

## **CHAPTER 1 - PURPOSE AND NEED**

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The purpose of this chapter is to briefly explain the purposes and needs for the proposed action. Also provided is a description of the potential planning requirements, environmental review, and permits or licensing that may have to be completed to implement the proposed action.

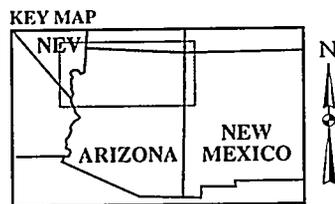
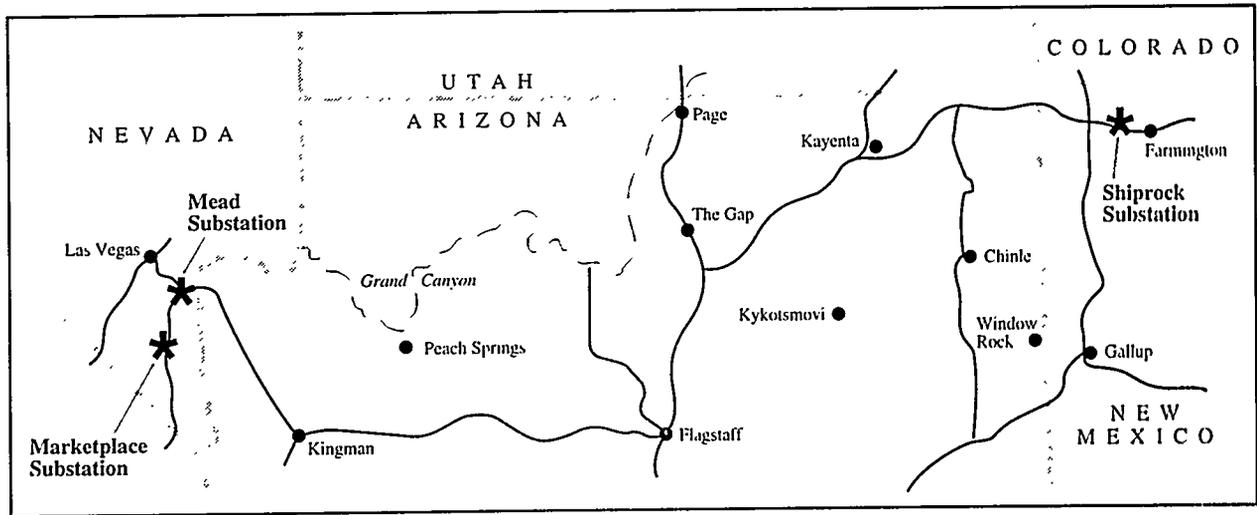
The following purposes and needs must be met when identifying and evaluating the range of reasonable alternatives that would accomplish the proposed action:

- relieve constraints on the transmission of electricity west from the Four Corners area to the Desert Southwest
- improve operational flexibility and reliability of the extra-high-voltage transmission system in the event of an outage of a parallel transmission system and, therefore, improve the overall system reliability in the Rocky Mountains/Four Corners/Desert Southwest (RM/FC/DS) region
- allow increased economical power transfers, sales, and purchases in the RM/FC/DS region
- improve economic conditions of the Navajo Nation
- facilitate the Navajo Nation's development of energy resources and participation in the electric utility industry

### **BACKGROUND**

For more than a decade, regional electrical transmission systems have become increasingly stressed by the lack of adequate bulk transmission capacity west from the Four Corners area in northwestern New Mexico. Several thousand megawatts of power generation was added in the RM/FC/DS region in the 1970s and 1980s, but no new transmission lines have been constructed west from the Four Corners area since 1970. Although a number of projects have been planned, lack of approved rights-of-way across the Navajo Indian Reservation has precluded completion of any of the projects.

Considering this need for transmission of bulk power west of the Four Corners area, Diné Power Authority (DPA) is pursuing the opportunity to develop an extra-high-voltage transmission line from Shiprock Substation west of Farmington, New Mexico, across northern Arizona to the Mead or the Marketplace Substation in southern Nevada (Figure 1-1). DPA was established as an enterprise by the Navajo Nation Council to promote the Navajo Nation's development of energy resources and new sources of transmission capacity. The proposed Navajo Transmission Project (NTP) is an opportunity for the Navajo Nation to own a transmission line that would be an integral part of a regional electrical transmission system in the western United States.



