequate conditions or restrictions regarding preservation, maintenance, or use; and neglect of a property resulting in its deterioration or destruction.

The NHPA specifies that several state, tribal, and Federal agencies must be consulted in compliance with Section 106, including each SHPO whose state would physically include any portion of the APE. The SHPO is appointed by each state to protect the interests of its citizens with respect to issues of cultural heritage. NHPA Section 101(b)(3) provides each SHPO a prominent role in advising the responsible Federal agencies and ACHP. In addition to the SHPO, the Lead Federal Agency has an obligation to work with state and local governments, private organizations, and individuals during the initial planning and development of the Section 106 process.

On nontribal lands, the Lead Federal Agency (OSMRE for this Project), in consultation with the SHPOs, and other consulting parties, assesses the need for historic and archaeological resource investigations in the proposed Project APE, generates and approves methodologies for undertaking such investigations within the state, and evaluates the preliminary NRHP status of any historical or archaeological resources located within the APE. The SHPO also assists the Lead Federal Agency in assessing any potential effects on historic properties. On tribal lands, the SHPO's Section 106 responsibilities can also be assumed by a Tribal Historic Preservation Officer (THPO), per NHPA Section 101(d)(2).

Section 106 regulations state that each SHPO (or THPO, if they have assumed the SHPO's role) is required to respond within 30 days of receiving a request to review a proposed action, or a request to review a Federal agency's finding or determination regarding historic properties located within the proposed Project APE. In the event that the SHPO/THPO does not respond within this timeframe, 36 CFR 800.3(c)(4) states that the Lead Agency can decide to (1) proceed to the next step in the application process based on any earlier findings or determinations that have been made up to that point, or (2) consult directly with the ACHP in lieu of the SHPO/THPO. If, after this step is followed, the SHPO or THPO decides to reenter the Section 106 process, 36 CFR 800.3(c)(4) further states that the Lead Agency official may continue the consultation proceeding without being required to reconsider previous findings or determinations.

The National Register of Historic Places

The NRHP, created under the NHPA, is the Federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. NRHP properties have significance to the history of their community, state, or the Nation and have been deemed worthy of preservation based on value, integrity, and relevance. The NPS maintains and expands the NRHP on behalf of the Secretary of the Interior.

To guide the determination of eligibility of archaeological resources, historic buildings and structures, or sites of religious and traditional significance as historic properties for inclusion in the NRHP, the NPS has developed the following NRHP Criteria for Evaluation (36 CFR 60.4). The criteria are standards by which every property is evaluated for listing in the NRHP. The criteria (36 CFR 60.4 [a–d]) used to evaluate the significance of a resource are as follows:

- *Criterion A.* Are associated with events that have made a significant contribution to the broad patterns of our history; or
- *Criterion B.* Are associated with the lives of persons significant in our past; or
- *Criterion C.* Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- *Criterion D.* Have yielded, or may be likely to yield, information important in prehistory or history.

Additional "Criteria Considerations" A through G are defined to guide application of the Criteria for Evaluation A through D, listed above. Properties also need to exhibit integrity of location, materials, setting, design, association, workmanship, and feeling and must also be at least 50 years old. Buildings less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance under

Criterion Consideration G, as described in NPS Bulletin No. 22, “How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years.”

Properties of Religious and Cultural Significance

Historic properties include sites of religious or cultural significance (including TCPs) that meet the NRHP criteria of eligibility but that do not necessarily have physical evidence of human activity. National Register Bulletin 38 defines TCPs as locations that embody the “beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property is derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices that are essential for continuing the cultural identity of the community.” In some tribal cultures, culture and religion are intertwined; therefore, a historic property may have both cultural and religious significance. As noted in Bulletin 38, a property’s religious significance does not preclude its eligibility for the NRHP. OSMRE has consulted and will continue to consult with Indian tribes to assist in determining the best ways to identify, evaluate, and mitigate potential effects on TCPs. A summary of tribal consultation undertaken for the proposed Project is presented in Chapter 5, Consultation and Coordination.

Section 106 recognizes the importance of consulting with Indian tribes when Federal undertakings occur. Specifically, 36 CFR 800.2(c)(2)(ii) notes: “Section 101(d)(6)(B) of the NHPA requires the agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural importance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property.” In addition, 36 CFR 800.2(c)(2)(ii)(B) says the “Federal Government has a unique legal relationship with Indian tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. Consultation with Indian tribes should be conducted in a sensitive manner respectful of tribal sovereignty. Nothing in this part alters, amends, repeals, interprets or modifies tribal sovereignty, any treaty rights, or other rights of an Indian tribe, or preempts, modifies or limits the exercise of any such rights.”

Archaeological Resources Protection Act of 1979

ARPA (16 USC 470; 43 CFR Part 7) was created to protect archaeological resources and sites on public and Native American lands in addition to encouraging cooperation and exchange of information among governmental authorities, professionals, and private individuals. ARPA requires Federal landowning agencies to issue ARPA permits to qualified individuals, institutions, or firms that conduct archaeological excavations within Federal and tribal trust lands. ARPA established civil and criminal penalties for destruction and alteration of cultural resources.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act addresses the protection and preservation for American Indians, Eskimo, Aleut, and native Hawaiians, their inherent rights of freedom to believe, express, and exercise traditional religions, including access to sites, use and possession of sacred objects, and freedom to worship through ceremony and traditional rites (42 USC 1996).

Native American Graves Protection and Repatriation Act

NAGPRA applies to all Federal and tribal trust lands. NAGPRA effectively protects tribal burial sites and rights to items of cultural significance, including human remains, funerary objects, sacred objects, and objects of cultural patrimony (25 USC 3001[3]; 43 CFR Part 10). NAGPRA requires that Indian tribes be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal trust lands (NPS 2007). On Federal lands, intentional excavation and removal of Native American human remains and objects from Federal or tribal trust lands for discovery, study, or removal is permissible only if an ARPA permit is issued by a Federal land-holding agency. Consultation with Native Americans must occur

prior to the issuance of an ARPA permit and removal of human remains and objects requires the consent of the applicable Native American tribe. Each state has statutes that govern the inadvertent discovery and/or excavation of human remains as well as artifacts on private lands.

4.4.1.2 State Regulations

New Mexico

In addition to the Federal laws described above, New Mexico statutes provide additional protections for cultural resources. The Cultural Properties Act (Sections 18-6 through 18-6-23, New Mexico Statutes Annotated 1978) was originally enacted in 1969 and has been amended several times. It established the central principles of preservation in New Mexico: "that the historical and cultural heritage of the state is one of the state's most valued and important assets [and] that the public has an interest in the preservation of all antiquities, historic and prehistoric ruins, sites, structures [and] objects of historical significance."

The Cultural Properties Act established the Historic Preservation Division and the Cultural Properties Review Committee. This act authorizes the committee to issue permits for archaeological survey and excavation and excavation of unmarked human burials on state and private lands to qualified institutions with the concurrence of the state archaeologist and SHPO. It also established civil and criminal penalties for looting of archaeological sites and disturbance of unmarked burials on state and private lands. This act requires that state agencies provide the SHPO with an opportunity to participate in planning for activities that will affect properties that are on the State Register of Cultural Properties or the NRHP. The State Register of Cultural Properties is the official list of historic properties worthy of designation in New Mexico and is administered by the Historic Preservation Department. Historic properties can be listed on both the NRHP and the State Register depending on their significance.

The Prehistoric and Historic Sites Preservation Act of 1989 (Sections 18-8-1 through 18-8-8, New Mexico Statutes Annotated 1978) prohibits the use of state funds for projects or programs that would adversely affect sites on the State Register or NRHP unless the state agency or local government demonstrates that no feasible and prudent alternative exists and that all possible planning has been done to minimize the harm to the register site.

Arizona

The Arizona State Historic Preservation Act of 1982 includes Arizona Revised Statutes 41-862 through 41-864, which provide additional protections for cultural resources within the state of Arizona such as archaeological and vertebrate paleontological discoveries, permitting, prohibition of unnecessary defacing of sites or objects, duty to report discoveries, disposition of discoveries, definitions, and laws regarding disturbing human remains or funerary objects. The Arizona Antiquities Act of 1960, which includes Arizona Revised Statutes 41-841 through 41-845, contains regulations designed to protect archaeological and paleontological resources on property owned or controlled by the state (Arizona State Museum 2010, 2013).

4.4.1.3 Tribal Regulations

The Section 106 process is conducted in parallel with a number of tribal laws and policies including the Navajo Nation Cultural Resources Protection Act, the Navajo Nation Policy for the Disposition of Cultural Resource Collections, and the Navajo Nation Policy for the Protection of Jishchaa'.

The Navajo Nation Cultural Resources Protection Act provides a structure that directs the administration of cultural resources in a spirit of stewardship and for the inspiration of present and future generations, in cooperation with states, Federal Government, other Indian tribes, and private organizations and individuals (Navajo Nation n.d.a).

The Policy for the Disposition of Cultural Resource Collections emphasizes the protection of all cultural resources owned by or found under the Navajo Nation's jurisdiction and avoidance of unnecessary excavation, disturbance, or removal of any cultural resources unless a compelling need exists, and it

outlines the protocol to follow if such disturbance occurs either accidentally or out of necessity (Navajo Nation 2008).

The Navajo Nation Policy for the Protection of Jishchaa' addresses the protection of gravesites, human remains, and funerary items under their jurisdiction based on Navajo cultural beliefs (Navajo Nation n.d.b).

4.4.2 Affected Environment Pre-2014

A project APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16(d)). For the purposes of the proposed Project and NHPA Section 106, the APE includes areas containing the Navajo Mine and Pinabete SMCRA Permit Areas, the FCPP Lease Area, and the four associated transmission lines. The Project APE for the Proposed Action consists of the following:

- The APE boundary for the Navajo Mine SMCRA Permit Renewal, the proposed Pinabete SMCRA Permit and the lease renewal of the Navajo Mine Area III access road includes (1) certain portions of Areas III and IV North that are approved in the current Navajo Mine SMCRA Permit, where future mining-related disturbance is anticipated; (2) the proposed Pinabete SMCRA Permit Area, which includes portions of Areas IV North and IV South; (3) for consideration of potential effects on TCPs, a buffer of 1 mile in all directions from the future mining-related disturbances and the western lease boundary of Area III including the existing Area III-Lowe coal stockpile and railcar-loading facility, which would be used during operation of the proposed Pinabete SMCRA Permit Area; and (4) a short segment of the Area III access road extending from the southeastern corner of Area II to the southeast. The portion of the APE that includes the mine has a 1-mile buffer zone for TCPs, as shown on Figure 4.4-1.
- The APE boundary for the FCPP includes all areas within the lease boundaries, as shown on Figure 4.4-2. The APE includes proposed new DFADAs, as well as Morgan Lake and the existing lease areas or corridors for a water pipeline from the power plant area to the San Juan River, a water pipeline access road from the pumping plant to Morgan Lake, a pumping plant on the southern side of the San Juan River, a 69-kV transmission line from the power plant to the pumping plant, County Road 6675 from the FCPP to the San Juan River, and a power plant access road from the power plant area northeastward to San Juan River.
- The APE boundary for four subject transmission lines is the ROW corridors, the Moenkopi switchyard and other ancillary facilities (Figure 4.4-3).

4.4.2.1 *Cultural History*

The cultural history of the Four Corners region provides context for evaluating the archaeological and historical resources, as well as TCPs within the proposed APE. Portions of the APE are located within the Navajo Nation, which is bounded by four sacred mountains surrounding the Four Corners area of the Colorado Plateau (see Project Description), the Hopi Reservation, as well as Federal, state, and private lands. The summary below is based on archaeological and historical research, which differs from the traditional Navajo creation accounts and histories.

The proposed Project is situated within the prehistoric culture area of the Four Corners region and, specifically, the San Juan Basin of the Colorado Plateau. This region is characterized by a series of traditions, periods, and phases extending back as far as 10000 years before Christ (BC). The cultural periods represented in the San Juan Basin include the Paleoindian (ca. 10000-5500 BC), the Archaic (ca. 5500 BC-Anno Domini [AD] 400), the Anasazi (ca. AD 1-1300), and the Navajo (see Table 4.4-1).

Table 4.4-1 Cultural History Timeline for the APE

| Cultural Period | Dates |
|-----------------|----------------|
| Paleoindian | 10000-5500 BC |
| Archaic | 5500 BC-AD 400 |
| Anasazi | AD 1-1300 |
| Navajo | Present |

The Paleoindian period (ca. 10000-5500 BC) is characterized by highly mobile populations focused on hunting large game animals and now-extinct mega-fauna. Paleoindian period sites tend to be characterized as “kill localities” associated with the exploitation of these large game animals and, frequently, include projectile points and butchering tools. Four complexes have been defined for this period based on distinctive projectile point technology: Clovis (10000-9000 BC), Folsom (9000-8000 BC), Plano (8000-7000 BC), and Cody (7000-6000 BC). Changes between the complexes occur in adaptive strategies and tool kits, where mega-fauna were hunted during the Clovis complex and modern bison were hunted during the Cody complex (Reed et al. 2009).

During the Archaic period (ca. 5500 BC-AD 400), an increased focus on gathering plant resources and hunting smaller game developed, which reflects shifting adaptive strategies in response to changing environmental and habitat conditions. Broad spectrum diversification began early in the Jay and Bajada phases of the Archaic period (between 5500 and 3200 BC). Canyon heads were primarily occupied during this time by small, mobile groups of people (Reed et al. 2009). Chipped stone artifacts are commonly found but ground stone artifacts are rare. The mid-Archaic period lasted until about 800 BC and represents a time of significant changes related to the cooking and roasting of foodstuffs and processing plant materials, which occurred in the San Jose and Armijo phases. Numerous large hearths and underground ovens appeared, as well as large chopper tools, shallow basin metates, and one-hand manos. Maize was introduced after approximately 1800 BC, which resulted in substantial population growth, large habitation sites, seasonal aggregation, an increase in ground stone implements, and an appearance of ceremonial items (Reed et al. 2009). The late Archaic period lasted until approximately 100 BC during the En Medio phase, and transitioned into the Basketmaker II phase of the Anasazi period (Reed et al. 2009). During the late Archaic period, agriculture and seasonal cycles became increasingly important, and populations continued to grow.

