

## **4.16 Recreation**

Recreational resources for the purposes of this EIS are generally defined as recreational activities such as wildlife viewing, hunting, fishing, picnicking, hiking, and sightseeing, and the publicly accessible facilities and land areas that provide these recreational opportunities. The primary ROI examined for recreational resources encompasses the ROI associated with the Navajo Mine, which includes the Navajo Mine and Pinabete SMCRA Permit Areas, the FCPP, and the ROWs associated with the four transmission lines (see Section 1.1). In addition, the ROI includes regional recreational resources within the Four Corners region generally within 15 to 20 miles of the Navajo Mine and FCPP and approximately 5 miles from the transmission line ROWs. The regional recreational resources ROI is the general viewing area in which the Project features and activities could indirectly affect recreational opportunities and experiences. This ROI is consistent with the BLM's VRM Process (BLM 2012b), which defines distant or seldom seen views at greater than 15 miles from the proposed activities (see also Section 4.13, Visual Resources).

### **4.16.1 Regulatory Compliance Framework**

#### **4.16.1.1 *Navajo Nation Recreation Management***

The Navajo Nation requires permits for all recreation-related activities on the Navajo Nation tribal trust lands. The Navajo Parks and Recreation Department issues camping, hiking, or backcountry permits (Navajo Nation Parks and Recreation 2012a). Hunting and fishing permits are issued by the NNDFW. The area within 10 miles of the Pinabete SMCRA Permit Area and the FCPP is within Navajo Nation Hunting Unit 13, which is managed for archery, muzzleloader, and rifle deer and elk hunts (NNDFW 2012a). Detailed information regarding hunting seasons, numbers of permits, and hunter success rates are provided in the Navajo Nation Hunting and Trapping Proclamation. The majority of hunting permits are issued to members of the Navajo Nation, but permits are also issued to non-Navajos. Non-Navajos are required to use a licensed Navajo Nation guide when hunting on Navajo Nation tribal trust lands (NNDFW 2012b). Fishing and small game permits, also issued by NNDFW, are combined into one permit. Watercraft permits are required to use motorized and non-motorized boats in the Navajo Nation. The Navajo Nation prohibits rock climbing on Navajo Nation tribal trust lands and monuments (NNDFW 2012c).

#### **4.16.1.2 *Hopi Tribe***

The Hopi Tribe tribal trust lands contain no designated public recreation areas. The Hopi Tribe provides guided tours of some of the villages and some ceremonies are open to the general public, although photography, video recording, and sketching by visitors are not allowed (Visit Hopi 2012). The Hopi Tribe generally does not allow hunting, fishing, or hiking unless with a hired guide (Arizona Handbook 2012).

#### **4.16.1.3 *BLM Land Management Plan – Recreation Management Component***

The BLM's Farmington Field Office has jurisdiction over the BLM facilities traversed by the transmission lines (BLM 2012c). The BLM's Resource Management Plan for the Farmington Field Office indicates that the purpose of the outdoor recreation program is "to ensure the continued availability of public land for a diverse array of quality resource-dependent outdoor recreation opportunities. Recreation use is managed to protect the health and safety of visitors; to protect natural, cultural, and other resource values; to stimulate enjoyment of public lands; and to resolve user conflicts" (BLM 2003). The NPS does not have a comparable VRM Component. In general, projects are evaluated on a case-by-case basis using viewshed analysis, visual stimulations, and in some instances public input. The NPS also draws upon BLM's VRM and the USFS's Scenery Management System, which have both been in place since the 1970s. There are three NPS-managed parks in the ROI: Canyon de Chelly National Monument, Chaco Cultural National Park, and El Malpais National Park, and each park has a unique management plan.

#### **4.16.2 Affected Environment Pre-2014**

##### **4.16.2.1 *Regional Recreation Resources***

Regional recreational resources within the ROI include Navajo Nation recreational opportunities, BLM-managed recreation areas, scenic roads and trails, and dispersed recreation use areas (see Figure 4.16-1; Public Lands Information Center 2012). Popular recreational activities within the ROI include, but are not limited to, hiking, boating, fishing, windsurfing, whitewater rafting, horseback riding, use of off-highway vehicles (OHVs), mountain biking, wildlife viewing, and visiting scenic attractions (BLM 2012d). The following subsections summarize the regional recreational resources within the ROI.

##### **Four Corners Geotourism Initiative**

Collaborative efforts to promote tourism of the Four Corners region include a geotourism initiative developed in partnership with National Geographic Society and numerous Federal, state, and local agencies and interest groups. Geotourism is defined as “tourism that sustains or enhances the geographical character of a place — its environment, culture, aesthetics, heritage, and the well-being of its residents. Geotourism incorporates the concept of sustainable tourism — that destinations should remain unspoiled for future generations — while allowing for ways to protect a place’s character.” The Four Corners Geotourism Stewardship Council along with the National Geographic Society developed an interactive website and map that promotes geotourism of the Four Corners area. This initiative provides information regarding area tourism destinations and promotes the natural, historic, and cultural assets unique to the Four Corners area (National Geographic Society 2013).