**PROJECT VICINITY  
FIGURE 1-1**

As the project is currently envisioned, revenue would be generated by leasing the capacity of the transmission line to regional utilities. Annual revenues over the life of the project would provide funds to allow the Navajo Nation to improve its economic condition and allow for investment in other long-range productive business opportunities. NTP is one project of a broader effort of the Navajo Nation to promote development to create a viable economy that provides for a decent standard of living, services, and jobs for the Navajo people.

DPA, the majority owner of NTP, began to develop the project in the early 1990s. Western Area Power Administration (Western) may participate and is assisting with preconstruction activities, including serving as the Federal lead agency for compliance with the National Environmental Policy Act of 1969 (NEPA).

As a Federal power-marketing agency, Western is responsible for marketing and transmitting power from Federal power facilities (e.g., Colorado River Storage Project [CRSP]) in 15 western states, which includes the RM/FC/DS region. Since the 1960s, Western has been assisting the Navajo Nation in meeting its energy needs through (1) existing firm-energy contract agreements with the Navajo Tribal Utility Authority (NTUA), a Navajo Nation enterprise providing utility services, and (2) various energy-related projects (such as construction and use of photo-voltaic units to serve remote residences on Navajo Nation lands).

Funding of the environmental and power-systems studies for NTP has been a combination of Navajo Nation funding to DPA and U.S. Congressional appropriations. Preconstruction activities are currently being supported through grants awarded under Section 2603(a) of Title XXVI of the Energy Policy Act of 1992, a program designed to support development of energy resources on American Indian reservations.

The following sections provide background information explaining the underlying purposes and needs listed above.

■ ***Relieve constraints on the transmission of electricity west from the Four Corners area to the Desert Southwest***

Currently, more energy can be imported from the north on existing transmission lines into the Four Corners area than is capable of being exported with existing transmission capacity to the west. The existing system is fully committed to transmitting energy from the Four Corners area and is generally heavily loaded, causing the amount of power scheduled across any one line to be periodically cut back to keep flows within established line limits. This transmission “bottleneck” essentially precludes economic sales of electricity to markets in south-central Arizona, Nevada, and southern California. An estimate of future load growth in Arizona, Nevada, and southern California, based on conservative assumptions, is more than 10,000 megawatts (MW) during the next 10 years. A project with the characteristics of NTP would play an integral role in meeting a portion of this projected load growth.

Studies conducted by DPA and Western have shown that NTP would provide the needed transfer path for bulk electrical power and increase the electrical transfer level west of the Four Corners area. The additional capacity would support the existing system and prevent or reduce damages from outages, thereby enhancing the existing transmission grid and contributing to increased reliability, efficiency, and capability in the southwestern United States.

■ ***Improve operational flexibility and reliability of the extra-high-voltage transmission system in the event of an outage of a parallel transmission system and, therefore, improve the overall system reliability in the RM/FC/SD region***

The extra-high-voltage transmission system west of Four Corners consists of one 500kV line and two 345kV lines owned by Arizona Public Service (APS). There are restrictions on how much capacity each of the lines west of Four Corners may carry for reasons of safety and reliability. A margin of safety has been provided in anticipation of the consequences should the largest line in the system (the 500kV line) suddenly fail. Under extreme operating conditions, there is the potential for the 500kV line to fail and cause an overload on the two parallel 345kV lines. That would happen when the power that was being carried on the 500kV line is automatically routed to the 345kV lines. The system could then exceed the maximum limits for power flow, causing the power generators to either slow down or shut off to avoid overloading and damaging the generators and the 345kV lines. Studies have shown that NTP would provide additional capacity to support the system and prevent or reduce damages from such an outage.

Several western states, two Canadian provinces, and the northern portion of Baja California and Norte Mexico form one interconnected electric power system that is largely independent from the rest of the United States, Canada, and Mexico. NTP would help enhance the existing transmission grid and contribute to increased reliability, efficiency, and capability, especially in the RM/FC/DS region. Figure 1-2 shows 345kV and 500kV transmission lines in the western United States and Western's Shiprock-to-Glen Canyon 230kV line in the project area.