The Anasazi period (ca. AD 1-1300) is differentiated from the earlier Archaic period by another shift in subsistence strategies. During the Basketmaker II phase (AD 1-500), sedentism increased as agriculture became more important. Ceramics and small pit house structures with extramural cists were introduced during this phase (Meininger and Baker 2006). Settlements were generally located on terraces above major drainages (Meininger and Baker 2006). The Basketmaker III phase (AD 500-700) saw an intensification of agriculture with maize, the increased importance of domesticates such as beans and squash, the introduction of the bow and arrow, and an increase in shell and lithics trade. People also began living in great pit structures during this time (Meininger and Baker 2006). The Pueblo I phase (AD 700-900) included the addition of large built structures such as kivas, aboveground masonry and/or jacal structures, and pueblos, as well as the continuance of pit houses for habitation (Reed et al. 2009). Pueblos increased in size and frequency during the Pueblo II phase (AD 900-1100), along with more sophisticated irrigation and farming techniques. The Chaco Canyon great house was developed during the Pueblo II phase. The agricultural way of life continued into the Pueblo III phase (AD 1100-1300) but began to decline due to resource depletion, population pressure, and climatic change.

Four Corners Power Plant and Navajo Mine Energy Project

ENVIRONMENTAL SETTING & CONSEQUENCES

Figure 4.4-1

Area of Potential Effect
Navajo Mine

PROJECT BOUNDARIES

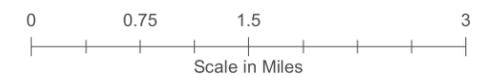
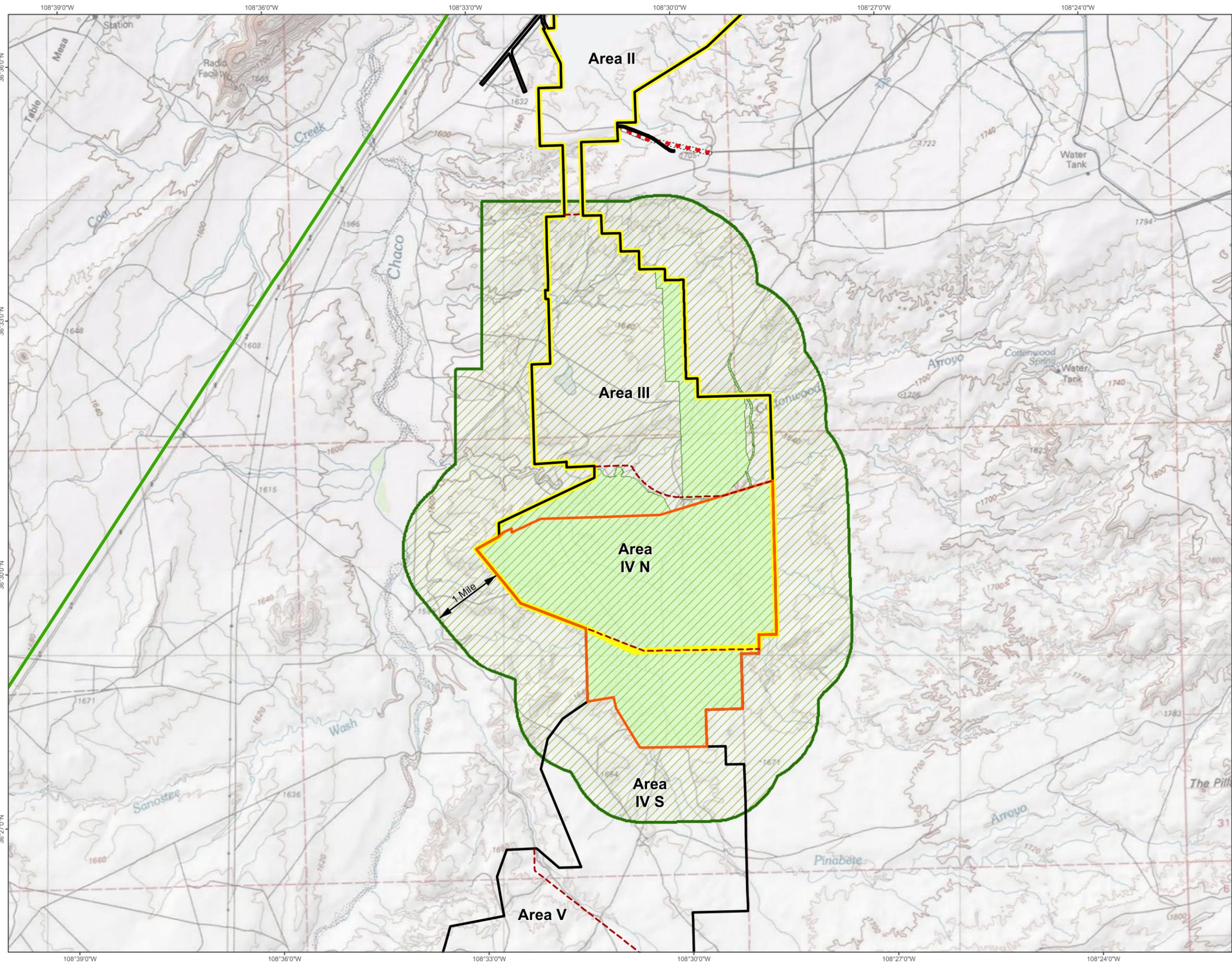
- Navajo Mine Resource Areas 
- Navajo Mine Lease and ROWs 
- Navajo Mine SMCRA Permit Boundary 
- Proposed Pinabete SMCRA Permit Boundary 

TRANSMISSION LINES

345kV 

AREA OF POTENTIAL EFFECT

- Traditional Cultural Properties APE 
- Mining Related Disturbance Area 
- Area III Road 

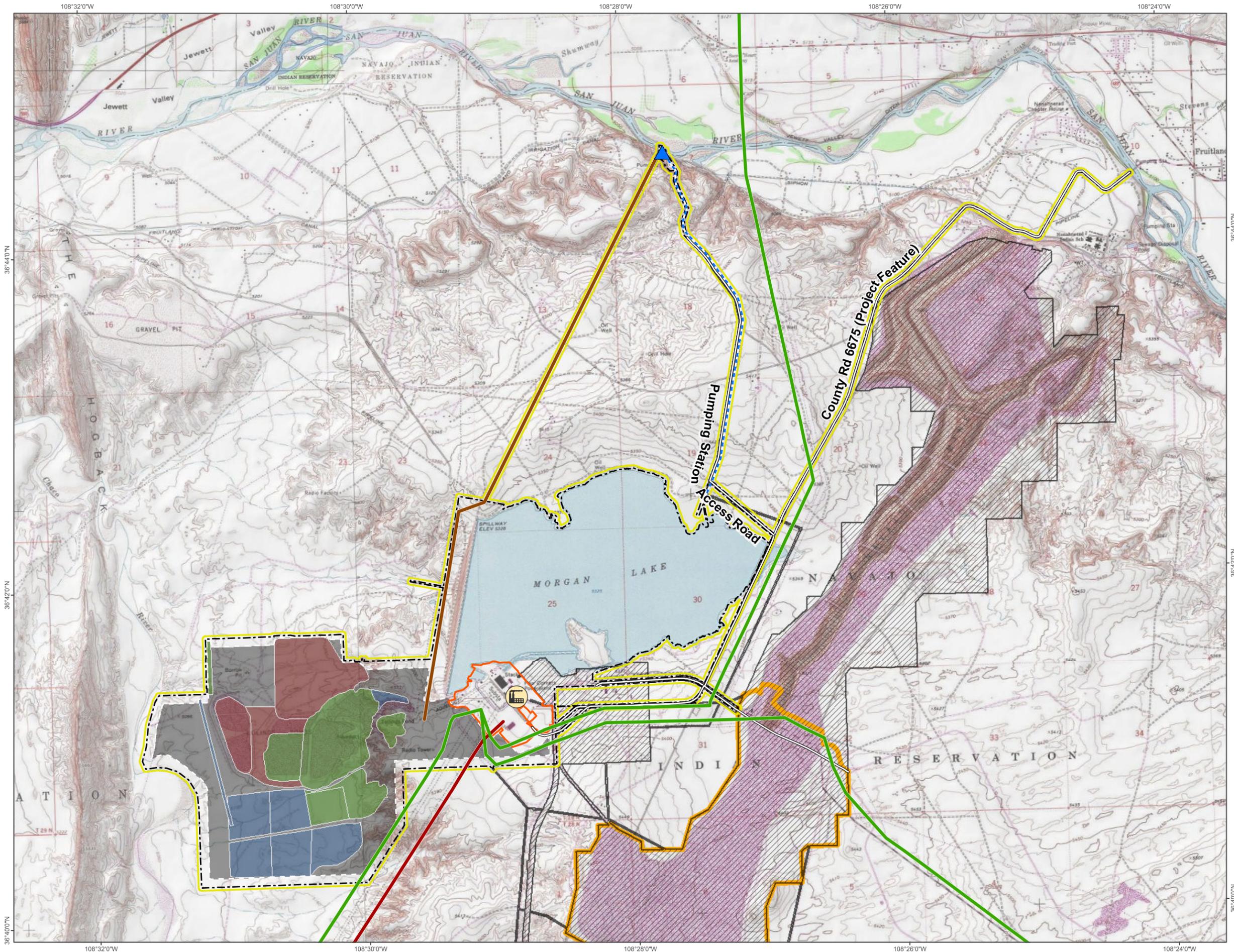


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Four Corners Power Plant and Navajo Mine Energy Project

ENVIRONMENTAL SETTING & CONSEQUENCES

Figure 4.4-2
Area of Potential Effect
Four Corners Power Plant



PROJECT FACILITIES

- Four Corners Power Plant 
- Pumping Station 
- Pumping Station Pipeline 

PROJECT BOUNDARIES

- Four Corners Lease Boundary 
- Power Plant Fence Line 
- Navajo Mine Lease Area and ROWs 
- Navajo Mine SMCRA Permit Boundary 

TRANSMISSION LINES

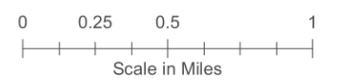
- 345kV 
- 500kV 
- 69kV - Pumping Station to Power Plant 

AREAS OF POTENTIAL EFFECT

- Area of Potential Effect 

ASH FACILITIES

- Existing Active Facility 
- Existing Inactive Facility 
- Future Facility 
- Future Ash Disturbance Area 



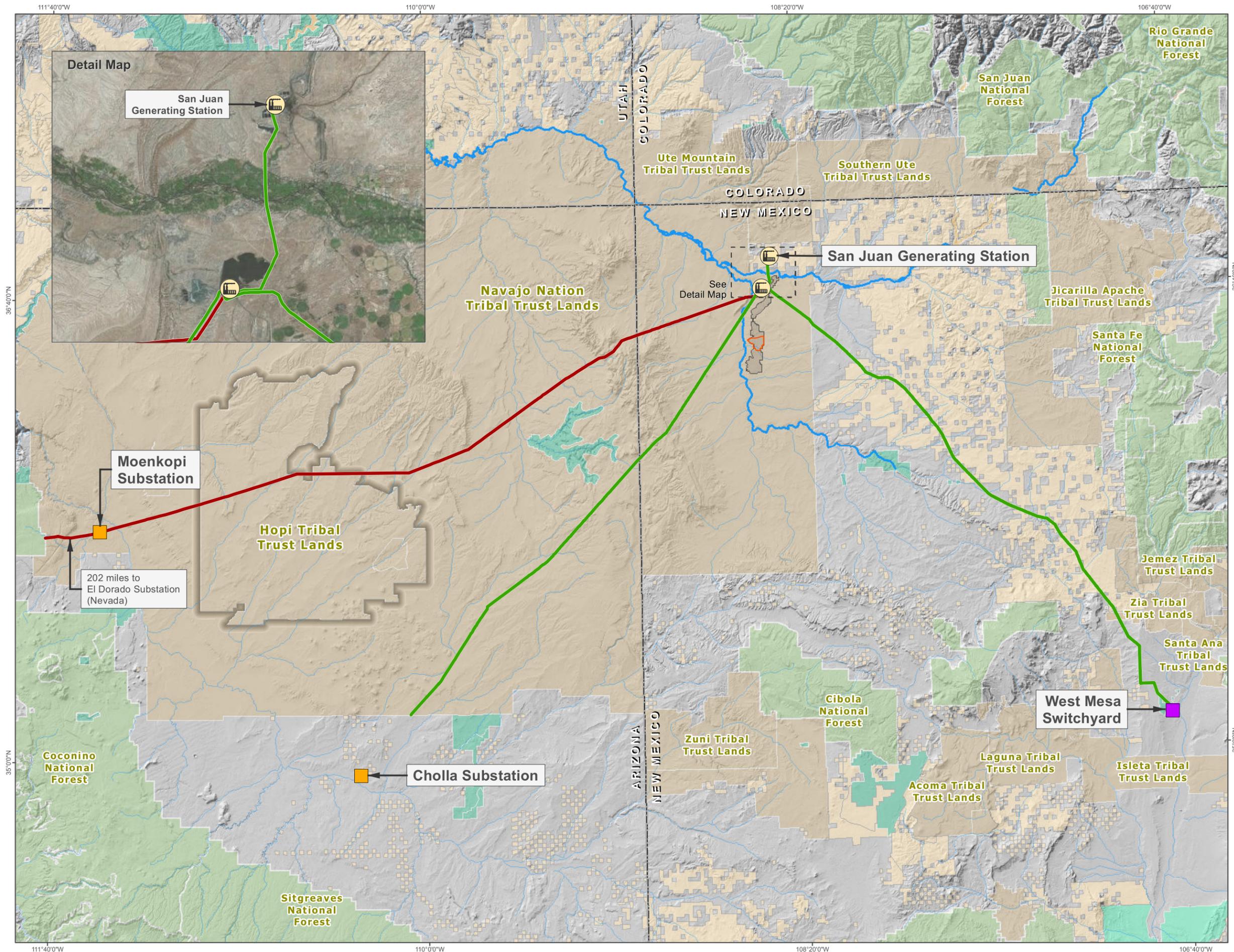
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Four Corners Power Plant and Navajo Mine Energy Project

ENVIRONMENTAL SETTING & CONSEQUENCES

Figure 4.4-3

Area of Potential Effect
Transmission Lines



PROJECT FACILITIES

- Four Corners Power Plant
- Substation
- Switchyard

PROJECT BOUNDARIES

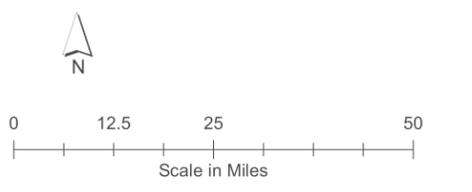
- Navajo Mine Lease Area
- Proposed Pinabete SMCRA Permit Boundary

TRANSMISSION LINES

- 345kV
- 500kV

FEDERAL MANAGING GROUP

- Forest Service
- Bureau of Land Management
- Fish and Wildlife Service
- National Park Service
- Bureau of Indian Affairs
- Bureau of Reclamation



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By the end of the Pueblo III phase, the Anasazi abandoned the San Juan Basin (Meininger and Baker 2006), leaving the area sparsely inhabited until Athabascan groups entered the region around AD 1500. However, Navajo traditions recognize their continuous occupation of the San Juan Basin through a cultural affiliation with the Anasazi.