##### **Navajo Nation Recreational Opportunities**

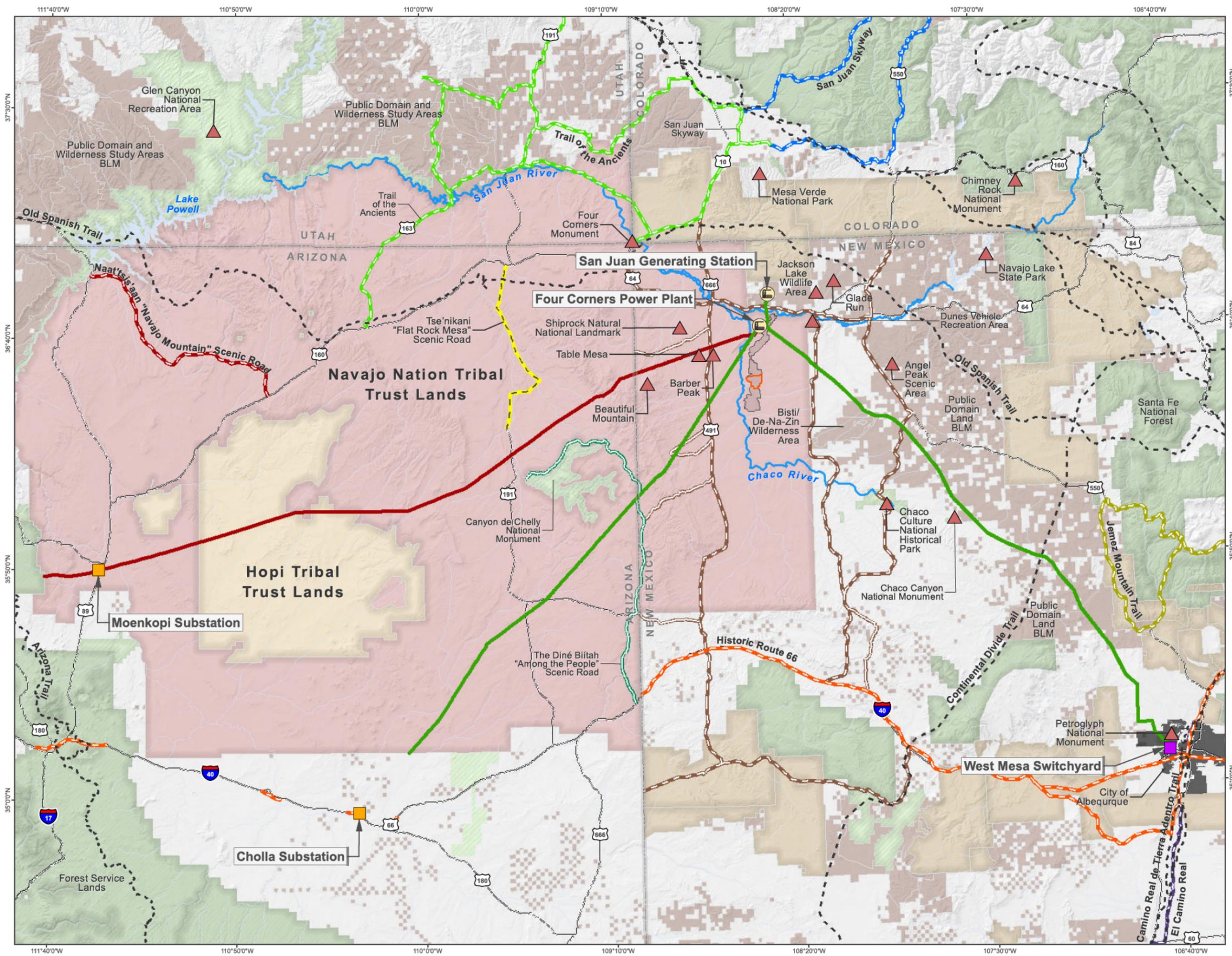
Recreational opportunities on Navajo Nation land include sightseeing, visiting parks and historic sites, photography, and hiking and walking. The ROI has no designated recreation areas or facilities on Navajo Nation lands and, therefore, the majority of recreational use is associated with dispersed recreational activities, such as camping, hiking, or hunting, as allowed under designated permits. In addition, scenic views of the distinguishable landforms, including Barber Peak, Table Mesa, Beautiful Mountain, and Shiprock Natural National Landmark, provide sightseeing opportunities in the region. The Navajo Nation manages many fishing lakes on Navajo Nation tribal trust lands, but no fishing lakes are located within the recreational resources ROI with the exception of Morgan Lake, described below (NNDFW 2012d). As mentioned above, the ROI is within Navajo Nation Hunt Unit 13. Table 4.16-1 provides a summary of the number of hunting permits available in 2012 as well as 2011 hunt success rates within Unit 13.

# Four Corners Power Plant and Navajo Mine Energy Project

## ENVIRONMENTAL SETTING & CONSEQUENCES

**Figure 4.16-1**

Recreational Resources in the Vicinity of the Project Area



### PROJECT FACILITIES

- Power Plant
- Substation
- Switchyard

### PROJECT BOUNDARIES

- Navajo Mine Lease Area
- Proposed Pinabete SMCRA Permit Boundary

### TRANSMISSION LINES

- 345kV
- 500kV

### RECREATION FEATURES

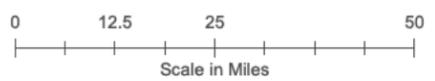
- Monuments/Tourism Sites
- National Historic Trails

### SCENIC HIGHWAYS & ROADS

- El Camino Real
- Historic Route 66
- Jemez Mountain Trail
- Naat'tsis'aan "Navajo Mountain" Scenic Road
- San Juan Skyway
- Trail of the Ancients
- Tse'nikani "Flat Rock Mesa" Scenic Road
- Proposed Trail of the Ancients NSB
- The Diné Bítah "Among the People" Scenic Road

### FEDERAL LANDS

- Bureau of Land Management
- Bureau of Reclamation
- Forest Service
- National Park Service
- Tribal Trust Lands



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**Table 4.16.1 Big Game Hunting in Hunt Unit 13**

Hunt Type	Hunt Dates	2012 Permits Available	2011 Hunt Success (%)	Comment
Archery Deer Hunt	Sept. 8-16, 2012	44	8	Includes data for Hunt Units 13 to 15
Rifle Deer	November 3 - 11, 2012	17	29	
Archery Elk	September 8 – 30, 2012	100	5	Includes data for Hunt Units 13 and 14
Muzzleloader Elk	October 3 - 7, 2012	25	32	Includes data for Hunt Units 11 to 14
Youth Elk	October 10 - 14, 2012	30	10	Includes data for Hunt Unit 14
General Elk	January 9 – 20, 2013	30	25	Includes data for Hunt Units 1 to 8, 11 to 15
Special Deer	Oct. 1, 2012 - Jan. 31, 2013 Any 30 days	1	100	Includes data for Hunt Units 1 to 16; Navajo tribal members only
Special Elk	Sept. 1 – Oct. 15, 2012 and Jan. 1 - Feb. 15, 2013 Any 30 days	1	100	Includes data for Hunt Units 1 to 16; Navajo tribal members only

Source: NNDFW 2012b.