■ *Allow increased economical power transfers, sales, and purchases in the RM/FC/DS region*

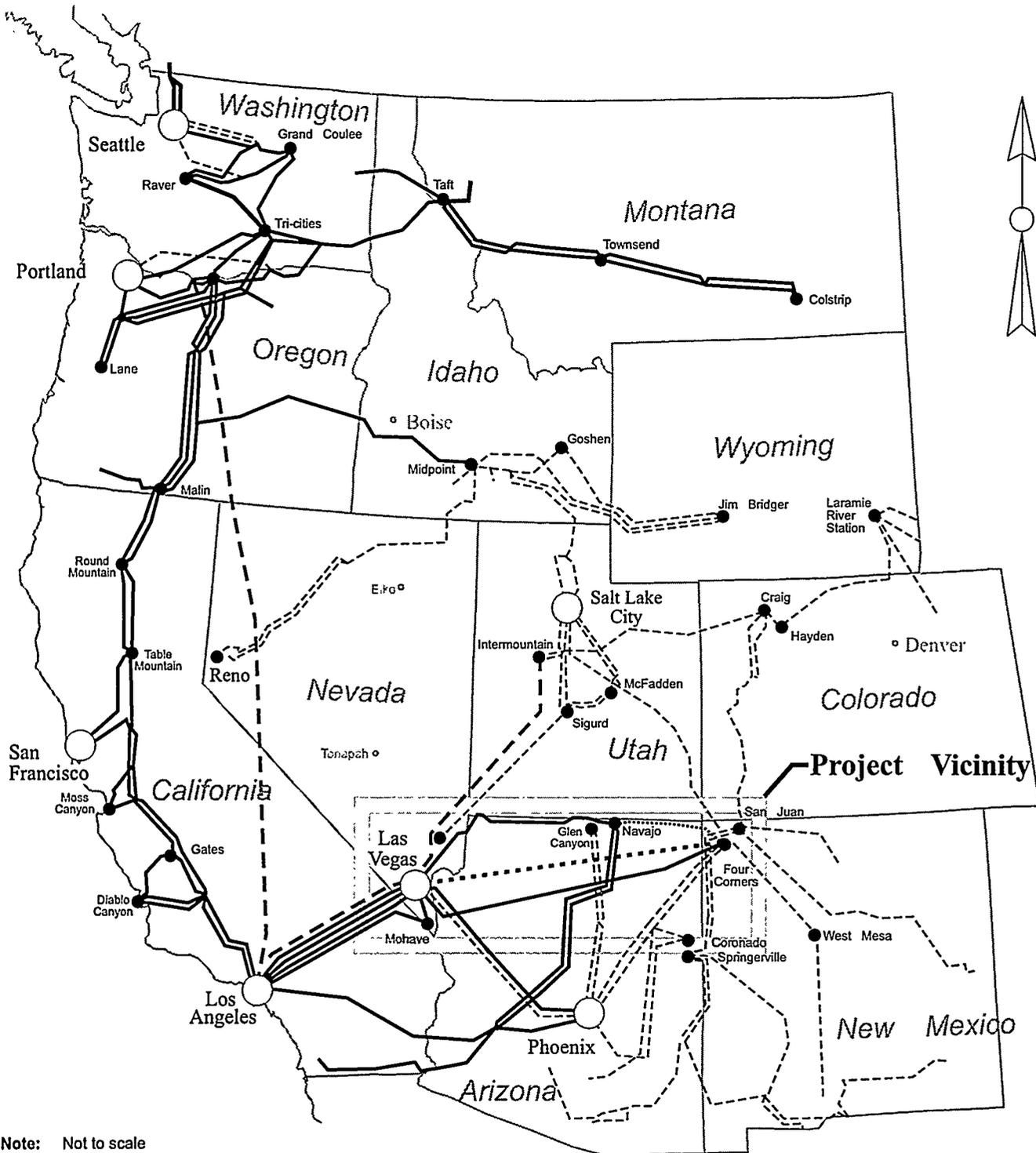
By removing the existing transmission restrictions and/or interconnecting with other regional systems in the Four Corners area, Arizona, California, and Nevada, utilities would be able to increase economical transfer of seasonal surpluses of electrical generation from resources in the Rocky Mountain and Four Corners areas. Also, they would be able to support their peak load periods by importing power from existing hydro and coal-fired generation sources in the Rocky Mountain area. Such economic purchases reduce the use of more expensive generation.

Western's participation in NTP would benefit CRSP customers by increasing the reliability of the critical Shiprock-to-Glen Canyon transmission line path. The capacity of Western's Shiprock-Kayenta-Glen Canyon 230kV line is now fully committed and Western is unable to provide any new long-term firm transmission service over the line. NTP could carry some of the capacity now delivered across the 230kV line and provide replacement capacity should there be an extended outage of one or more of the existing transmission lines west of Four Corners. NTP would improve the operational flexibility of area generation facilities and take advantage of economic and seasonal diversity in the electrical power market. When lower cost surplus power is available to the north and east of Four Corners, it could be "wheeled" across NTP to customers west and south of Four Corners, providing a sales benefit to the provider and a benefit to the purchasing utility ultimately resulting in lower rates to the customers.