The Navajo are descendants of the Athabascan populations, who initially practiced hunting, gathering, trading, and some agriculture in the San Juan Basin during the Dinétah phase (AD 1450-1630). The Navajo continued to practice a mixed economy in the Gobernador phase (AD 1630-1775), utilizing European trade items and adopting some European lifeways, such as animal husbandry (Meininger and Baker 2006). The Navajo also constructed masonry pueblitos during the Gobernador phase. During the Cabezon phase (AD 1775-1863), the Navajo territory expanded, and the practice of sheepherding increased, which resulted in an increase in raiding. The end of the Cabezon phase coincided with the advent of the Carson campaign against the Navajo Nation, which was in response to raids in northern New Mexico (Meininger and Baker 2006). In 1864, the U.S. Army defeated the Navajo and, subsequently, relocated the majority to Bosque Redondo near Fort Sumner; however, some Navajo in southern Utah and in areas near the Grand Canyon and Tuba City, Arizona, managed to avoid the relocation efforts. The eventual signing of the Treaty of 1868 allowed the Navajo at Bosque Redondo to return to their territory in the newly established Navajo Reservation.

The Treaty of 1868 also set forth requirements for the schooling of Navajo children and the establishment of a livestock economy through stock supplied by the Federal Government. This treaty formed the foundation for subsistence herding (primarily sheep) on the reservation, with grasslands to the east of reservation boundaries in the San Juan Basin serving as popular grazing locations. The boundaries of the Navajo Reservation were extended 15 times and, by 1934, it was the largest reservation in the U.S.

Beginning in 1876, Euro-American settlers arrived in the San Juan River area. Settlement increased with the arrival of the railroad in Gallup in 1880. By 1905, additional railroad connections were created between Durango and Farmington. Trading posts were established that encouraged interaction between Euro-Americans and the Navajo (Baker 2013). Trading posts in Shiprock, Waterflow, and Fruitland became centers for the exchange of mass-produced food and other European goods with wool, weaving, and livestock from the reservation (Unruh and Vierra 2012). The establishment of trading posts and the new transportation infrastructure contributed to a transition from the subsistence-based herding economy to a commercial-herding economy. Increases in the price of wool further encouraged this shift to commercial-based herding and the use of seasonal laborers. Farming also became more prevalent in this period (Baker 2013).

Changes to the Navajo community occurred as a result of the Taylor Grazing Act of 1934. This act mandated a livestock reduction program intended to decrease overgrazing, erosion, and arroyo downcutting. Permitting and fencing reduced the availability of nearby public lands. Livestock herds on the reservation were reduced by 50 percent. With the loss of commercial herding, the community became increasingly dependent on wage labor and cash income (Baker 2013).

Additional change of the traditional patterns of life resulted from modifications in the use of the San Juan River in the 20th century. Between 1933 and 1948, the Federal Government created the Fruitland Irrigation Project on the San Juan River, leading to increased agricultural use of the area. This increase continued in the 1970s and 1980s when the Federal Government constructed the Navajo Irrigation Project. The change in access to water led to the establishment of an industrial farm and the Navajo Agricultural Products Industries (Unruh and Vierra 2012).

Also speeding the process of change was the increasing extraction of the mineral wealth of the region. Initial explorations in oil and gas occurred in the late 1920s around Farmington, but production was low until the 1950s when use of oil and gas expanded throughout the U.S. In 1960, the FCPP's establishment and the use of coal from the Navajo Mine made the area a center for electric power generation for the entire region (Unruh and Vierra 2012).

4.4.2.2 Archaeological Resources

Cultural resources studies have been completed for archaeological resources within the APE, including the Navajo Mine and Pinabete SMCRA Permit Areas, the FCPP, and the transmission lines. The studies conducted and resources identified within each area are discussed below. There are additional archaeological resources that have been identified outside of the APE listed in Appendix B. These resources were identified as part of a screening level analysis of alternatives and are not included in the discussion below.

Navajo Mine

Cultural resources surveys and inventories conducted for the mine portion of the APE within the last 10 years include a Class I (literature search) cultural resources review (Meininger and Baker 2006), one Class II (pedestrian relocation survey) inventory (Meininger and Wharton 2004), one Class III (100% pedestrian survey) inventory (Burlison 2006), and one Class II and III inventory (Meininger and Wharton 2009). The majority of the APE for the Navajo Mine has been surveyed, including those portions of Navajo Mine Areas III and IV North where future mining-related disturbance is anticipated, the Pinabete SMCRA Permit Area (portions of Mine Areas IV North and IV South), and the Burnham Road realignment. To date, 110 archaeological sites have been identified during cultural resources inventories for the Navajo Mine Lease Area. Additionally, 54 isolated artifact occurrences were identified during the inventories.

The Class II inventory conducted in Area IV North identified 73 archaeological sites, 57 of which were previously recorded (Meininger and Wharton 2004). Burlison et al. (2006) developed a treatment plan for 47 sites in Area IV North. OSMRE in conjunction with the Navajo Nation THPO have determined 52 of the sites to be eligible for listing in the NRHP.

The Class II and III inventories conducted in both Area IV South and Area V identified 33 archaeological sites in Area IV South, 25 of which were previously recorded (Meininger and Wharton 2009). OSMRE and Navajo Nation THPO have determined 29 sites eligible for listing in the NRHP. In addition, 54 isolated occurrences were identified in the total survey area (Areas IV South and V), which are not eligible for the NRHP.

The Class III inventory for the Burnham Road realignment identified four archaeological sites, three of which were previously recorded (Burlison 2006). OSMRE and Navajo Nation THPO have determined all four sites eligible for listing in the NRHP. Additionally, 13 isolated occurrences were identified, none of which are eligible for the NRHP.

The results of the recent surveys performed, recommendations of eligibility by the Applicant, determinations of eligibility by OSMRE, and concurrence by the Navajo Nation THPO are presented in Appendix B.

In addition to these recent surveys, an archaeological salvage project was conducted at the Navajo Mine (Sciscenti and Greminger 1962). The salvage project was sponsored by Utah Construction & Mining Company and identified 20 archaeological sites.

Four Corners Power Plant

Three cultural resources inventories have been conducted for the FCPP portion of the APE within the last 10 years (Jolly et al. 2005, Unruh and Vierra 2012, Unruh et al. 2014). A Class III survey of 769.7 acres was performed for the proposed construction of a new ash disposal pond (Jolly et al. 2005). A second Class III survey was conducted for planned facilities, including ash disposal ponds, which overlapped portions of the previous survey area (Unruh and Vierra 2012). Additional surveys of the FCPP property and ancillary facilities (Morgan Lake, pumping plant area, 69-kV transmission line from FCPP to the pumping plant, the water pipeline from FCPP to San Juan River, the road adjacent to the pipeline, and the FCPP access road from the plant to the San Juan River) were conducted by APS in late 2013.

A total of 20 archaeological resources and 22 isolated occurrences have been identified in the APE. A total of 14 archaeological sites were identified during the Class III survey for the new DFADAs, 13 of which were previously recorded (Jolly et al. 2005, 2006). Based on consultation with the Navajo Nation Historic Preservation Department (NNHPD), Jolly and colleagues recommended data testing (Phase I data recovery) at one site within the APE (Jolly et al. 2006). This site was tested in 2007 and was recommended cleared for the ash disposal area (Tactikos 2007, Tactikos et al. 2008).

The second inventory for the planned facilities and DFADAs identified 14 sites, 13 of which were previously recorded (Unruh and Vierra 2012). Additionally, 22 isolated occurrences were identified (Unruh and Vierra 2012).

The third inventory consisted of evaluations for NRHP eligibility for 33 archaeological sites; however, only 19 sites were relocated and revisited (Unruh et al. 2014). Unruh et al. (2014) also identified 22 isolated occurrences, none of which are eligible for the NRHP. OSMRE has determined that 12 sites are eligible, 10 sites are not eligible, and 2 sites are unevaluated for listing in the NRHP (Appendix B).

In addition to these recent surveys, an archaeological salvage project was conducted at the FCPP in 1961 (Sciscenti and Greminger 1962). The salvage project was sponsored by APS and identified 49 archaeological sites.

Transmission Lines

Eight cultural resources inventories have been conducted within the APE for the transmission lines within the last 10 years. To date, 309 archaeological resources have been identified during the cultural resources inventories for the transmission lines. A total of 793 isolated occurrences were also identified during transmission line surveys; of these, 11 were determined to be isolated features.

A total of 122 archaeological resources were identified in the survey for the APS 500-kV transmission line to the Moenkopi Substation, 7 of which were previously recorded (Laurila, Bild, and Davis 2011). Additionally, 235 isolated occurrences were identified. OSMRE determined that 78 archaeological sites are eligible, 12 archaeological sites are not eligible, and 32 archaeological sites are unevaluated for listing in the NRHP (Appendix B). The isolated occurrences are not eligible for listing in the NRHP.

The survey conducted for the transmission line on Hopi tribal trust lands identified 29 archaeological sites, of which one was previously recorded (Laurila, Bild, and Davis 2011). OSMRE determined that all 29 archaeological sites are eligible for listing in the NRHP (Appendix B). An additional 11 isolated features and 76 isolated occurrences were recorded on Hopi Tribal Lands, none of which are eligible for the NRHP.

A total of 79 sites were recorded during the survey for the APS 345-kV transmission line to the Navajo Nation border on the Cholla line, of which 15 sites were previously recorded (North et al. 2011). In addition, 260 isolated occurrences were identified. OSMRE determined 66 archaeological sites are eligible and 13 archaeological sites are not eligible for the NRHP (Appendix B). The isolated occurrences are not eligible for listing in the NRHP.

Two archaeological sites were identified during the survey for the PNM Four Corners to San Juan transmission line on Navajo lands (Walley, Kerr, and Hroncich-Conner 2012). OSMRE determined that the two archaeological sites are eligible for listing in the NRHP (Appendix B). Two previously recorded archaeological sites were identified during the survey for the PNM Four Corners to San Juan transmission line on BLM, state, and private lands (Walley and Hroncich-Conner 2012). Two isolated occurrences were also identified but are not eligible for listing in the NHRP. OSMRE determined that the two archaeological sites are eligible for listing in the NRHP (Appendix B).

A total of 28 archaeological sites were identified during the survey for the PNM Four Corners to West Mesa transmission line on Navajo lands (Walley et al. 2012). OSMRE determined that 9 archaeological sites are eligible, 11 archaeological sites are not eligible, and 8 archaeological sites are unevaluated for

listing in the NRHP (Appendix B). Additionally, 89 isolated occurrences were identified, none of which are eligible for listing in the NRHP.

Twenty-two archaeological sites were identified during the survey for the PNM Four Corners to West Mesa transmission line on BLM, state, Zia Pueblo, and private lands (Walley, Hroncich-Conner, and Kerr 2012). Five of these sites were previously recorded. Additionally, 90 isolated occurrences were identified. OSMRE determined that 4 archaeological sites are eligible for listing in the NRHP, 10 archaeological sites are not eligible, and 8 archaeological sites are unevaluated for the NRHP (Appendix B). OSMRE consulted with the Navajo Nation THPO regarding determinations of eligibility. The isolated occurrences are not eligible for listing in the NRHP.

A total of 16 archaeological sites were identified during the survey for the PNM 345-kV transmission line between the Rio Puerco and West Mesa switchyards (Goar and Kerr 2013). Twenty of these sites were previously recorded. Additionally, 41 isolated occurrences were identified. OSMRE determined 10 archaeological sites are eligible, 3 archaeological sites are not eligible, and 3 archaeological sites are unevaluated for the NRHP (Appendix B). The isolated occurrences are not eligible for listing in the NRHP.

The results of the recent surveys performed, recommendations of eligibility by the Applicant, determinations of eligibility by OSMRE, and concurrence by the Navajo Nation THPO, Hopi Cultural Preservation Office (CPO), and applicable SHPOs are presented in Appendix B.