According to the 2011 Navajo Nation Visitor Survey, the most important recreational and leisure activities for visitors in the region are general sightseeing (85.3 percent), visiting parks (46.7 percent), photography (39.8 percent), hiking or walking (35.6 percent), visiting historic areas or sites (33.5 percent), shopping (30.3 percent), looking at and buying arts and crafts (25.6 percent), visiting museums (22.2 percent), and eating traditional Navajo foods (20.4 percent) (Navajo Nation Division of Economic Development 2011). The Navajo Nation’s 2009-2010 Comprehensive Economic Development Strategy states that 565,933 people visited Navajo Nation tribal trust lands and the surrounding vicinity in 2007, the most recent year for which data are available (Navajo Nation Division of Economic Development 2010).

### **BLM-Managed Recreation Areas**

The ROI has two BLM-managed recreation areas, Dunes Vehicle Recreation Area and Glade Run Recreation Area; one scenic area, Angels Peak Scenic Area; and one wilderness area, Bisti/De-Na-Zin Wilderness. The 800-acre Dunes Vehicle Recreation Area is used primarily for OHV use, motorcycle riding, mountain biking, and hiking/backpacking (BLM 2012d). Glade Run Recreation Area is popular for OHV use, hiking, and horseback riding. Approximately 3/4 of the 19,000-acre Glade Run Recreation Area is managed for limited trail use, and 3,800 acres in the southern portion of the recreation area are managed as an open OHV area (BLM 2011). Hunting is not permitted in either of the BLM-managed recreation areas. Both areas are open to the public year-round, though roads may become impassable during bad weather. Moreover, portions of the recreation areas may be closed to the public for short periods during authorized competitions or events (BLM 2012e).

Angels Peak Scenic Area offers about 10,000 acres of rugged terrain recognized for its geologic features and scenic panoramic views from the nearly 7,000-foot Angel Peak. The area provides hiking, photography, wildlife viewing, camping, picnicking, and dispersed hiking opportunities along the rim (BLM 2012f). Bisti/De-Na-Zin Wilderness is a 41,170-acre remote desert wilderness that offers some of the most unusual scenery found in the Four Corners region. This wilderness area is open year-round with no

fees, but it has no amenities. Bisti/De-Na-Zin Wilderness area offers primitive recreational opportunities for hiking, backpacking, camping, wildlife viewing, photography, and horseback riding (BLM 2012g).

### **Chimney Rock National Monument**

Chimney Rock National Monument is located in southern Colorado about 75 miles northeast of the FCPP. The monument site encompasses approximately 4,726 acres of San Juan National Forest and is surrounded by Southern Ute Indian Reservation. The monument was designated on September 21, 2012, by Presidential Proclamation due to nationally significant archaeology, archaeoastronomy, visual and landscape characteristics, and geological and biological features, as well as objects of cultural and educational value. The Secretary of Agriculture through the USFS, in partnership with the Chimney Rock Interpretive Association, a nonprofit organization (USFS 2012), manages Chimney Rock National Monument.

### **Mesa Verde National Park**

Mesa Verde National Park is located in southwestern Colorado about 40 miles north of the FCPP and encompasses about 52,000 acres. The park was established in 1906 to preserve archaeological sites built by the Ancestral Puebloans who inhabited Mesa Verde for more than 700 years (550 to 1300 AD) and currently has over 4,700 archaeological sites, including 600 cliff dwellings. The park draws over 550,000 visitors annually (NPS 2013a).

### **Petroglyph National Monument**

Petroglyph National Monument, authorized by Congress in 1990, stretches along the western side of the City of Albuquerque. The monument protects one of the largest petroglyph sites in the United States, encompassing approximately 7,250 acres, hundreds of archaeological sites, and approximately 24,000 images carved by Pueblo Indians and early Spanish settlers. The City of Albuquerque and the NPS cooperatively manage the monument; two-thirds of the monument is on city-managed land. The monument is managed with the goal of protecting the petroglyphs and other significant natural and cultural resources, while providing for a fulfilling visitor experience (NPS 2013b).

### **New Mexico State Park and Wildlife Areas**

Jackson Lake Wildlife Area, managed by the NMDGF, is located just north of the FCPP and covers about 840 acres. Recreational opportunities at the wildlife area include waterfowl hunting during the open hunting season, year-round fishing, wildlife viewing (deer, waterfowl, and songbirds), photography, and hiking (NMDGF 2012). Navajo Lake State Park is located northeast of FCPP and consists of three areas – Pine River, Sims Mesa, and San Juan River. The Pine River and Sims Mesa areas are located adjacent to lake and recreational facilities, including visitor centers, developed campgrounds, day use areas, and a full service marina. The San Juan River area below the dam is a world-renowned trout fishing location and includes wheelchair-accessible fishing facilities on the river, campgrounds, day use areas, and hiking trails (New Mexico State Parks 2013b).