■ *Improve economic conditions of the Navajo Nation*

The Navajo Nation is economically disadvantaged according to U.S. government statistics. Per capita annual income is \$5,943, median family income is \$24,961. The Navajo Nation is the second largest American Indian tribe in the United States with a population of 162,378 according to 1994 statistics of the Navajo Economic Development Commission. According to the 1990 U.S. Census Bureau statistics, approximately 57 percent of families live below the poverty level. Furthermore, more than 60 percent of Navajo Nation residences do not have electricity.

Economic indicators suggest an absence of a strong and diverse economic base within the Navajo Nation. Since the Economic Recovery Act of 1981 and later Gramm-Rudman initiatives, there has been a substantial reduction in Federal funding to American Indian tribes, and continued decreases are anticipated. The decreases affect all services and employment opportunities on the Navajo Reservation. The Nation realizes that it must diligently develop programs and projects that generate revenue for producing sustainable growth, building economic self-sufficiency, and reinvesting in further productive



Note: Not to scale

Source: Western Systems Coordinating Council  
 Map of Principal Transmission Lines,  
 Jan. 1, 1992

**Legend**

500kV AC	—————
500kV DC	- - - - -
345kV	.....
230kV (Western)	.....
NTP (AC)	.....
Local System	○

**Regional Transmission  
 Network**  
 Navajo Transmission Project

activities. It is believed that this can be achieved through wise use of the land, natural resources, human resources, and capital.

NTP would assist in improving the economic condition of the Navajo Nation. As NTP is currently envisioned, revenue would be generated by leasing the capacity of the transmission line to regional utilities. Annual revenues over the life of the project would provide funds to allow the Navajo Nation to invest in other long-range productive business opportunities. The amount of revenue would depend on final percent of ownership, right-of-way costs, lease agreements, operation and maintenance costs, and availability of capacity. In addition, the development of NTP would provide short-term employment opportunities for American Indian groups during construction in a region having an unemployment rate of about 30 percent (on the Navajo Reservation). Skills and experience gained from construction jobs would be useful for future employment. After construction, it is anticipated that there may be limited opportunities for long-term employment in aspects of operation and maintenance of the transmission line. NTP is expected to contribute to an increase in the income and standard of living for the Navajo Nation.

Availability of electricity on the Navajo Reservation is critical to economic growth and infrastructure development of the Navajo Nation. A substantial portion of the Navajo Nation's power and energy is delivered from Western and Tucson Electric Power (TEP) to the Navajo Reservation in bulk form across Western's Shiprock-to-Glen Canyon 230kV line to the Long House Valley and Kayenta substations. From there, NTUA delivers electricity to Navajo Reservation businesses and residences across lower-voltage transmission and distribution lines. Additional power is received from TEP through wheeling arrangements across transmission systems owned by Public Service Company of New Mexico and APS.

Because of the capacity constraints, NTUA cannot plan to accommodate expansion of business and residential development on Navajo Nation lands. NTP would allow Western an alternate path for firm-power deliveries, thus reducing dependence and freeing capacity on the 230kV path for increased deliveries of electricity to the Kayenta and Long House Valley substations. That would provide NTUA with more flexibility to plan additional distribution. A source of high-voltage transmission is still needed to meet present and future needs of the NTUA and Navajo Nation. Because of vast distances between consumers and low-density populations of consumers on Navajo Nation lands, it is not economically feasible for NTUA alone to construct a high-voltage transmission line solely to accommodate the small number of business and residential consumers in the area.

■ *Facilitate the Navajo Nation's development of energy resources and participation in the electric utility industry*

The role of the Navajo Nation in the energy industry traditionally has been that of a passive resource owner. Nonrenewable resources from the Navajo Nation lands are exported to provide fuel for power for much of the western United States. The economy and self-sufficiency of the Navajo Nation depend heavily on the export of these resources. However, the businesses associated with the energy activities are typically non-Navajo.

The Navajo Nation is in the process of developing a comprehensive strategy for energy development. The goal is to provide for benefits and ensure that future generations will share equitably from the energy

resources while protecting the land, environment, and culture. The resources that have provided economic benefits in the past also must constitute the foundation for the future prosperity of the Nation. Preliminary strategies include planned exploration, developing new energy resources, promoting recovery of other resources that are now only marginally economic, and promoting energy conservation and energy-efficient behavior.