In addition to these recent surveys, an initial survey of the APS 345-kV power line within Arizona was conducted in 1961 by Sciscenti and Greminger (1962) during which they located 13 archaeological sites. An archaeological salvage project was conducted for the APS 345-kV line in the 1960s (Olson 1971). The salvage project identified 29 archaeological sites.

4.4.2.3 Historic Buildings and Structures

This section identifies historic structures within the Project APE, including in-use areas (IUAs). IUAs are cultural resources that are currently in use, such as habitations, and do not receive site numbers per the NNHPD.

Navajo Mine

Four IUAs were recorded in Areas IV North and IV South during cultural resources inventories (Meininger and Wharton 2004, 2009). Two of the IUAs are located in Area IV North, both of which were determined not eligible for the NRHP (Appendix B). Two IUAs are located in Area IV South, both of which were determined not eligible for the NRHP (Appendix B).

Four Corners Power Plant

APS completed research and documentation of 42 historic buildings and structures at the FCPP in 2013 through a systematic pedestrian survey (Thompson et al. 2014). The surveys were conducted to gather information to be used in determining eligibility for listing in the NRHP. The FCPP contains multiple structures which are older than 50 years that are slated to be removed from service. Morgan Lake Dam and the River Pump Station and associated facilities were included in the survey, even though they will not be removed from service in the near future. All 42 historic buildings and structures were determined not eligible for listing in the NRHP (Appendix B). OSMRE consulted with Navajo Nation THPO regarding these determinations of eligibility.

Transmission Lines

Two IUAs were recorded during cultural resources inventories for the 345-KV transmission line (Walley, Kerr, and Hroncich-Conner 2012). Both of the IUAs are water conveyance features. OSMRE determined that one IUA is not eligible and the other IUA is unevaluated for the NRHP (Appendix B). OSMRE consulted with the Navajo Nation THPO for determinations of eligibility.

4.4.2.4 Properties of Religious and Cultural Significance (including TCPs)

This section identifies known and potential properties of religious and cultural significance that are in and adjacent to the APE, including burials. TCP studies have been completed for archaeological resources within the APE, including the Navajo Mine SMCRA Permit Area, the Pinabete SMCRA Permit Area, the FCPP, and the transmission lines. The studies conducted and resources identified within each area are discussed below.

TCPs are listed by area in Appendix B. As the results of the studies are considered confidential, the specific locations of the TCPs are not included. Details of the TCP locations are described in confidential reports. OSMRE consulted with the Navajo Nation and Hopi Tribe regarding the location, NRHP eligibility, and impacts to properties of religious and cultural significance (including TCPs).

Navajo Mine

Studies identified a total of 14 TCPs in the Project APE, including one TCP in Area III, four TCPs in Area IV North, one TCP in Area IV South, five TCPs outside the lease area, and three TCPs in unspecified locations. OSMRE and the Navajo Nation THPO have determined two TCPs are eligible, eight TCPs are not eligible, and three TCPs are unevaluated (Appendix B). OSMRE has determined one TCP not eligible; however, consultation with the Navajo Nation THPO is still ongoing for this resource.

In 2006, the Navajo Nation Archaeological Department conducted studies to identify culturally sensitive areas, TCPs, and burials through ethnographic research in Areas IV and V. This study identified seven TCPs in the boundary or in the buffer of Area IV North and South. Another study identified an additional two TCPs in Area IV North (Kelley et al. 2007). As part of the 2006 cultural resources Class III survey, one TCP was identified in the APE for the Burnham Access Road (Burlison 2006).

Four Corners Power Plant

In 2012, a cultural resource investigation was performed within and around the FCPP. This study identified seven TCPs (Kelley and Francis 2012). APS prepared a summary of previous studies at the FCPP for cultural resources, including TCPs. This study notes that the Jolly et al. (2005, 2006) survey identified two potential TCPs and three areas of concern in the proposed DFADAs. Unruh et al. (2014) conducted an ethnographic study at the FCPP in 2012 during which they visited six TCPs.

OSMRE has determined all seven TCPs are eligible for the NRHP and consulted with the Navajo Nation THPO regarding these determinations (Appendix B).

Transmission Lines

Additional survey work for properties of religious and cultural significance (including TCPs) was conducted in the expanded APE, which covered 100 meters on either side of the ROW within the boundaries of the Hopi Reservation for the 500-kV transmission line (Hopkins et al. 2014). Hopkins et al. (2014) identified 38 TCPs, 36 of which have been determined eligible by OSMRE. Two TCPs remain unevaluated for the NRHP. OSMRE consulted with the Hopi CPO and Arizona SHPO regarding determinations of eligibility.

4.4.3 Changes to Cultural Resources Affected Environment Post-2014

Two completed federal actions have been incorporated into the baseline for this analysis: (1) the EPA has made its ruling with respect to BART to control air emissions; and (2) OSMRE has approved the Navajo Mine SMCRA permit transfer from BNCC to NTEC (Section 2.4). These completed federal actions are considered part of the environmental baseline to which the effects of continuing operations and the Proposed Actions are compared in the following Section. Neither of these completed federal actions would change the affected environment for Cultural Resources.

4.4.4 Environmental Consequences

The impact analysis examined likely effects of the proposed Project on historic properties under NHPA. As noted previously in Section 4.4.1, if a project affects a “historic property” within the APE, to comply with NHPA Section 106, the Lead Federal Agency must assess whether the effect is adverse. This assessment is accomplished in consultation with the SHPO by applying the Criteria of Adverse Effect as stated in 36 CFR 800.5(a)(1). The Criteria of Adverse Effect are applied when a project has the potential to:

“... [A]fter directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.”

Examples of adverse effects include physical destruction of a resource; alterations to a property that are not consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties; removal from its original location; change in the character of the property’s use or setting; introduction of visual, atmospheric, or audible elements that diminish historic integrity; neglect; and the transfer, lease, or sale of property out of Federal ownership (36 CFR 800.5(a)2). Adverse effects can also include reasonably foreseeable effects that may occur later in time, at greater distances, or that may be cumulative.

The criteria listed below were considered when evaluating the types of short-term and long-term impacts of the Proposed Action and alternatives on the NRHP-eligible historic properties within the APE.

- *Demolition or Alteration of a Property:* Demolition or extensive alteration of all or part of the resource.
- *Isolation/Alteration of Surrounding Environment:* Temporary or permanent restrictions of access to a historic resource or a change in the property’s setting.
- *Traffic Congestion/Parking/Access:* Congestion arising from changes in traffic patterns, parking, and access to historic buildings and structures.
- *Visual:* Removal of historical resources adjacent to a historic property or the introduction of modern construction that is out of character with or alters the resource’s historical setting.
- *Introduction of New Construction:* Addition of new construction that is not compatible with the existing architecture of historic buildings and structures.
- *Structural Instability:* Introduction of vibration during construction or operation that would cause damage to historic buildings and structures.
- *Noise:* Introduction of audible elements that are out of character with the historic resource and its established use such that its use may be altered or abandoned.
- *Change of Use:* The change in use of a historic resource brought about by construction- or operation-related activities that make it no longer physically or financially feasible or desirable to maintain the current use.
- *Vibration:* Construction or operation techniques that would create vibrations such that a resource may experience damages such as the loosening of paint or mortar, cracking of mortar or plaster, weakening of structural elements, or crumbling masonry.
- *Temporary Dirt/Unintended Damage:* Introduction of atmospheric elements that may alter or damage a historic resource.
- *Neglect:* Neglect of a resource resulting in its deterioration or demolition.

If a project’s effects do not diminish the integrity of a historic property, then a “no adverse effect” finding is appropriate (36 CFR Part 800.5(b)). If an adverse effect is expected to occur as a result of a proposed

project, the Lead Agency should consult further to resolve the adverse effect, pursuant to 36 CFR Part 800.5(2) and develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties (36 CFR Part 800.6). In accordance with Section 106 of the NHPA, and as outlined in 36 CFR Part 800.4(b)(2), OSMRE developed two PAs for the proposed Project. One PA addresses effects on the historic properties within the Navajo Mine APE, and the other PA covers historic properties within the APE for the transmission lines and FCPP. The PAs provide a process for compliance with NHPA pursuant to 36 CFR Part 800.14(b) in parallel with NEPA. Specifically, 36 CFR Part 800.4(b)(2), states that an agency may defer final identification and evaluation of historic properties if it is specifically provided for in a PA or documents used by an agency to comply with NEPA. Accordingly, the identification and evaluation of historic properties within the APE will be completed as specific aspects are refined pursuant to 36 CFR Part 800.4(b)(1) and 36 CFR Part 800.4(c). The PAs provide procedures and responsibilities for the ongoing identification, evaluation, and mitigation of historic properties and procedures to minimize impacts to historic properties. The PAs also contain additional information including standards, guidelines, and unanticipated discovery protocols.

The following section provides an analysis of impacts by Alternative (Tables 4.4-2, 4.4-3, and 4.4-4). Potential impacts were analyzed in three groups: archaeological resources, historic buildings and structures, and properties of religious and cultural significance (including TCPs).

Table 4.4-2 Summary of Potentially Affected Historic Properties by Alternative for the Navajo Mine APE

| | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|--|---------------|-----------------|------------------|---------------|---------------|
| Archaeological Resources | 68 | 84 ¹ | 114 ² | 68 | 0 |
| Historic buildings and structures | 0 | 0 | 0 | 0 | 0 |
| Traditional Cultural Properties ³ | 5 | 2 | 2 | 5 | 0 |

Notes:

Includes NRHP eligible, listed, and/or NRHP unevaluated resources. Those historic properties located within Area III have been previously mitigated and therefore are not included.

¹ This number includes 53 archaeological resources with unknown NRHP-eligibility identified outside of the APE within the disturbance area of Alternative B.

² This number includes 46 archaeological resources with unknown NRHP-eligibility identified outside of the APE within the disturbance area of Alternative C.

³ OSMRE is currently consulting with the NNTHPO regarding determinations of eligibility and effect for TCPs.

Table 4.4-3 Summary of Potentially Affected Historic Properties by Alternative for the Four Corners Power Plant APE

| | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|--|---------------|---------------|---------------|---------------|---------------|
| Archaeological Resources ¹ | 14 | 14 | 14 | 14 | 14 |
| Historic buildings and structures ² | 0 | 0 | 0 | 0 | 0 |
| Traditional Cultural Properties ³ | 7 | 7 | 7 | 7 | 7 |

Notes:

Includes NRHP eligible, listed, and/or NRHP unevaluated resources.

¹ OSMRE is currently consulting with the NNTHPO regarding determinations of eligibility and effect for archaeological resources.

² OSMRE is currently consulting with the NNTHPO regarding determinations of eligibility and effect for historic resources.

³ OSMRE is currently consulting with the NNTHPO regarding determinations of eligibility and effect for TCPs.

Table 4.4-4 Summary of Potentially Affected Historic Properties and Unevaluated Resources by Alternative for the Transmission Lines APE

| | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Archaeological Resources ¹ | 257 | 257 | 257 | 257 | 257 ⁴ |
| Historic buildings and structures ² | 31 | 31 | 31 | 31 | 3 ⁴ |
| Traditional Cultural Properties ³ | 38 | 38 | 38 | 38 | 38 ⁴ |

Notes:

Includes NRHP eligible, listed, and/or NRHP unevaluated resources. Table has been updated based on results of Section 106 consultation and any unevaluated sites will be evaluated under the Programmatic Agreement for the project.

¹ OSMRE is currently consulting with the appropriate Section 106 Consulting Parties regarding determinations of eligibility and effect for archaeological resources.

² OSMRE is currently consulting with the appropriate Section 106 Consulting Parties regarding determinations of eligibility and effect for historic buildings and structures

³ OSMRE is currently consulting with the appropriate Section 106 Consulting Parties regarding determinations of eligibility and effect for TCPs.

⁴ Under Alternative E, there could be impacts to historic properties due to the decommissioning and dismantling of the transmission lines. If transmission lines are left in place, there would be no impacts to historic properties.

4.4.4.1 Alternative A – Proposed Action

Alternative A has the potential to affect 384 archaeological resources, historic buildings and structures, and TCPs that are eligible, listed, and/or unevaluated to the NRHP.

Archaeological Resources

Table 4.4-5 lists the archaeological historic properties and unevaluated archaeological resources present within the APE under Alternative A. OSMRE has determined 68 archaeological resources at the Navajo Mine, 12 archaeological resources at the FCPP, and 194 archaeological resources within the APE for the transmission lines are eligible for listing in the NRHP. In addition, there are 2 currently unevaluated archaeological resources at the FCPP and 63 within the APE for the transmission lines that may be impacted under Alternative A (Appendix B). The PAs for the Project will provide procedures to minimize and/or mitigate impacts to historic properties.

Those historic properties located within Navajo Mine Area III have been previously mitigated and therefore are not included in Table 4.4-5.

Navajo Mine

Under Alternative A, a new permit area (Pinabete SMCRA Permit Area) would be mined and reclaimed, as described in Section 3.2.1.1. Development of the resource areas and the construction of the new roads and mine-support power lines could impact the 68 archaeological resources in Area IV North, Area IV South, and the Burnham Road realignment (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO for determinations of Project effects on these historic properties within the APE. The PA for the Navajo Mine includes measures to avoid, minimize, or mitigate impacts to these resources. Therefore, impacts would be minor.