### **Scenic Roads and Trails**

The ROI has three designated Navajo Nation Scenic Roadway systems that provide scenic views of the region (see Figure 4.16-1). These roadways are recognized by the Navajo Nation as “*being a special resource the community wants to preserve and a place the local residents want to share with visitors*” (Navajo Nation Scenic Roads 2009). The 105-mile-long Diné Biiłah “Among the People” Scenic Road, located on Routes 12 and 64, starts at Route I-40, passes north towards Canyon de Chelly National Monument, and crosses the Four Corners-West Mesa transmission line ROW. Tse’nikani Scenic Road is located on U.S. Highway 191 just north of the Four Corners-Moenkopi transmission line. The Trail of the Ancients within the Navajo Nation encompasses multiple roads in New Mexico in proximity to the Project and is proposed as a National Scenic Byway to connect to the larger network of the Trail of the Ancients

Scenic Byway within Colorado, Utah, and Arizona. These roads provide views of untouched Navajo Nation lands with striking vistas of desert landscapes, red rock formations, and historical and cultural landscapes (Navajo Nation Scenic Roads 2009).

The Old Spanish National Historic Trail, designated as part of the National Trails System in 2002, is a historic trade route that traverses about 1,200 miles, connecting Northern New Mexico to Southern California. The trail passes through the ROI about 15 miles to the north of the FCPP. The trail passes through Federally managed lands under the administration of the BLM, NPS, USFS, USFWS, BOR, USACE, and U.S. Department of Defense, as well as through tribal lands, privately held lands, and lands under the administration of state and municipal agencies. The BLM and NPS have been directed to share administration of the national historic trail. The BLM and NPS are currently preparing a Comprehensive Management Plan and associated EIS, with the intent to protect the trail's natural and historic resources and recreational opportunities (NPS 2012a, BLM 2012h).

The Continental Divide Trail crosses the existing Four Corners-West Mesa transmission line ROW on BLM lands in New Mexico. The trail is a U.S. National Scenic Trail, designated due to its natural beauty and the opportunities for scenic viewing, primitive hiking, and horseback riding that it provides. The trail crosses about 3,100 miles of land between Mexico and Canada. The portion of the trail that crosses BLM lands in New Mexico does not have designated pathways, except where it follows ranch roads. In addition, equestrian facilities are intermittent and in various stages of development (BLM 2012i).

### **River Recreation**

The San Juan River flows east to west, originating along the southern slope of the San Juan Mountains in southwestern Colorado. It flows through Farmington and passes about 5 miles north of the ROI before it drains into the Colorado River in Utah. Camping and hiking along the river is allowed with permits from the Navajo Nation, if recreating on the Navajo Nation tribal trust lands along the southern bank; or from the BLM, if recreating on the BLM land along the northern bank. A permit issued by the BLM is also required to boat on the San Juan River (Navajo Nation Parks and Recreation 2012b). The San Juan River provides world-class trout fishing, primarily upstream from Farmington and downstream of Navajo Lake (Farmington Convention and Visitors Bureau 2009).

The Chaco River is an intermittent wash that flows northwest through Chaco Canyon. It passes within 5 miles to the west of the Pinabete SMCRA Permit Area and directly to the west of the FCPP. Water from Morgan Lake is released via a canal into No Name Arroyo, which flows into the Chaco River and then joins the San Juan River approximately 5 miles northwest of the FCPP. Dispersed recreation, including small game, furbearer, and game-bird hunting and trapping occurs along the Chaco River (DOI and BLM 2007).

### **Community Rodeos**

Community rodeos are a popular activity throughout the region. Numerous rodeo associations in New Mexico promote the sport of rodeo with competitors from across America. The associations coordinate hundreds of rodeos annually throughout the state of New Mexico. Rodeos near Farmington, New Mexico take place year round with the majority of the competitions taking place during the summer months, June through September. Rodeos near Farmington consist of tie-down roping, steer wrestling, saddle bronco riding, bareback bronco riding, bull riding, and barrel racing (New Mexico Rodeo Association 2013).

#### **4.16.2.2 ROI Recreation Resources**

##### **Four Corners Power Plant**

With the exception of Morgan Lake, no parks, trails, scenic trails, or scenic landmarks are destinations for visitors within 10 miles of the existing FCPP (AECOM 2012c). Dispersed recreation, including small game, furbearer, and game-bird hunting and trapping, may occur around the FCPP; and hunting, fishing, and trapping are known to occur along the San Juan River and Chaco River, which both pass the FCPP. The plumes from the FCPP stacks and the brown haze from the plant emissions are visible for short periods of time in areas surrounding the plant where dispersed recreation may occur

The FCPP is a secure facility with a fence and controlled access and is closed to the public (see Section 4.17, Health and Public Safety) (Cardno ENTRIX 2012). Morgan Lake, located directly adjacent to the FCPP to the north, is a 1,200-acre human-made reservoir that provides water for industrial and domestic use at the FCPP. Cooling water used during power plant operations is discharged into Morgan Lake and, as a result, the lake's water temperature ranges from 65 to 90°F depending on the time of the year. Morgan Lake is open to the public for recreation year-round and, due to the warm water temperatures, fishing, boating, and windsurfing are possible year-round. The Navajo Nation stocks the lake with channel catfish, largemouth bass, bluegill, and carp for recreational fishing and manage it as a quality bass lake. A license, issued by the Navajo Nation, is required to fish at Morgan Lake. Other activities at the lake include picnicking at designated picnic areas, windsurfing, and boating. There are no motor size restrictions at Morgan Lake, though watercraft permits are required for boating in motorized or non-motorized boats, as well as for windsurfing. Permits are valid for all water bodies on the Navajo Nation and are not specific to Morgan Lake. Swimming is not permitted at Morgan Lake (NNDFW 2012d). The lake also serves as a destination for hikers (JJ Clacs and Company 2002). The San Juan Chapter has proposed a nature trail from the San Juan Chapter House to Morgan Lake.