With the understanding of what markets exist for basic energy resources and products, such as electricity, the Navajo are making decisions about energy development activities. The Navajo Nation continues to identify and analyze market conditions and trends with respect to energy resources and products in the regional, national, and global economies in order to guide its energy development strategies and investments. Through greater involvement in refining, generating, distributing, and marketing functions, the Navajo Nation will gain more control over the use of its energy resources and ensure the appropriate use of resources to fully benefit the Navajo Nation.

NTP is an opportunity for the Navajo Nation to own a transmission line that would be an integral part of a regional electrical transmission system, thereby establishing a role in the electric industry. A feasibility study for NTP examined the potential for marketing the project. The study focused on marketing excess power from frequently less costly coal-fired generation sources in the Four Corners area and using it to replace existing, frequently more costly, generation sources in southern Nevada and southern California. The study considered generation units located in Utah, Colorado, New Mexico, and northeastern Arizona. The feasibility study concluded that the differences in the production costs between the Four Corners area and the southern Nevada and southern California area could be sufficient to offset the cost of NTP and yield a significant cost savings to participants in NTP. (This conclusion was based on findings examining strictly fuel-production cost differences and assumptions regarding the NTP load factor and transfer capability).

Also, NTP would allow access to the Western Systems Coordinating Council's (WSCC) southern 500kV transmission grid, which covers the states of New Mexico, Arizona, and southern California. This would provide the opportunity for NTUA to buy less expensive power that may be available through regional and seasonal diversity, or due to the new Federal Energy Regulatory Commission's (FERC) transmission open access guidelines.

## **PLANNING REQUIREMENTS, ENVIRONMENTAL REVIEW, AND LICENSING**

This draft environmental impact statement (DEIS) was prepared by Western in compliance with Federal regulations and guidelines, principally NEPA, Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), Department of Energy (DOE) NEPA Implementation Procedures (10 CFR 1021), and other applicable regulations.

Also, Western is responsible for ensuring compliance with applicable regulations of other affected agencies, including the agencies cooperating in the preparation of this DEIS. The cooperating agencies for NTP include the Bureau of Land Management (BLM); Bureau of Indian Affairs (BIA); Forest Service; National Park Service (NPS); and Navajo, Hopi, and Hualapai tribes. The cooperating agencies have participated in the NEPA process, including scoping, since early in the project (see Chapter 5).

These and other relevant agencies have been involved throughout the environmental process and have provided resource data and other information. Agency plans were consulted and relevant information was incorporated into the DEIS. Applicable agency plans are listed in Table 1-1. If a decision is made to construct the transmission line, a construction, operation, and maintenance plan (COMP) would be developed in coordination with the land-managing and regulatory agencies to incorporate agency specifications based on the final design. The COMP is described in Chapter 2.

<b>TABLE 1-1 APPLICABLE AGENCY MANAGEMENT PLANS</b>		
<b>Agency/Planning Authority</b>	<b>Plan</b>	<b>Date</b>
Boulder City	■ Boulder City Master Plan	1991
Coconino County	■ Red Lake Area Plan ■ Comprehensive Plan ■ Doney Park Area Plan	1992 1990 1988
City of Page	■ Community Master Plan	1989
Hopi Tribe	■ Comprehensive Development Plan	1988
Navajo Nation	■ Monument Valley Navajo Tribal Park Management Plan	1983
Coconino National Forest	■ Coconino Forest Plan	1987
Kaibab National Forest	■ Kaibab Forest Plan	1987
BLM, New Mexico	■ Farmington Resource Management Plan	1988
BLM, Arizona	■ Kingman Resource Area Proposed Resource Management Plan ■ Phoenix Resource Area Management Plan	1993 1988
BLM, Nevada	■ Draft Stateline Resource Area Management Plan	1992
NPS	■ General Management Plan and Alternatives, Lake Mead National Recreation Area (NRA) ■ Proposed General Management Plan, Lake Mead NRA	1986 1979

Table 1-2 provides a summary of the major Federal, state, and tribal permits that could be required for construction and operation of NTP. Approval to cross Navajo, Hopi, and Hualapai tribal lands would be at the discretion of the respective tribal councils.