Table 4.4-5 Archaeological Historic Properties and Unevaluated Archaeological Resources Located within APE under Alternative A.*

| Area | Site # | Description | Affiliation | Action Recommended |
|----------|-------------|--|------------------------------------|--|
| IV North | NM-H-28-2 | Previously recorded artifact scatter | Anasazi | Avoidance; data recovery |
| IV North | NM-H-28-4 | Previously recorded habitation/ field house | Anasazi | Avoidance; data recovery |
| IV North | NM-H-28-174 | Previously recorded habitation and feature | Anasazi/ Navajo | Tested 2007; Data recovery conducted 2008; Avoidance |
| IV North | NM-H-29-34 | Previously recorded artifact scatter and multiresidence habitation complex | Anasazi/ Navajo | Tested 2007; Data recovery conducted 2007; Avoidance |
| IV North | NM-H-29-35 | Previously recorded habitation | Navajo | Avoidance; data recovery |
| IV North | NM-H-29-80 | Habitation | Anasazi | Tested 2007; Data recovery conducted 2007; Avoidance |
| IV North | NM-H-29-88 | Habitation | Anasazi | Data recovery conducted 2008; Avoidance |
| IV North | NM-H-29-89 | Mining test pits | Recent Anglo-Euro/ American Mining | Avoidance |
| IV North | NM-H-29-91 | Previously recorded Wagon road and masonry wall support | Navajo | Avoidance |
| IV North | NM-H-29-92 | Previously recorded features | Navajo | Avoidance |
| IV North | NM-H-29-93 | Previously recorded coal mine shaft/ test pit | Unspecified historic | Avoidance |
| IV North | NM-H-29-97 | Previously recorded multiresidence habitation complex | Navajo | Avoidance; data recovery |
| IV North | NM-H-29-98 | Previously recorded habitation | Navajo | Tested 2007; Avoidance |
| IV North | NM-H-29-99 | Previously recorded ceramic scatter and pastoral residence | Anasazi/ Navajo | Avoidance; data recovery |
| IV North | NM-H-29-107 | Previously recorded single residence habitation | Navajo | Tested 2007; Avoidance |
| IV North | NM-H-29-110 | Previously recorded habitation | Anasazi | Avoidance; limited testing; site may be outside APE |
| IV North | NM-H-36-24 | Previously recorded artifact scatter with features | Archaic/ Anasazi | Data recovery conducted 2008; Avoidance |
| IV North | NM-H-36-25 | Previously recorded lithic scatter | Archaic | Avoidance; data recovery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------|-------------|---|-----------------|---|
| IV North | NM-H-36-26 | Previously recorded artifact scatter and sheep herders camp | Anasazi/ Navajo | Data recovery conducted 2007; Avoidance |
| IV North | NM-H-36-28 | Previously recorded fieldhouse and pastoral habitation | Anasazi/ Navajo | Data recovery conducted 2007; Avoidance |
| IV North | NM-H-36-29 | Previously recorded buried pueblo | Anasazi | Tested 2007; Avoidance |
| IV North | NM-H-36-31 | Previously recorded activity area and habitation | Anasazi/ Navajo | Data recovery conducted 2007; Avoidance |
| IV North | NM-H-36-79 | Petroglyph panel | Navajo | Avoidance |
| IV North | NM-H-36-80 | Lithic scatter and cairn markers | Unknown/ Navajo | Tested 2007; Avoidance |
| IV North | NM-H-36-82 | Previously recorded activity areas | Archaic | Avoidance; data recovery |
| IV North | NM-H-36-84 | Previously recorded temporary camp | Navajo | Avoidance |
| IV North | NM-H-36-85 | Previously recorded water control dams | Unknown recent | Avoidance |
| IV North | NM-H-36-86 | Previously recorded lithic scatter and temporary camp | Unknown/ Navajo | Avoidance |
| IV North | NM-H-36-87 | Previously recorded sheepherders camp | Navajo | Avoidance |
| IV North | NM-H-37-48 | Previously recorded ceramic and lithic scatter | Anasazi | Tested 2007; Avoidance |
| IV North | NM-H-37-49 | Previously recorded sheepherders camp | Navajo | Tested 2007; Avoidance |
| IV North | NM-H-37-50 | Previously recorded lithic scatter and habitation | Unknown/ Navajo | Tested 2007; Avoidance |
| IV North | NM-H-37-52 | Previously recorded lithic scatter | Unknown | Tested 2007; Avoidance |
| Burnham Road | NM-H-28-175 | Previously recorded artifact scatter with feature | Unknown | Avoidance |
| Burnham Road | NM-H-28-176 | Previously recorded multiple habitation | Navajo | Tested 2007; Avoidance |
| Burnham Road | NM-H-28-177 | Previously recorded artifact scatter with features | Archaic | Tested 2007; Avoidance |
| Burnham Road | NM-H-28-178 | Artifact scatter with features | Unknown | Tested 2007; Avoidance |
| IV South | NM-H-36-35 | Previously recorded activity area | Anasazi | Testing |
| IV South | NM-H-36-50 | Previously recorded multiple residence/ rock art panels | Anasazi/ Navajo | Avoidance |

| Area | Site # | Description | Affiliation | Action Recommended |
|----------|-------------|---|-----------------|--------------------|
| IV South | NM-H-36-135 | Previously recorded multiple residences | Navajo | Testing |
| IV South | NM-H-36-136 | Previously recorded single residence | Anasazi | Testing |
| IV South | NM-H-36-137 | Previously recorded artifact scatter and features | Navajo | Avoidance |
| IV South | NM-H-36-138 | Previously recorded artifact scatter and features/ rock art panel | Unknown/ Navajo | Avoidance |
| IV South | NM-H-36-139 | Previously recorded artifact scatter and features | Archaic | Testing |
| IV South | NM-H-36-140 | Previously recorded single residence | Navajo | Avoidance |
| IV South | NM-H-36-141 | Previously recorded artifact scatter | Anasazi | Testing |
| IV South | NM-H-36-144 | Previously recorded multiple residence | Navajo | Avoidance |
| IV South | NM-H-36-145 | Previously recorded artifact scatter and features | Navajo | Testing |
| IV South | NM-H-36-146 | Previously recorded lithic scatter/ artifact scatter and features | Unknown/ Navajo | Testing |
| IV South | NM-H-36-147 | Previously recorded ceremonial feature | Navajo | Testing |
| IV South | NM-H-36-150 | Previously recorded artifact scatter and single residence | Anasazi/ Navajo | Testing |
| IV South | NM-H-36-151 | Previously recorded residential complex | Navajo | Testing |
| IV South | NM-H-36-155 | Previously recorded artifact scatter and features | Archaic | Avoidance |
| IV South | NM-H-36-237 | Artifact scatter | Unknown | Testing |
| IV South | NM-H-36-244 | Single residence and burials | Navajo | Testing |
| IV South | NM-H-36-247 | Single residence/ recent trash dump | Navajo | Testing |
| IV South | NM-H-36-248 | Rock art panels | Navajo | Avoidance |
| IV South | NM-H-36-254 | Artifact scatter/ artifact scatter and features | Unknown/ Navajo | Testing |
| IV South | NM-H-36-260 | Artifact scatter and features | Anasazi | Testing |
| IV South | NM-H-37-57 | Previously recorded artifact scatter and features | Archaic | Testing |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|--------------------------|---|--------------------------------|---|
| IV South | NM-H-37-91 | Previously recorded artifact scatter and rock artifact/ artifact scatter with features and rock art | Unknown/ Navajo | Avoidance |
| IV South | NM-H-37-92 | Previously recorded artifact scatter and features | Archaic | Testing |
| IV South | NM-H-37-93 | Previously recorded artifact scatter and features | Navajo | Testing |
| IV South | NM-H-37-94 | Previously recorded artifact scatter | Archaic | Testing |
| IV South | NM-H-37-95 | Previously recorded artifact scatter and features | Archaic | Testing |
| IV South | NM-H-37-96 | Previously recorded artifact scatter and features | Archaic | Testing |
| F CPP | NM-H-20-12 | Previously recorded structural site | Anasazi | Avoidance |
| F CPP | NM-H-20-14/ LA53817 | Previously recorded artifact scatter | Anasazi | Avoidance |
| F CPP | NM-H-20-15/ LA53818 | Previously recorded sheepherding camp | Navajo | Avoidance; ethnographic study |
| F CPP | NM-H-20-16 | Previously recorded habitation | Anasazi | Avoidance |
| F CPP | NM-H-20-17/ LA53819 | Previously recorded feature | Anasazi | Avoidance |
| F CPP | NM-H-20-18/ LA8348 | Previously recorded field house | Anasazi | Avoidance |
| F CPP | NM-H-20-19/ LA8345 | Previously recorded field house | Anasazi | Avoidance |
| F CPP | NM-H-20-21 | Previously recorded structural site and cairns | Anasazi/ Late Historic/ Navajo | Ethnographic study |
| F CPP | NM-H-20-62/ LA125603 | Previously recorded multiple residence | Anasazi | Avoidance; data recovery |
| F CPP | NM-H-20-128/ LA173795 | Artifact scatter | Anasazi | Avoidance; testing |
| F CPP | NM-H-20-152/ LA173405 | Hogan | Navajo | Avoidance |
| F CPP | NM-H-20-154/ LA11206 | Previously recorded multiple residence | Anasazi | Avoidance |
| F CPP | NM-H-20-155/ LA12987 | Previously recorded residence | Anasazi | Avoidance |
| F CPP | NM-H-21-156 | Previously recorded possible hearth | Unknown | Avoidance; testing |
| 500-kV to Moenkopi | AZ-I-25-121 | Artifact scatter with feature | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|-------------|--|---------------------|---|
| 500-kV to Moenkopi | AZ-I-25-124 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-38-46 | Previously Recorded Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-38-47 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-38-50 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-38-51 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-38-52 | Sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-39-137 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-39-138 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-39-139 | Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-39-140 | Artifact scatter with features | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-39-141 | Artifact scatter | Basketmaker/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-48 | Sweat lodge with features and artifact scatter | Unknown/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-49 | Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-50 | Artifact scatter with features | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-52 | Sweat lodge and artifact scatter with features | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-53 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-54 | Sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|-------------|-----------------------------------|------------------|---|
| 500-kV to Moenkopi | AZ-I-44-55 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-56 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-58 | Lithic scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-59 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-60 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-62 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-63 | Sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-64 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-65 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-66 | Sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-67 | Sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-44-68 | Habitation | Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-101 | Artifact scatter with features | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-102 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-103 | Artifact scatter with feature | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-104 | Artifact scatter with feature | Archaic/ Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-105 | Flaked stone quarry with features | Unknown/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|-------------|--|------------------------------|---|
| 500-kV to Moenkopi | AZ-I-45-106 | Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-45-107 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-51-1 | Habitation | Navajo/ Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-52-78 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-63-66 | Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-64-67 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-I-64-68 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-100 | Artifact scatter with feature | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-101 | Habitation and sweat lodge | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-91 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-92 | Artifact scatter with features | Basketmaker/ Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-93 | Artifact scatter with features and sweat lodge | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-94 | Artifact scatter with features | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-95 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-96 | Artifact scatter with feature | Basketmaker/ Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-98 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-57-99 | Artifact scatter with features | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|-------------|---|---|---|
| 500-kV to Moenkopi | AZ-J-58-125 | Habitation and sweat lodge | Anasazi/ Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-126 | Artifact scatter | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-127 | Habitation and sweat lodge | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-128 | Habitation | Anasazi/ Navajo/ Historic | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-129 | Sweat lodge | Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-130 | Sweat lodge | Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-58-131 | Sweat lodge | Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-59-107 | Artifact scatter with features and sweat lodges | Anasazi/ Navajo/ protohistoric-historic | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-59-108 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-J-59-109 | Sweat lodge | Navajo/ Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-K-53-4 | Previously Recorded Road | Euro-American | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-17-1 | Lithic scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-17-2 | Flaked stone scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-17-3 | Flaked stone scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-17-4 | Lithic scatter | Early Archaic | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-17-5 | Artifact scatter with features | Early Archaic/ Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-1 | Artifact scatter | Archaic/ Patayan | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|------------|----------------------|--------------------------|---|
| 500-kV to Moenkopi | AZ-M-18-10 | Lithic scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-11 | Artifact scatter | Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-12 | Artifact scatter | Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-13 | Flaked stone scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-14 | Artifact scatter | Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-2 | Lithic scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-5 | Artifact scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-6 | Artifact scatter | Archaic/ Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-7 | Flaked stone scatter | Archaic | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-8 | Lithic scatter | Unknown/ Prehistoric | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-18-9 | Artifact scatter | Late Archaic/ Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-19-2 | Flaked stone scatter | Archaic | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-M-19-3 | Flaked stone scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-11-18 | Artifact scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-12-47 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-12-58 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-12-60 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|--------------------|-------------|---|-----------------|---|
| 500-kV to Moenkopi | AZ-N-12-61 | Habitation | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-12-62 | Artifact scatter with features | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-12-64 | Flaked stone scatter with features | Unknown/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-13-16 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-13-17 | Artifact scatter | Cohonina | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-14-12 | Artifact scatter with feature | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-14-13 | Sweat lodge and corral | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-N-7-1 | Artifact scatter | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-Z-25-1 | Lithic scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-Z-25-2 | Artifact scatter | Patayan | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-Z-25-3 | Flaked stone scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | AZ-Z-25-4 | Flaked stone scatter | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-146 | Sherd scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-147 | Previously Recorded Chacoan Great House Community | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-148 | Habitation | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-153 | Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-77 | Previous Recorded Artifact scatter with feature | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|-------------------------|-------------|--|--------------------------|---|
| 500-kV to Moenkopi | NM-H-20-84 | Previously Recorded Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-20-90 | Previously Recorded Artifact scatter with features | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-30-24 | Artifact scatter with features | Archaic/ Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-32-103 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-32-104 | Rock art | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-H-32-105 | Previously Recorded Habitation | Anasazi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-I-25-122 | Habitation | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV to Moenkopi | NM-I-25-123 | Habitation | Anasazi/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 001-2009 | Habitation | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 002-2009 | Habitation | Hisatsinom/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 003-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 004-2009 | Developed spring | Hopi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 005-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 006-2009 | Hogan | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 007-2009 | Artifact scatter and feature | Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 008-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 009-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|-------------------------|----------|--|-----------------------|---|
| 500-kV Hopi Reservation | 010-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 011-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 012-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 013-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 014-2009 | Habitation | Hisatsinom/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 015-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 016-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 017-2009 | Artifact scatter and feature | Basketmaker | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 018-2009 | Rock art and feature | Unknown | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 019-2009 | Rock art, features, and artifact scatter | Hisatsinom/ Hopi | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 020-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 021-2009 | Habitation | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 022-2009 | Rock shelter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 023-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 024-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 025-2009 | Artifact scatter and habitation | Hisatsinom/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 026-2009 | Rock art and artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|-------------------------|-------------|--|-----------------------|---|
| 500-kV Hopi Reservation | 027-2009 | Artifact scatter and feature | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 028-2009 | Artifact scatter | Hisatsinom | Flag; hand cutting only, no vehicles or heavy machinery |
| 500-kV Hopi Reservation | 029-2009 | Habitation | Hisatsinom/ Navajo | Flag; hand cutting only, no vehicles or heavy machinery |
| 345-kV to Cholla | AZ-I-57-32 | Flaked stone scatter and features | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-I-57-33 | Flaked stone scatter | Unknown | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-O-56-8 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-O-56-9 | Artifact scatter and feature | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-07-60 | Previously recorded habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-11-45 | Sweat lodge | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-12-68 | Habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-12-69 | Previously recorded multiple room blocks and kivas | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-20-160 | Sherd scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-20-161 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-20-162 | Artifact scatter and feature | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-20-163 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-21-79 | Sweat lodge | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-21-80 | Flaked stone scatter | Unknown | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-29-65 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-30-16 | Previously recorded artifact scatter and feature | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-30-45 | Sweat lodge | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-30-46 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-30-47 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-30-48 | Artifact scatter and feature | Anasazi | No vehicles or heavy machinery; monitor |