##### **Navajo Mine SMCRA and Pinabete SMCRA Permit Areas**

No parks, trails, scenic roads, or scenic landmarks are designated recreation areas within the Navajo Mine SMCRA and Pinabete SMCRA Permit Areas. The primary land use in these Permit Areas and adjacent areas includes very low-intensity livestock grazing, along with a few scattered dwellings. About 3.4 miles of Burnham Road, a BIA road, crosses through the Permit Area. The remainder of the roadways consists of two-track unimproved roads that are primarily utilized by Navajo Nation members with customary use rights in the area; public use is infrequent. Dispersed recreation, including small game, furbearer, and game-bird hunting and trapping may occur within the Permit Areas and in the adjacent areas. However, due to the remoteness of the area and the limited public roadway access within the Pinabete SMCRA Permit Area, potential is limited for dispersed recreational use in the Pinabete SMCRA Permit Area and adjacent land areas.

In terms of public safety and access restrictions for dispersed recreational use, various controls are in place both to prevent unauthorized entry or travel through the site and to direct authorized visitors away from hazardous mining activities (BNCC 2012g). These controls include, but are not limited to, communication, site security, inspections, signage, audible alarms, fencing, barriers, and training. Most areas of the Navajo Mine have controlled access, through fencing and security stations at the Navajo North and Area III facilities. For uncontrolled public access roads, various ground control measures (e.g., berms or barriers) minimize traffic risks and the potential for unauthorized entry into restricted areas. In addition, security routinely patrols the mine site, intercepts unauthorized personnel, and escorts them back to the public access road (see also Section 4.17, Health and Public Safety).

## **Transmission Lines**

The existing transmission line ROWs primarily traverse Navajo Nation tribal trust lands, Hopi Tribe tribal trust lands, and BLM-managed land. The existing Four Corners-West Mesa transmission line crosses NPS and city of Albuquerque land (see Figure 4.16-1) when it bisects Petroglyph National Monument, which is a destination for visitors. With the exception of Petroglyph National Monument, the existing transmission lines do not bisect any parks or scenic landmarks that would be destinations for visitors. Dispersed recreational use, such as hiking and OHVs, may occur along portions of the ROWs where public access occurs. With the exception of Petroglyph National Monument, the ROI has very few developed recreational facilities within proximity to the transmission line ROWs (see Figure 4.16-1). Table Mesa and Barber Peak are located immediately to the south of the Four Corners-Moenkopi transmission line, Beautiful Mountain is located about 5 miles south, and Shiprock Natural National Landmark is located approximately 7 miles to the north. Canyon de Chelly National Park, located on the Navajo Nation and managed by the NPS (NPS 2012b), is located south of Four Corners-Moenkopi transmission line and north of the Four Corners-Cholla transmission line in northwestern Arizona. Chaco Canyon National Monument and Chaco Culture National Historical Park are located south of the Four Corners-West Mesa transmission line ROW in New Mexico. The NPS manages both areas (NPS 2012c).

The Continental Divide Trail crosses the existing Four Corners-West Mesa transmission line in New Mexico. The Diné Bítah “Among the People” Scenic Road bisects the Four Corners-Cholla transmission line about 30 miles southwest of the Pinabete SMCRA Permit Area and FCPP, but no scenic tourist attractions are in the vicinity where the Scenic Byway bisects the transmission line ROW. No other designated trails or scenic byways pass within 5 miles of the ROWs, as depicted on Figure 4.16-1.

For the Four Corners-San Juan and the Four Corners-West Mesa transmission lines ROWs, PNM has obtained easements from landowners for the construction, operation, and maintenance of the transmission lines, but PNM does not own the land underlying the ROWs. Public access to land underlying the transmission line ROW is determined by the landowners, which in this case includes private individuals, private businesses, tribes, and government agencies. Some sections of the ROWs are publicly accessible, while others are restricted by the landowner’s choice. At the point where transmission lines enter the boundary of a power plant or switchyard, access is restricted in accordance with facility security requirements (PNM 2012).

For the Four Corners-Moenkopi and Four Corners to Cholla transmission lines, APS does not hold easements or access rights outside the transmission line ROW. Access to the transmission line ROW is achieved exclusively through the use of public roads and is generally open to the public unless access is restricted by the landowner. The public is excluded from coming into close proximity to the transmission lines due to the distance between the transmission lines and the ground, as mandated by the NESCA.

### **4.16.3 Changes to Recreation 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 SMCRA permit transfer from BNCC to NTEC (Section 2.4). These completed Federal Actions are considered part of the environmental baseline to which the impacts 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 recreational resources.

### **4.16.4 Environmental Consequences**

Recreational opportunities and access could be affected by the Proposed Action and alternatives, in some instances due to direct impacts on adjacent recreation areas and in other instances through indirect impacts on recreation-related activities. Mining construction activities and operations could result in short-term noise impacts due to drilling and blasting activities and increased vehicular traffic within the ROI. Modifications to the ROI site topography as a result of the mining operations could result in changes to

the visual character of the region and potential changes in the recreational setting and experience within viewing distance of the Project. This section analyzes these potential impacts to recreation and determines whether their magnitude. The Proposed Action and alternatives would not reduce or increase recreational fishing and hunting opportunities as a result of potential changes in fisheries populations and potential impacts on wildlife populations and mobility. In addition, the long-term landownership and management of the Navajo Mine and Pinabete SMCRA Permit Areas and FCPP following reclamation would not result in any changes to existing potential recreational use and access within the ROI. Therefore, these issues are not addressed further.