| Area | Site # | Description | Affiliation | Action Recommended |
|------------------|-------------|---|-----------------|---|
| 345-kV to Cholla | AZ-P-30-49 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-30-50 | Artifact scatter and features | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-34-10 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-34-9 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-47-1 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-48-10 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-48-11 | Structure | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-48-7 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | AZ-P-48-8 | Habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | AZ-P-48-9 | Habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-143 | Previously Recorded Habitation | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-20-98 | Previously recorded artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-20-99 | Previously recorded artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-21-209 | Bread oven | Navajo | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-29-139 | Previously recorded habitation with multiple room blocks, kivas, and artifact scatter | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-20 | Habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-21 | Artifact scatter and features | Anasazi/Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-22 | Artifact scatter and features | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-23 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-35-24 | Previously recorded artifact scatter and features | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-35-26 | Habitation | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-27 | Artifact scatter and features | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-28 | Artifact scatter and feature | Anasazi/ Navajo | No vehicles or heavy machinery |

| Area | Site # | Description | Affiliation | Action Recommended |
|------------------|-------------|--|-----------------|---|
| 345-kV to Cholla | NM-H-35-29 | Rock art, artifact scatter, and features | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-35-30 | Artifact scatter and features | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-125 | Previously recorded habitation and artifact scatter | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-126 | Artifact scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-47-127 | Habitation | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-128 | Previously recorded habitation | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-129 | Artifact scatter and features | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-130 | Artifact scatter and feature | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-132 | Sherd scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-47-133 | Artifact scatter and features | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-134 | Previously recorded habitation | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-135 | Artifact scatter and feature | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-47-32 | Previously recorded artifact scatter and feature | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-47-94 | Previously recorded habitation | Anasazi/ Navajo | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-49-116 | Artifact scatter and features | Anasazi/ Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-49-117 | Previously recorded hogan | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-49-2 | Previously recorded flaked stone scatter | Anasazi | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-50-180 | Previously recorded room block, pit house, and trash mound | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-50-181 | Artifact scatter and feature | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-50-182 | Sweat lodge | Navajo | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-H-50-183 | Artifact scatter | Anasazi/ Navajo | No vehicles or heavy machinery |
| 345-kV to Cholla | NM-H-50-184 | Previously recorded habitation | Anasazi | No vehicles or heavy machinery; monitor |
| 345-kV to Cholla | NM-I-57-35 | Previously recorded habitation | Unknown/ Navajo | No vehicles or heavy machinery; monitor |

| Area | Site # | Description | Affiliation | Action Recommended |
|-------------------------------------|-------------------------|--|---------------------------------|---|
| 345-kV to San Juan | NM-H-21-213 | Residence | Navajo | Rubber-tire use of existing road, tracked vehicles in dry conditions only |
| 345-kV to San Juan | NM-H-21-214 | Residence | Navajo | Rubber-tire use of existing road, tracked vehicles in dry conditions only |
| 345-kV to San Juan | LA 68213 | Previously recorded Farmer's Mutual Ditch | Anglo | Avoidance; use of existing roads |
| 345-kV to San Juan | LA 83965 | Previously recorded Jewett Valley Ditch | Anglo/ Euro-American and Navajo | Avoidance; use of existing roads |
| PNM FCPP to West Mesa Navajo Nation | NM-G-48-68 | Previously recorded artifact scatter with features | Unknown | Data recovery/ coordinate pole work |
| PNM FCPP to West Mesa Navajo Nation | NM-G-50-37 | Artifact scatter | Unknown | Avoidance; existing access road bypasses site |
| PNM FCPP to West Mesa Navajo Nation | NM-G-50-39 | Artifact scatter with feature | Unknown | Rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-G-51-76 | Artifact scatter with features | Unknown/ Navajo | Rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-G-51-77 | Artifact scatter with features | Unknown | Data recovery/ coordinate pole work |
| PNM FCPP to West Mesa Navajo Nation | NM-G-62-200 (LA 173642) | Artifact scatter | Unknown | Testing; rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-H-21-212 | Artifact scatter with features | Anasazi | Testing |
| PNM FCPP to West Mesa Navajo Nation | NM-R-4-41 | Previously recorded artifact scatter | Unknown | Testing; rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-R-4-42 | Previously recorded artifact scatter | Unknown | Avoidance |
| PNM FCPP to West Mesa Navajo Nation | NM-R-5-13 | Previously recorded artifact scatter | Anasazi | Rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-R-5-14 | Artifact scatter | Unknown | Testing; rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-R-5-15 | Artifact scatter | Archaic | Testing; rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-R-10-19 | Multiple residences | Navajo | Avoidance |
| PNM FCPP to West Mesa Navajo Nation | NM-R-10-20 | Residence | Navajo | Avoidance |
| PNM FCPP to West Mesa Navajo Nation | NM-R-11-17 | Residence | Navajo | Rubber tire use of existing road |
| PNM FCPP to West Mesa Navajo Nation | NM-R-12-6 | Residence, commercial | Navajo | Rubber tire use of existing road; coordinated pole work |
| PNM FCPP to West Mesa Navajo Nation | NM-R-12-7 | Artifact scatter with feature | Unknown | Testing; rubber tire use of ROW centerline; coordinate pole work |
| PNM FCPP to West Mesa | LA 9176 | Previously recorded multiple residence | Navajo | Rubber-tire use of existing road |

| Area | Site # | Description | Affiliation | Action Recommended |
|----------------------------------|------------------------|--|-------------------------------|---------------------------------------|
| PNM FCPP to West Mesa | LA 9177 | Previously recorded artifact scatter with features | Navajo | Avoidance |
| PNM FCPP to West Mesa | LA 13943 | Previously recorded artifact scatter | Ancestral Pueblo ² | TBD ¹ |
| PNM FCPP to West Mesa | LA 28997 | Previously recorded artifact scatter with features | Unknown/ Navajo | Avoidance |
| PNM FCPP to West Mesa | LA 157254 | Previously recorded artifact scatter with features | Unknown/ Navajo | Rubber-tire use of existing road |
| PNM FCPP to West Mesa | LA 169527 | Previously recorded antelope trap | Unknown/ Navajo | Rubber-tire use of existing road |
| PNM FCPP to West Mesa | LA 173639 | Residence | Navajo | TBD ¹ |
| PNM FCPP to West Mesa | LA 173641 | Artifact scatter | Unknown | Rubber-tire use of existing road |
| PNM FCPP to West Mesa | LA 173642 | Artifact scatter | Unknown | Rubber-tire use of existing road |
| PNM FCPP to West Mesa | LA 173646 | Artifact scatter with features | Ancestral Pueblo ² | Use existing road north of site |
| PNM FCPP to West Mesa | LA 173647 | Artifact scatter | Unknown | Use of existing road |
| PNM FCPP to West Mesa | LA 173648 | Artifact scatter | Unknown | Use of existing road |
| PNM FCPP to West Mesa | LA 173649 | Artifact scatter | Unknown | TBD ¹ |
| PNM FCPP to West Mesa | LA 173651 | Artifact scatter with features | Unknown | Excavation; monitoring/ consultation. |
| PNM FCPP to West Mesa | LA 173652/ LA173803 | Historic dump | Unknown/ historic | No further work |
| PNM FCPP to West Mesa | LA 173653 | Artifact scatter | Unknown | TBD ¹ |
| PNM FCPP to West Mesa | LA 173796 | Artifact scatter | Unknown | TBD ¹ |
| PNM FCPP to West Mesa Rio Puerco | LA 175230 | Artifact scatter with features | Unknown | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 175232 | Artifact scatter | Unknown | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 175233 | Artifact scatter | Late Archaic | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 175234 | Artifact scatter with features | Unknown | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 162292 | Previously recorded artifact scatter | Unknown | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 54635 | Previously recorded artifact scatter | Basketmaker II | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 146431 | Previously recorded artifact scatter with features | Early to Late Archaic | Monitor |

| Area | Site # | Description | Affiliation | Action Recommended |
|----------------------------------|-----------|--|---|-----------------------|
| PNM FCPP to West Mesa Rio Puerco | LA 146432 | Previously recorded artifact scatter | Early to Late Archaic/ Ancestral Pueblo ² | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 146435 | Previously recorded artifact scatter | Early to Late Archaic | Eligible ¹ |
| PNM FCPP to West Mesa Rio Puerco | LA 54642 | Previously recorded artifact scatter | Basketmaker II/ Anasazi | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 54643 | Previously recorded artifact scatter | Ancestral Pueblo ² | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 137833 | Previously recorded artifact scatter with features | Late Archaic | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 111622 | Previously recorded artifact scatter with features | Middle to Late Archaic/ Developmental Pueblo ³ | Monitor |
| PNM FCPP to West Mesa Rio Puerco | LA 52100 | Previously recorded petroglyphs | Unknown | No further work |

Notes:

* OSMRE consulted with the appropriate Section 106 Consulting Parties for determinations of NRHP eligibility and project effects.

¹ Site determined not eligible by OSMRE, however, additional consultation with SHPO is ongoing to finalize NRHP eligibility. The PA provides procedures for ongoing evaluation and mitigation as necessary.

² Ancestral Pueblo often referred to as Anasazi.

³ Developmental Pueblo sometimes referred to as Early Anasazi.

Four Corners Power Plant

Under Alternative A, the FCPP would continue to operate under a new lease agreement through 2041, as described in Section 3.2.1.2. The construction of the five additional DFADAs between the base of the escarpment and the Chaco River could impact archaeological resources.

OSMRE determined 12 archaeological sites eligible for listing in the NRHP and 2 archaeological sites are unevaluated for listing in the NRHP (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for these resources and Project effects for historic properties within the APE. The PA for the FCPP and Transmission Lines includes measures to avoid, minimize, or mitigate impacts to these resources; therefore, impacts would be minor.

Transmission Lines

The continued operation and maintenance of the transmission lines could impact 63 archaeological resources that are currently unevaluated for the NRHP and 194 archaeological resources that are determined eligible for the NRHP (Table 4.4-5).

OSMRE consulted with the Navajo Nation THPO, Hopi CPO, New Mexico SHPO, Arizona SHPO, or federal land manager, as appropriate, on determinations of NRHP eligibility and Project effects for historic properties within the APE. The PA for the FCPP and Transmission Lines includes measures to avoid, minimize, or mitigate impacts to these resources; therefore, impacts would be minor.

Historic Buildings and Structures

Determinations of impacts to historic buildings and structures under Alternative A are being conducted through Section 106 consultation with tribes and agencies. Table 4.4-6 lists the NRHP-eligible and

unevaluated historic buildings and structures under Alternative A. OSMRE has determined that no historic resources are eligible for listing in the NRHP within the Navajo Mine APE or the FCPP APE. Three NRHP unevaluated historic resources are located in the APE for the transmission lines. The PAs for the Project provide procedures to minimize and/or mitigate impacts to historic properties.

Table 4.4-6 Historic Buildings and Structures Located within the APE under Alternative A*

| Area | Site # | Description | Affiliation | Action Recommended |
|--------|-----------|----------------------------------|--------------------------------|--------------------|
| PNM FC | AC HPL 1 | Water Conveyance AD 1870-present | Anglo/Euro-American and Navajo | Avoidance |
| PNM FC | LA 176088 | Structural/ transmission line | Historic/recent | TBD ¹ |
| PNM FW | LA 176089 | Structural/ transmission line | Historic/recent | TBD ¹ |

Notes:

* OSMRE is consulting with the Navajo Nation THPO for determinations of NRHP eligibility and project effects. The Project PAs provide guidance for ongoing evaluation of specific resources.

¹ Resource originally recorded as archaeological resource; documentation as historic resource forthcoming.

Navajo Mine

All historic buildings and structures have been determined not eligible for listing in the NRHP by OSMRE and the Navajo Nation THPO. As such, the operation of the mine and construction of new roads and mine-support power lines would have no impacts on this resource type (Appendix B).

Four Corners Power Plant

OSMRE determined that there are no historic buildings and structures eligible for listing in the NRHP present at the FCPP (Appendix B); therefore, there would be no impacts to historic buildings and structures. OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for all resources and Project effects for historic properties within the APE.

Transmission Lines

The operation and ongoing maintenance of the transmission lines under Alternative A could impact three historic resources that are currently unevaluated for the NRHP (Table 4.4-6). OSMRE consulted with the Navajo Nation THPO on determinations of NRHP eligibility and Project effects within the APE. Implementation of the PA for the FCPP and Transmission Lines would minimize impacts to these resources; therefore, impacts would be minor.

Properties of Religious and Cultural Significance (including TCPs)

Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of impacts is ongoing for those TCPs located within the APE (Appendix B). Table 4.4-7 lists the TCP that have been determined eligible for the NRHP to date. In addition, there are 4 currently unevaluated TCPs within the Navajo Mine, 7 unevaluated TCPs within the FCPP, and 38 unevaluated TCPs within the APE for the transmission lines that may be affected under Alternative A (Table 4.4-7). The Project PAs provide guidance for ongoing evaluation of resources and measures to minimize or mitigate impacts to resources if determined eligible for the NRHP.

In addition to direct effects from construction activities and mine operation, indirect effects to TCPs may occur from noise and visual intrusion that impede use of the historic property in the traditional manner. OSMRE recommends avoiding TCPs through reroutes and design. The avoidance and mitigation of impacts to TCPs have been developed in coordination and consultation with the Navajo Nation THPO and Hopi CPO and are included in the PAs.

Table 4.4-7 TCP Historic Properties Located within the APE under Alternative A*

| Area | TCP # | Description | Affiliation | Action Recommended |
|-------------------------|--|--|-------------|------------------------------------|
| IV South | Bii' Diich' ii Dahazkani (Tangy Spring Mesa Breeze Mountain) | Eagle taking area | Navajo | Avoidance |
| Outside Lease Area | Teel (Chaco River) | Gathering area | Navajo | Avoidance; ceremony with community |
| Unknown | Halii | Spring and nlt'iz (offering place) | Navajo | Avoidance |
| Unknown | To Ba Jisdahi (Water that you wait for) | Well and possible nlt'iz (offering place) | Navajo | Avoidance |
| Unknown | Tse Achiih (Nose Rock) | Sacred place | Navajo | Avoidance |
| F CPP | NM-H20-15 (Kfl203-1) | Sheep Camp | Navajo | Avoidance |
| F CPP | NM-H20-21 | Structural site, Navajo cairns | Navajo | Avoidance |
| F CPP | NM H-20-152 (Kfl203-6) | Sheep Camp | Navajo | Avoidance |
| F CPP | Kfl203-2 | Small yellow hills | Navajo | Avoidance |
| F CPP | Kfl203-3 | Sacred canyon | Navajo | Avoidance |
| F CPP | Kfl203-4 | Historic horse and ceremonial travel corridor | Navajo | Avoidance |
| F CPP | Kfl203-5 | Zone with The Hogback and Chaco Arroyo | Navajo | Avoidance |
| 500-kV Hopi Reservation | 001-2009 | Ancestral habitation | Hopi | Avoidance |
| 500-kV Hopi Reservation | 002-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 003-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 004-2009 | Spring | Hopi | Avoidance |
| 500-kV Hopi Reservation | 005-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 006-2009 | Ancestral artifact scatter, possible historic shepherding features or hogan foundation | Hopi | Avoidance; ethnographic work |
| 500-kV Hopi Reservation | 007-2009 | Possible historic shepherding features or hogan foundation | Hopi | Avoidance; ethnographic work |
| 500-kV Hopi Reservation | 008-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 009-2009 | Ancestral artifact scatter | Hopi | Avoidance |

| Area | TCP # | Description | Affiliation | Action Recommended |
|-------------------------|--------------------|--|--------------------|---------------------------|
| 500-kV Hopi Reservation | 010-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 011-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 012-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 013-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 014-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 015-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 016-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 017-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 018-2009 | Historic or modern petroglyphs and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 019-2009 | Unknown, historic, or modern petroglyphs, artifact scatter, and features | Hopi | Avoidance |
| 500-kV Hopi Reservation | 020-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 021-2009 | Ancestral habitation | Hopi | Avoidance |
| 500-kV Hopi Reservation | 022-2009 | Rock shelter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 023-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 024-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 025-2009 | Ancestral artifact scatter, trail segment, offering place, and possible historic sheepherding features | Hopi | Avoidance |
| 500-kV Hopi Reservation | 026-2009 | Ancestral habitation; petroglyphs | Hopi | Avoidance |
| 500-kV Hopi Reservation | 027-2009 | Ancestral artifact scatter and feature | Hopi | Avoidance |
| 500-kV Hopi Reservation | 028-2009 | Ancestral artifact scatter | Hopi | Avoidance |
| 500-kV Hopi Reservation | 029-2009 | Ancestral habitation | Hopi | Avoidance |
| 500-kV Hopi Reservation | Isolated Feature 4 | Stone trail marker and offering place | Hopi | Avoidance |

| Area | TCP # | Description | Affiliation | Action Recommended |
|-------------------------|----------|---|-------------|--------------------|
| 500-kV Hopi Reservation | 001-2014 | Ancestral habitation with stone pillars | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Trail | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Trail | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Eagle collection site | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Eagle collection site | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Eagle collection site | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Mineral collection site | Hopi | Avoidance |
| 500-kV Hopi Reservation | N/A | Mineral collection site | Hopi | Avoidance |

Note:

* OSMRE consulted with the appropriate Section 106 Consulting Parties for determinations of NRHP eligibility and project effects.

Navajo Mine

Development of the Navajo Mine and Pinabete SMCRA Permit Areas and the construction of the new roads and mine-support power lines could affect five NRHP-eligible and unevaluated TCPs (Table 4.4-7). Consultation with the Navajo Nation THPO is ongoing regarding determinations of eligibility for the unevaluated TCPs and Project effects on TCPs. The PA for the Navajo Mine provides guidance for ongoing evaluation of resources and measures to minimize or mitigate impacts to resources if determined eligible for the NRHP. Therefore, impacts would be minor.

Four Corners Power Plant

Seven NRHP-eligible TCPs have been identified in the FCPP (Table 4.4-7). The construction of the new additional DFADAs could adversely affect these TCPs. OSMRE consulted with the Navajo Nation THPO regarding determination of eligibility and Project effects on the historic properties that are TCPs. Further, the PA for the FCPP and Transmission Line includes measures to minimize and/or mitigation potential impacts to TCPs. Therefore, impacts would be minor.

Transmission Lines

The operations and maintenance of the transmission lines could impact 38 NRHP-eligible and unevaluated TCPs (Table 4.4-7). OSMRE consulted with the Hopi CPO and Arizona SHPO on determinations of eligibility and Project effects for these TCPs. Further, the PA for the FCPP and Transmission Line includes measures to minimize and/or mitigation potential impacts to TCPs. Therefore, impacts would be minor.

4.4.4.2 Alternative B – Navajo Mine Extension Project

Alternative B has the potential to affect 344 archaeological resources, historic buildings and structures, and TCPs that are eligible, listed, and/or unevaluated to the NRHP within the APE. In addition, there are 53 archaeological resources whose NRHP status is unknown that have been identified outside of the APE as part of a screening level analysis of alternatives that are included in the discussion below.

Archaeological Resources

Archaeological historic properties under Alternative B have been identified in addition to those data provided under Alternative A. There are a total of 296 NRHP-eligible and unevaluated archaeological resources that are located within the APE as it lies within Alternative B. There are 53 additional archaeological resources whose NRHP status is unknown that have been identified outside of the APE as part of a screening level analysis of alternatives that are included in the discussion below (Appendix B).

Navajo Mine

Under Alternative B, NTEC would seek approval from OSM for an alternative mine plan for the Navajo Mine which would include a 5,412-acre SMCRA permit area and proposed mining disturbance in approximately 4,998 acres. Development of the lease areas and the construction of the new roads and mine-support power lines could affect 84 archaeological resources within Area IV South (31 resources within the APE and 53 resources outside of the APE). However, implementation of the PA for the Navajo Mine would minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

Four Corners Power Plant

Under Alternative B, the FCPP would continue to operate under a new lease agreement through 2041, as described under Alternative A. The construction of the five additional DFADAs between the base of the escarpment and the Chaco River could affect archaeological historic properties.

OSMRE determined 12 archaeological sites eligible for listing in the NRHP and 2 archaeological sites are unevaluated for listing in the NRHP (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for these resources and Project effects for historic properties within the APE. Further, implementation of the PA for the FCPP and Transmission Lines would minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

Transmission Lines

The continued operation and maintenance of the transmission lines could affect 357 archaeological resources that are currently unevaluated for the NRHP and 194 archaeological resources that are determined eligible for the NRHP (Table 4.4-5). Impacts would be the same as described for the Proposed Action.

OSMRE consulted with the Navajo Nation THPO, Hopi CPO, New Mexico SHPO, Arizona SHPO, or federal land manager, as appropriate, on determinations of impacts for historic properties within the APE. Further, implementation of the PA for the FCPP and Transmission Lines would minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

Historic Buildings and Structures

Table 4.4-6 lists the NRHP-eligible unevaluated historic resources under Alternative A. OSMRE has determined that no historic resources are eligible for listing in the NRHP within the Navajo Mine APE and at the FCPP. One NRHP unevaluated historic resource is located in the APE for the transmission lines.

Navajo Mine

All historic buildings and structures have been determined not eligible for listing in the NRHP by OSMRE and the Navajo Nation THPO. As such, the operation of the mine and construction of new features would have no impact to this resource type under Alternative B (Appendix B).

Four Corners Power Plant

Under Alternative B, the FCPP would continue to operate under the same lease amendment as in the Proposed Action. OSMRE determined that there are no historic buildings and structures eligible for listing

in the NRHP at the FCPP (Appendix B). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for all resources and Project effects for historic properties within the APE. No impacts would occur.

Transmission Lines

The operation and ongoing maintenance of the transmission lines under Alternative B could affect three historic resources that are currently unevaluated for the NRHP (Table 4.4-6). OSMRE consulted with the Navajo Nation THPO on determinations of NRHP eligibility and Project effects within the APE. Implementation of the FCPP and Transmission Line PA would minimize and/or mitigate impacts to these three resources. Therefore, impacts would be minor.

Traditional Cultural Properties

Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE (Appendix B). Table 4.4-7 lists the 5 NRHP-eligible and unevaluated TCPs within the APE, 7 unevaluated TCPs within the FCPP, and 38 unevaluated TCPs within the APE for the transmission lines that may be affected under Alternative B (Table 4.4-7). Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE (Appendix B).

Impacts are similar to those described under Alternative A. OSMRE recommends avoiding TCPs through reroutes and design. The avoidance and mitigation of impacts to TCPs were developed in coordination and consultation with the Navajo Nation THPO and Hopi CPO and included in the PAs. Therefore, impacts would be minor.

Navajo Mine

Under Alternative B, development of the lease area in Area IV South and the construction of the new roads and power lines could affect one NRHP-eligible TCP that has been identified in Area IV South, in addition to four NRHP-unevaluated TCPs for which the locations are currently unknown (Table 4.4-7). Consultation with the Navajo Nation THPO is ongoing regarding determinations of eligibility for unevaluated resources and project effects on historic properties. The Navajo Mine PA provides guidance for ongoing evaluation of resources and if determined eligible measures to minimize and/or mitigate impacts. Therefore, impacts would be minor.

Four Corners Power Plant

Seven NRHP-eligible TCPs have been identified in the FCPP (Table 4.4-7). The construction of the additional DFADAs could adversely affect these TCPs. OSMRE consulted with the Navajo Nation THPO regarding the determination of eligibility and impacts on the historic properties. Implementation of the FCPP and Transmission Line PA would minimize and/or mitigate impacts to these resources. Therefore, impacts would be minor.

Transmission Line

The operations and maintenance of the transmission lines could affect 38 NRHP-eligible and unevaluated TCPs (Table 4.4-7). Impacts would be the same as those described for the Proposed Action.

4.4.4.3 Alternative C – Alternative Pinabete Mine Plan

Alternative C has the potential to affect 427 archaeological resources, historic buildings and structures, and TCPs that are eligible, listed, and/or unevaluated to the NRHP within the APE as it lies within Alternative C. In addition, there are 46 archaeological resources whose NRHP status is unknown that have been identified outside of the APE as part of a screening level analysis of alternatives that are included in the discussion below.

Archaeological Resources

Impacts to archaeological historic properties present within the APE under Alternative C are similar to those impacts under Alternative A. In total, there are 333 NHRP-eligible and unevaluated archaeological resources present in the APE (Table 4.4-5). There are 46 additional archaeological resources with unknown NRHP status that have been identified outside of the APE that are included in the discussion below (Appendix B).

Navajo Mine

Under Alternative C, the proposed mining activity would be located in both Area IV North and Area IV South, as described in Section 3.2.3.1.

Mining under Alternative C and the construction of the new roads and power lines could affect 68 historic properties within the APE in Area IV North, Area IV South, and the Burnham Road realignment (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of Project effects on these historic properties within the APE. Mining activity could affect 46 additional archaeological resources outside of the APE for which NRHP status is unknown. The Navajo Mine PA provides guidance for ongoing evaluation of resources and measures to minimize and/or mitigate impacts of resources determined eligible for the NRHP. Therefore, impacts would be minor.

Four Corners Power Plant

Under Alternative C, the FCPP would continue to operate under a new lease agreement through 2041, as described under Alternative A. The construction of the five additional DFADAs between the base of the escarpment and the Chaco River could impact archaeological historic properties.

OSMRE determined 12 archaeological sites eligible for listing in the NRHP and 2 archaeological sites are unevaluated for listing in the NRHP (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for these resources and Project effects for historic properties within the APE. Implementation of the FCPP and Transmission Line PA would minimize and/or mitigate impacts to these resources. Therefore, impacts would be minor.

Transmission Lines

Impacts under Alternative C would be the same as described for the Proposed Action. The operations and maintenance of the transmission lines could affect 63 archaeological resources that are currently unevaluated for the NRHP and 194 archaeological resources that are determined eligible for the NRHP (Table 4.4-5).