Impacts on recreation resulting from the Proposed Action and alternatives were assessed in a qualitative manner by considering the direct and indirect impacts caused by construction activities, mining and power plant operations, maintenance activities, and post-reclamation land use. Compatibility with relevant recreation management plans was also assessed. The likely direct impacts on recreational use and access were considered, as well as the indirect potential changes in the existing recreational setting and experience. For the purposes of this EIS, a major impact on recreational resources would occur if implementation of the Proposed Action or alternatives would directly or indirectly result in any of the following conditions:

- Substantial reduction or displacement of existing recreational opportunities, such as wildlife viewing, hunting, or other existing recreational activities within the recreation ROI;
- Conflict with or incompatibility with recreation-related policies or objectives of existing applicable management plans;
- Major impact on scenic, or cultural quality, or other factors that contribute to the recreational opportunities and experience within the recreation ROI; or
- A reduction of public access to public recreation areas or opportunities.

The impact analysis includes both short-term and long-term impacts. At the Navajo Mine SMCRA Permit and Pinabete SMCRA Permit Areas, short-term impacts would occur during construction activities and mining operations and may persist through the reclamation phase of each individual area. Long-term impacts persist for the duration of the mining permit period (through 2041) and permanent impacts persist beyond or occur after reclamation. For the FCPP and transmission lines, short-term impacts are those that would occur immediately following approval of the lease renewals plus a reasonable period afterwards (i.e., a total of about 5 years). Long-term impacts are those that would persist beyond or occur after the 5-year period.

#### **4.16.4.1 Alternative A – Proposed Action**

##### **Navajo Mine**

According to the 2011 Navajo Nation Visitor Survey (Navajo Nation Division of Economic Development 2011), the most important recreational and leisure activities for visitors in the region are general sightseeing and visiting parks. The Proposed Action would have the potential to impact the recreational experience and dispersed recreational opportunities within the recreational resources ROI by affecting the scenic beauty, impacting hunting and fishing opportunities, or increasing ambient noise levels in the immediate project vicinity. Under the Proposed Action, mining construction and operation activities would occur within the Permit Areas, and public access restrictions, such as restricted access to two-track roads within the Permit Areas, would be implemented for safety purposes. The Proposed Action would include realignment of Burnham Road within the Navajo Mine SMCRA and Pinabete SMCRA Permit Area boundaries, and additional trucking and construction activities during the mining construction and operation periods. In addition, mining construction and operation would result in long-term changes to the site topography and vegetation within the Permit Areas, which would alter the visual character of the area, though the resulting impact on recreational resources would be minor because the changes in topography

and vegetation caused by the Proposed Action would result in the same visual character as the current mining operations adjacent to areas currently being mined.

No designated public recreational facilities lie within the Navajo Mine SMCRA and Pinabete SMCRA Permit Areas; therefore, the Proposed Action would not directly or indirectly impact potential recreational resources associated with designated public recreation facilities within the Pinabete SMCRA Permit Area.

The public access restrictions to the Permit Areas would have the potential to displace dispersed recreational opportunities within the Navajo Mine SMCRA and Pinabete SMCRA Permit Areas, such as trapping, hunting, fishing, and hiking activities. These impacts would be long term (dispersed recreational opportunities would be restored following reclamation); however, opportunities for dispersed recreational opportunities would be available in adjacent publicly accessible land areas. Though mining activities would raise the ambient noise level in the immediate area, these noise levels are expected to be similar to existing conditions associated with current mining operations within the adjacent mine areas. Noise levels would not be above levels considered to be a nuisance or harmful to nearby sensitive receptors (see Section 4.14, Noise and Vibration). Because noise levels are low and would not increase above baseline conditions, there would be no impacts to the recreational experience. Moreover, trucks and equipment used during mining activities would not result in impacts on recreational resources because they would only travel on roadways contained within the Permit Areas that do not offer recreational opportunities.

The Pinabete SMCRA Permit Area would be located adjacent to the existing Navajo Mine SMCRA permit operations and the existing regional recreation areas are located at long viewing distances (typically greater than 15 miles) from the Navajo Mine SMCRA Permit Area. The Navajo Nation scenic sites within the recreational resources ROI (including Table Mesa, Barber Peak, and Shiprock) are all more than 10 miles from the Permit Areas. Similarly, no designated Federal or state recreation areas lie immediately adjacent to the Permit Areas; the closest recreation areas (Jackson Lake, Dunes Vehicle Recreation Area, and Glade Run) are located 15 to 20 miles from the Permit Areas, which is not within viewing distance from the Permit Areas. Moreover, where mining is visible, views of the mining activities associated with the Proposed Action would be comparable with the existing scenic character of the region. Therefore, the recreational experience at these recreation areas and throughout the ROI would be similar to the existing conditions, and the potential impacts on regional recreation resources would be negligible (see also Section 4.13, Visual Resources).

Post-reclamation goals stated by the Burnham Community are to create suitable lands for grazing and wildlife habitat (BNCC 2012g). Under the Proposed Action, the post-mining land use for the Pinabete SMCRA Permit Area has been designated for grazing domestic livestock and wildlife habitat, which is the same as the pre-mining land use and is expected to be equal to or greater than the pre-mining quality. The post-reclamation land use of the Permit Areas would be similar to the pre-mining conditions at the Pinabete SMCRA Permit Area and Navajo Mine SMCRA Permit Area sites that have already been reclaimed. These lands would provide long-term recreational opportunities for dispersed recreational activities. The Proposed Action would not alter long-term recreational uses and access within the ROI and, therefore, would not conflict with or be incompatible with recreation-related policies or objectives or the existing applicable management plans in the ROI, including the BLM Farmington Field Office Management Plan and Navajo Nation recreation management.