OSMRE consulted with the Navajo Nation THPO, Hopi CPO, New Mexico SHPO, Arizona SHPO, or federal land manager, as appropriate, on determinations of Project effects for historic properties within the APE. Implementation of the FCPP and Transmission Line PA would minimize and/or mitigate impacts to these resources. Therefore, impacts would be minor.

Historic Buildings and Structures

Table 4.4-6 lists the NRHP-eligible and unevaluated historic buildings and structures under Alternative A. OSMRE has determined that no historic buildings and structures are eligible for listing in the NRHP at the Navajo Mine and at the FCPP. Three NRHP unevaluated historic building and structures are located in the APE for the transmission lines.

Navajo Mine

All historic buildings and structures have been determined not eligible for listing in the NRHP by OSMRE and the Navajo Nation THPO. As such, the operation of the mine and construction of new roads and mine-support power lines would have no impacts on this resource type under Alternative C (Appendix B).

Four Corners Power Plant

Under Alternative C, the FCPP would continue to operate under the same lease amendment as in the Proposed Action. OSMRE determined that there are no historic resources eligible for listing in the NRHP at the FCPP (Appendix B); therefore, no impacts would occur. OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for all resources and Project effects for historic properties within the APE.

Transmission Lines

The operation and ongoing maintenance of the transmission lines under Alternative C could affect three historic buildings and structure that are currently unevaluated for the NRHP (Table 4.4-6). OSMRE is consulting with the Navajo Nation THPO on determinations of NRHP eligibility and Project effects within the APE. The FCPP and Transmission Line PA provides guidance for ongoing evaluation of resources and if determined eligible for the NRHP provides measures that would minimize and/or mitigate impacts to these resources. Therefore, impacts would be minor.

Traditional Cultural Properties

Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE. Table 4.4-7 lists the 5 NRHP-eligible and unevaluated TCPs within the Navajo Mine, 7 unevaluated TCPs within the FCPP, and 38 unevaluated TCPs within the APE for the transmission lines that may be affected under Alternative C (Table 4.4-7). Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE (Appendix B).

Impacts are similar to those described under Alternative A. OSMRE recommends avoiding TCPs through reroutes and design. The avoidance and mitigation of effects to TCPs has been developed in coordination and consultation with the Navajo Nation THPO and Hopi CPO and included in the PAs. Therefore, impacts would be minor.

Navajo Mine

Under Alternative C, development in Area IV South and the construction of the new roads and power lines could affect one NRHP-eligible TCP that has been identified in Area IV South, in addition to four NRHP-unevaluated TCPs for which the locations are currently unknown (Table 4.4-7). Consultation with the Navajo Nation THPO is ongoing regarding determinations of eligibility and impacts to historic properties. The PA for the Navajo Mine provides guidance for the ongoing evaluation of such resources and if determined eligible for the NRHP includes measures to minimize and/or mitigate impacts. Therefore, impacts would be minor.

Four Corners Power Plant

Seven NRHP-eligible TCPs have been identified in the FCPP, none of which have been evaluated for listing in the NRHP. The construction of the new additional DFADAs could adversely affect these TCPs. Consultation with the Navajo Nation THPO is ongoing regarding the determination of eligibility and Project effects on TCPs that qualify as historic properties. Impacts would be the same as those described under the Proposed Action.

Transmission Lines

The operations and maintenance of the transmission lines could affect 38 NRHP-eligible and unevaluated TCPs (Table 4.4-7). Impacts would be the same as those described for the Proposed Action.

4.4.4.4 Alternative D – Alternative Ash Disposal Area Configuration

Alternative D has the potential to affect 384 archaeological resources, historic buildings and structures, and TCPs that are eligible, listed, and/or unevaluated to the NRHP.

Archaeological Resources

The Project effects on archaeological historic properties present within the APE under Alternative D are similar to those impacts under Alternative A, as listed in Table 4.4-5.

OSMRE has determined that 68 archaeological resources at the Navajo Mine, 12 archaeological resources at the FCPP, and 194 archaeological resources within the APE for the transmission lines are eligible for listing in the NRHP (Table 4.4-5). In addition, there are 2 currently unevaluated archaeological resources at the FCPP and 63 within the APE for the transmission lines that may be affected under Alternative D (Appendix B). OSMRE is consulting with the appropriate Section 106 Consulting Parties for determinations of eligibility and project effects for these resources.

The PAs for the Project provide procedures to minimize and/or mitigate impacts to historic properties. Therefore, impacts would be minor.

Navajo Mine

Under Alternative D, OSMRE would approve the Pinabete SMCRA Permit application and renew the SMCRA permit for the Navajo Mine permit. The Navajo Mine would operate as described under Alternative A. Impacts to archaeological historic properties present within the APE under Alternative D would be the same as those described under the Proposed Action (Table 4.4-5).

Four Corners Power Plant

Under Alternative D, the FCPP would continue to operate under a new lease agreement through 2041, as described for the Proposed Action. However, under this alternative the area of disturbance required for the DFADAs would be 350 acres instead of 385 acres. The 10 percent reduction in surface area of the DFADAs would reduce the potential for impacts to historic properties within the APE from those described for the Proposed Action.

OSMRE determined that 12 archaeological sites are eligible for listing in the NRHP and 2 archaeological sites are unevaluated for listing in the NRHP (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for these resources and Project effects for historic properties within the APE. Implementation of the FCPP and Transmission Lines PA would minimize and/or mitigate any impacts to these resources. Therefore, impacts would be minor.

Transmission Lines

The operations and maintenance of the transmission lines could affect 63 archaeological resources that are currently unevaluated for the NRHP and 194 archaeological resources that are determined eligible for the NRHP (Table 4.4-5).

Historic Buildings and Structures

Impacts to historic buildings and structures that are eligible for the NRHP present within the APE under Alternative D would be the same as those described under the Proposed Action (Table 4.4-5). OSMRE has determined that no historic buildings and structures are eligible for listing in the NRHP at the Navajo Mine and at the FCPP. Three NRHP unevaluated historic buildings and structures are located in the APE for the transmission lines (Table 4.4-6). The PAs for the Project provide procedures to minimize and/or mitigate effects to historic properties and mitigation for historic properties that are evaluated.

Navajo Mine

All historic buildings and structures have been determined not eligible for listing in the NRHP by OSMRE and the Navajo Nation THPO. As such, the operation of the mine and construction of new roads and mine-support power lines would have no impacts on this resource type Under Alternative D (Appendix B).

Four Corners Power Plant

Under Alternative D, the FCPP would continue to operate under a new lease agreement through 2041, as described in the Proposed Action. OSMRE has determined that there are no historic resources eligible for listing in the NRHP at the FCPP (Appendix B). Therefore, no impacts would occur. OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for all resources and Project effects for historic properties within the APE.

Transmission Lines

The operation and ongoing maintenance of the transmission lines under Alternative D could affect three historic buildings and structures that are currently unevaluated for the NRHP (Table 4.4-6). OSMRE is consulting with the Navajo Nation THPO on determinations of NRHP eligibility and Project effects within the APE. The PA for the FCPP and Transmission Lines provides guidance for the ongoing evaluation of resources and if determined eligible for the NRHP, measures to minimize and/or mitigate impacts. Therefore, impacts would be minor.

Traditional Cultural Properties

Table 4.4-7 lists the 5 NRHP-eligible and unevaluated TCPs within the Navajo Mine APE, 7 unevaluated TCPs within the FCPP, and 38 unevaluated TCPs within the APE for the transmission lines that may be affected under Alternative C (Table 4.4-7). Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE (Appendix B).

In addition to direct effects from construction activities and operation of the mine, indirect impacts may occur from noise and visual intrusion that impede use of the historic properties in the traditional manner. OSMRE recommends avoiding TCPs through reroutes and design. When it is not possible to avoid the resource, mitigation is included in the PAs.

Navajo Mine

Development of the lease areas and the construction of the new roads and mine-support power lines under Alternative D could affect five NRHP-eligible and unevaluated TCPs (Table 4.4-7). Impacts would be the same as for the Proposed Action.

Four Corners Power Plant

Seven NRHP-eligible TCPs have been identified in the FCPP (Table 4.4-7). The construction of the new additional DFADA could adversely affect these TCPs. Under this alternative the area of disturbance required for the DFADA would be 350 acres instead of 385 acres. The 10 percent reduction in surface area of the DFADA would reduce the potential impacts to TCPs within the APE compared to those described for the Proposed Action. All other FCPP components of this alternative are the same as for the Proposed Action. Therefore, impacts would be the same as described for the Proposed Action.

Transmission Lines

The operations and maintenance of the transmission lines could affect 38 NRHP-eligible and unevaluated TCPs (Table 4.4-7). Impacts would be the same as those described for the Proposed Action.

4.4.4.5 Alternative E – No Action Alternative

Alternative E has the potential to affect 384 archaeological resources, historic buildings and structures, and TCPs that are eligible, listed, and/or unevaluated to the NRHP.

Archaeological Resources

The Project effects on archaeological historic properties present within the APE under Alternative E would be less than those under Alternative A, as listed in Table 4.4-5.

Navajo Mine

The closure of the Navajo Mine would have no effect on historic properties. Lack of mining in Areas IV North and portions of IV South within the APE would have no effect on historic properties. No impact would occur.

Four Corners Power Plant

The decommissioning and dismantling of the FCPP could affect 14 NRHP-eligible and unevaluated archaeological resources (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO on determinations of eligibility and Project effects for these resources within the APE. Implementation of the FCPP and Transmission Lines PA would minimize and/or mitigate any potential impacts; therefore, impacts would be minor.

Transmission Lines

Under the No Action Alternative, the lines would either be decommissioned and dismantled or left in place to transmit power from another power source in the region. If the transmission lines are left in place, there would be no impacts to archaeological resources. If the transmission lines are dismantled, ground disturbing activities could impact the currently known 257 NRHP-eligible and unevaluated archaeological resources (Table 4.4-5). OSMRE consulted with the Navajo Nation THPO, Hopi CPO, New Mexico SHPO, Arizona SHPO, or federal land manager, as appropriate, on determinations of Project effects for historic properties within the APE. Implementation of the FCPP and Transmission Lines PA would minimize and/or mitigate any potential impacts; therefore, impacts would be minor.

Historic Buildings and Structures

The Project effects on historic buildings and structures present within the APE under Alternative E would be less than those described under Alternative A. Table 4.4-6 lists the NRHP-eligible and unevaluated historic resources within the APE. OSMRE has determined that no historic buildings and structures are eligible for listing in the NRHP at the Navajo Mine and at the FCPP. Three NRHP unevaluated historic buildings and structures are located in the APE for the transmission lines. The PAs for the Project provide procedures to minimize and/or mitigate effects to historic properties.

Navajo Mine

All historic buildings and structures have been determined not eligible for listing in the NRHP by OSMRE and the Navajo Nation THPO. As such, the closure of the mine and reclamation activities would have no impacts on this resource type (Appendix B).

Four Corners Power Plant

OSMRE consulted with the Navajo Nation THPO on determinations of eligibility for all resources and Project effects within the APE. As all historic buildings and structures have been determined not eligible for listing in the NRHP, the decommissioning and dismantling of the FCPP would have no impacts on historic buildings and structures.

Transmission Lines

Under the No Action Alternative, the lines would either be decommissioned and dismantled or left in place to transmit power from another power source in the region. If the transmission lines are left in place, there would be no impacts to historic resources. If the transmission lines are dismantled, ground disturbing activities could affect three historic buildings and structures that are currently unevaluated for the NRHP (Table 4.4-6). OSMRE is consulting with the Navajo Nation THPO regarding determinations of eligibility and Project effects for historic properties within the APE. The PA for the FCPP and Transmission Lines provides guidance for the ongoing evaluation of resources and if determined eligible for the NRHP, measures to minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

Traditional Cultural Properties

Table 4.4-7 lists the 5 NRHP-eligible and unevaluated TCPs within the Navajo Mine, 7 unevaluated TCPs within the FCPP, and 38 unevaluated TCPs within the APE for the transmission lines that may be impacted under Alternative E (Table 4.4-7). Consultation with the Navajo Nation THPO and Hopi CPO regarding the determinations of Project effects is ongoing for those TCPs located within the APE (Appendix B).

Navajo Mine

The closure of the Navajo Mine would have no effect on the five NRHP-eligible and unevaluated TCPs (Table 4.4-7). No impacts would occur.

Four Corners Power Plant

The decommissioning and dismantling of the FCPP could affect seven NRHP-eligible TCPs. OSMRE is consulting with the Navajo Nation THPO on determinations of Project effects for these resources. The PA for the FCPP and Transmission Lines provides guidance for the ongoing evaluation of resources and if determined eligible for the NRHP, measures to minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

Transmission Lines

Under the No Action Alternative, the lines would either be decommissioned and dismantled or left in place to transmit power from another power source in the region. If the transmission lines are left in place, there would be no impacts to TCPs. If the transmission lines are dismantled, ground disturbing activities could affect 38 NRHP-eligible and unevaluated TCPs (Table 4.4-7). OSMRE is consulting with the Hopi CPO and Arizona SHPO for determinations of eligibility and Project effects for these resources. The PA for the FCPP and Transmission Lines provides guidance for the ongoing evaluation of resources and if determined eligible for the NRHP, measures to minimize and/or mitigate potential impacts. Therefore, impacts would be minor.

4.4.5 Historic Properties Mitigation Measures

The Proposed Action, including the continuing operations of Navajo Mine, FCPP, and the transmission lines could result in adverse effects to historic properties, as defined under the NHPA.

As part of the proposed Project, two PAs have been developed that define mitigation for adverse effects on historic properties. One PA addresses impacts to the historic properties within the Navajo Mine Lease Area, and the other PA addresses impacts to historic properties within the APE for the transmission lines and FCPP. When it is not possible to avoid the historic properties, mitigation measures including the appropriate PA would reduce impacts.