#### **Four Corners Power Plant**

Under the Proposed Action, public access to the FCPP would continue to be restricted with fences and locked gates, but public recreational opportunities and public access at Morgan Lake would remain. The Proposed Action would result in continued operation of Units 4 and 5 with increased emission controls, and construction of new DFADAs. Discharges to Morgan Lake would be the same as under existing conditions and, thus, water temperatures and associated year-round potential for recreational opportunities at Morgan Lake would not be impaired. Similarly, the proposed ash disposal area and associated borrow areas would be located in the southwest portion of the Four Corners Power Plant

Lease boundary, and Morgan Lake is located in the northeastern portion; the existing ash ponds are located between Morgan lake and the proposed future DFADAs. Therefore, the proposed DFADAs would not alter existing recreational opportunities at Morgan Lake. The proposed surge pond location is located northeast of the existing ponds, closer to Morgan Lake. However, the power plant is also located adjacent to this portion of Morgan Lake, resulting in an industrial baseline character, and therefore the proposed surge pond would not impact recreational opportunities. Therefore, recreational access and opportunities associated with Morgan Lake would remain the same as existing conditions, and implementation of the Proposed Action would not cause any adverse impacts.

Under the Proposed Action, the regional recreational opportunities and experiences within the ROI would remain largely similar to existing conditions. Increased emission controls for Units 4 and 5 may result in a reduced emissions plume, which could result in some minor improvements to the visual setting and overall visibility in the area. Since visibility and views of the landscape are a component of the recreational experience in this region, this could potentially result in minor beneficial impacts to recreation. The Proposed Action would not alter roadway access and, therefore, no impacts on access to recreation areas within the ROI would occur. Short-term minor noise impacts during the construction of the ash disposal area may occur on-site but these impacts would be temporary and intermittent and would have no substantial effect on noise in the area. As such, they would not impact dispersed recreation in the adjacent areas, nor would they be audible from distant recreation areas. Long-term noise levels under the Proposed Action at the FCPP would be similar to existing conditions (see Section 4.14, Noise and Vibration) and would not impact recreational experiences within the ROI.

### **Transmission Lines**

Under the Proposed Action, the existing ROW leases for the Four Corners-Moenkopi, the Four Corners-Cholla, the Four Corners-San Juan, and the Four Corners-West Mesa transmission lines would be renewed and existing alignments would remain. The existing recreational activities along the transmission line ROWs would not be altered because the Proposed Action would not result in changes to ROW access or maintenance activities. Public access along the transmission line ROWs, which are currently publicly accessible in some locations, would not change from the existing conditions as a result of the Proposed Action. Public access is currently and would continue to be at the landowner's discretion. Public access would continue to be restricted at the points where transmission lines enter the boundary of a power plant or switchyard. The ROWs would not be realigned and existing maintenance and operations of the transmission lines would not change under the Proposed Action; therefore, no impacts on recreational resources associated with the transmission lines would occur.

Moreover, the Proposed Action would not alter the recreational experience (including scenic beauty, hunting, and hiking) in the ROI because the transmission lines already exist and the Proposed Action would not alter existing conditions. Dispersed recreational opportunities (such as hunting, hiking, and OHV use), which may occur along portions of the transmission line ROWs, would not be impacted because the Proposed Action would not alter existing conditions. Similarly, renewing the leases on the existing transmission line ROWs would not conflict with or be incompatible with existing recreation-related policies or objectives.

#### **4.16.4.2 Alternative B – Navajo Mine Extension Project**

### **Navajo Mine**

Under Alternative B, the mining operations would be comparable to those described in the Proposed Action but would occur in a slightly different part of the Navajo Mine Lease Area. As such, Alternative B would result in a similar set of impacts on the recreational experience and dispersed recreational opportunities within the recreational resources ROI as described for the Proposed Action. No designated public recreational facilities currently lie within the Navajo Mine Lease Area, including the Navajo Mine Extension ROI, so Alternative B would not directly impact recreational resources. The Navajo Mine

Extension ROI is also located adjacent to the existing operations within the Navajo Mine SMCRA Permit Area, and the existing regional recreation areas are located at long viewing distances (typically greater than 15 miles) from the Navajo Mine SMCRA Permit Area, so no impacts to public recreational facilities would occur, as described under the Proposed Action. Potential adverse impacts associated with mining operations would be comparable to those described for the Proposed Action, including impacts from trucks and equipment traffic, impacts on ambient noise, and impacts on scenic beauty. Alternative B would also result in the realignment of Burnham Road, with the same potential impacts.

The public access restrictions to the Alternative Mine Plan and associated potential displacement of dispersed recreational opportunities (e.g., trapping, hunting, and hiking) would be comparable to those described for the Proposed Action, though the alternate permit area boundary would result in access restrictions in a slightly different location.

Under Alternative B, mining would occur within Pinabete Arroyo and require a diversion of flows from the arroyo around mining activities. Diversion of the Pinabete Arroyo may indirectly impact dispersed recreation downstream by impacting wildlife along the arroyo (see Section 4.7, Wildlife and Habitats). However, these impacts are expected to be negligible because Pinabete Arroyo is ephemeral and, as such, only intermittently supports wildlife and the associated hunting and fishing opportunities throughout the year. Moreover, reclamation activities would include reestablishing the approximate original channel location, though final reclamation would not occur for over 40 years. All other reclamation activities would be the same as described for the Proposed Action and would not conflict with recreation-related policies and objectives in the ROI.

#### **Four Corners Power Plant**

Under Alternative B, the BIA would approve the lease amendment for FCPP, and FCPP would operate as described under the Proposed Action, with the same recreation-related impacts described above.

#### **Transmission Lines**

Under Alternative B, the transmission line ROWs would be approved, and they would continue to be operated and maintained as described under the Proposed Action, with the same potential recreation-related impacts as described above.

#### **4.16.4.3 Alternative C – Alternative Pinabete Mine Plan**

##### **Navajo Mine**

Under Alternative C, the mining operations would be comparable to those described in the Proposed Action but would occur in a slightly different part of the Navajo Mine Lease Area. As such, Alternative C would result in a similar set of impacts on the recreational experience and dispersed recreational opportunities within the recreational resources ROI as described for the Proposed Action. No designated public recreational facilities currently lie within the Navajo Mine Lease Area, including the Alternative Pinabete Mine Plan Area, so Alternative C would not directly impact recreational resources. The Alternative Pinabete Mine Plan Area is also located adjacent to the existing operations within the Navajo Mine SMCRA Permit Area, and the existing regional recreation areas are located at long viewing distances (typically greater than 15 miles) from the Navajo Mine SMCRA Permit Area, so no impacts to public recreational facilities would occur, as described under the Proposed Action. Potential adverse impacts associated with mining operations would be comparable to those described for the Proposed Action, including impacts from trucks and equipment traffic, impacts on ambient noise, and impacts on scenic beauty. Alternative C would also result in the realignment of Burnham Road, with the same potential impacts.

The public access restrictions to the Alternative Pinabete Mine Plan and associated potential displacement of dispersed recreational opportunities (e.g., trapping, hunting, and hiking) would be comparable to those described for the Proposed Action, though the alternate permit area boundary would result in access restrictions in a slightly different location.

Under Alternative C, mining would not occur within Pinabete Arroyo and a diversion of flows from the arroyo would not be required. As such, there would be no impact to dispersed recreation downstream by impacting wildlife along the arroyo (see Section 4.7, Wildlife and Habitats). All other reclamation activities would be the same as described for the Proposed Action and would not conflict with recreation-related policies and objectives in the ROI.

#### **Four Corners Power Plant**

Under Alternative C, the BIA would approve the lease amendment for FCPP, and FCPP would operate as described under the Proposed Action, with the same recreation-related impacts described above.

#### **Transmission Lines**

Under Alternative C, the transmission line ROWs would be approved, and they would continue to be operated and maintained as described under the Proposed Action, with the same potential recreation-related impacts as described above.

#### **4.16.4.4 Alternative D – Alternative Ash Disposal Area Configuration**

##### **Navajo Mine**

Under this alternative, 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 the Proposed Action. Impacts would be the same as described for the Proposed Action.

##### **Four Corners Power Plant**

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 would result in the same recreation-related impacts as 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**

Under this alternative, the transmission line ROWs would be approved and they would continue to be operated and maintained as described for the Proposed Action. As such, impacts would be the same as described for the Proposed Action.

#### **4.16.4.5 Alternative E – No Action Alternative**

##### **Navajo Mine**

Under the No Action Alternative, the Navajo Mine SMCRA Permit would not be extended and the Pinabete SMCRA Permit applications would not be approved and mining would cease when the ROD is issued in 2015, the Navajo Mine would close, and the previously mined areas would be reclaimed. Post-reclamation goals stated by the Burnham Community are for grazing and to support wildlife. The post-reclamation land use under the No Action Alternative would be comparable to the post-reclamation land use under the Proposed Action, although it would occur sooner under the No Action Alternative. It is expected that following reclamation, the land would be returned to pre-mining quality and would provide recreational opportunities the same as before mining. Reclaimed lands would provide long-term recreational opportunities for dispersed recreation, such as trapping, hunting, fishing, and hiking. The No Action Alternative would not alter long-term recreation within the ROI and, therefore, would not be in

conflict with or incompatible with recreation-related policies or objectives or the existing applicable management plans in the ROI.

The No Action Alternative would improve the recreational setting because ambient noise levels would decrease due to cessation of mining operations and a decrease in adjacent traffic. No access restriction would inhibit dispersed recreation within the ROI, and indirect impacts on scenic beauty from designated recreation areas would not occur.

#### **Four Corners Power Plant**

Under the No Action Alternative, APS would shut down Units 4 and 5 and decommission and dismantle the units and all of the switchyards and facilities.

The elimination of the emissions from the stacks on Units 4 and 5 would reduce the visibility of the FCPP to people recreating in the area. Moreover, all of the operating units and ancillary facilities would eventually be dismantled, which would result in a moderate beneficial impact by improving the scenic beauty in the ROI. The site would be remediated, and access restrictions would be removed, increasing the opportunity for dispersed recreation in the area.

If the FCPP were to shut down, Morgan Lake would no longer be necessary. Discharges to Morgan Lake would not continue. If the river pumping plant and the pipeline to Morgan Lake were not operated or removed, over time Morgan Lake would evaporate and cease to exist, so all recreational opportunities in Morgan Lake would cease to exist. Elimination of water to Morgan Lake would have a major, long-term impact on recreational resources in the ROI. It is not known if or how the river pump station would be operated if APS chose to leave the river pumping plant and the pipeline behind, and the Navajo Nation took possession of those facilities.

#### **Transmission Lines**

Under the No Action Alternative, the transmission line ROWs would not be renewed. The power lines would either be decommissioned and dismantled or left in place. If the transmission lines were left in place, the recreational setting would not change from the existing condition. If the transmission lines were dismantled, moderate beneficial impacts would occur from improving the scenic beauty in the ROI. Currently, no decommissioning plan exists. Removal of the transmission line structures would occur under a separate approval process and recreational impacts would be assessed in the environment documents analyzing that particular action.

#### **4.16.5 Recreation Resources Mitigation Measures**

The Project Applicants must comply with protective regulatory requirements including laws, ordinances, regulations, and standards that are enforceable by the responsible agency over that activity. These are described in the Regulatory Compliance Framework Section. Where the environmental analysis in this EIS recommends additional protective measures, over and above the protective regulatory measures, they are listed below as specific mitigation measures.

The Proposed Action, including the continuing operations of Navajo Mine, FCPP, and the transmission lines, would not result in major adverse impacts to recreation resources. Therefore, no additional mitigation is recommended.

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