**TABLE 1-2  
SUMMARY OF POTENTIAL, MAJOR FEDERAL, STATE, LOCAL, AND TRIBAL PERMITS OR LICENSES REQUIRED  
AND OTHER ENVIRONMENTAL REVIEW REQUIREMENTS FOR  
TRANSMISSION LINE CONSTRUCTION AND OPERATION**

Issue	Action Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review	Relevant Laws and Regulations
<b>FEDERAL</b>				
NEPA compliance	Federal action: to grant right-of-way across land under Federal jurisdiction	Lead agency - Western; cooperating agencies	EIS and Record of Decision	NEPA (42 USC 4321), CEQ (40 CFR 1500-1508), DOE NEPA implementing Regulations (10 CFR 1021)
Right-of-way across land under Federal management	Preconstruction surveys; construction, operation, maintenance, and abandonment	BLM	Right-of-way grant and temporary use permit	Federal Land Policy and Management Act (FLPMA) of 1976 (PL 94-579) 43 USC 1761-1771 43 CFR 2800
		BIA, tribe	Right-of-way grant across American Indian lands	25 CFR 169
		Forest Service	Special use authorization permit or easement	36 CFR 251
		NPS	Authorization to cross NPS lands	18 USC, 36 CFR 14
		Fish and Wildlife Service (FWS)	Special use permit for crossing a national wildlife refuge	50 CFR 25

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Right-of-way across land under Federal management (continued)	"Conversion of use" for a use other than recreation on lands reserved with Land and Water Conservation Fund Act (LWCF) monies	NPS	Review of transmission line corridor to identify conflicts with recreational area	Land and Water Conservation Fund Act PL 88-578, Section 6(f)(3)
	Construction, operation, maintenance, and abandonment of transmission line across or within highway rights-of-way	Federal Highway Administration	Permits to cross Federal Aid Highway; 4 (f) compliance	Department of Transportation Act 23 CFR 1.23 and 1.27 23 USC 116, 123, and 315 23 CFR 645 23 CFR 771
Ground disturbance and water quality degradation	Construction sites with greater than five acres of land disturbed	Environmental Protection Agency (EPA)	Section 402 National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities	Clean Water Act (33 USC 1342)
	Construction across water resources	Army Corps of Engineers (COE)	General easement	10 USC 2668 to 2669
	Crossing 100-year floodplain, streams and rivers	COE	Floodplain use permits	40 USC 961
	Construction in or modification of floodplains	Federal lead agency	Compliance	Executive Order 11988 Floodplains

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Issue	Action Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review	Relevant Laws and Regulations
Ground disturbance and water quality degradation (continued)	Construction in or modification of wetlands	Federal lead agency	Compliance	Executive Order 11990 Wetlands
	Potential discharge into waters of the state (including wetlands and washes)	COE (and states); EPA on tribal lands	Section 401 permit	Clean Water Act (33 USC 1344)
	Discharge of dredge or fill material to a watercourse	COE; EPA on tribal lands	404 Permit (individual or nationwide)	Clean Water Act (33 USC 1344)
	Placement of structures and construction work in navigable waters of the U.S.	COE	Section 10 permit	Rivers and Harbors Act of 1899 (33 USC 403)
	Protection of all rivers included in the National Wild and Scenic Rivers Systems	Affected land-managing agencies	Review by permitting agencies	Wild and Scenic Rivers Act (PL 90-542) (43 CFR 83.50)
	Potential pollutant discharge during construction, operation, and maintenance	EPA	Spill Prevention Control and Countermeasure (SPCC) Plan for substations	Oil Pollution Act of 1990 (40 CFR 112)
Biological resources	Grant right-of-way by Federal land-managing agency	FWS	Endangered Species Act compliance by Federal land-managing agency and lead agency	Endangered Species Act of 1973 as amended (16 USC 1531 et seq)

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Biological resources (continued)	Protection of migratory birds	FWS	Compliance	Migratory Bird Treaty Act of 1918 16 USC 703-712 50 CFR Ch1
	Protection of bald and golden eagles	FWS	Compliance	Bald and Golden Eagle Protection Act of 1972 (16 USC 668)
Cultural resources	Disturbance of historic properties	Federal lead agency, State Historic Preservation Officers (SHPO), Advisory Council on Historic Preservation (ACHP)	Section 106 consultation	National Historic Preservation Act of 1966, (16 USC 470) (36 CFR Part 800)
	Excavation of archaeological resources	Federal land-managing agency	Permits to excavate	Archaeological Resources Protection Act of 1979 (16 USC 470aa to 470ee)
	Potential conflicts with freedom to practice traditional American Indian religions	Federal lead agency, Federal land-managing agency	Consultation with affected American Indians	American Indian Religious Freedom Act (42 USC 1996)
	Disturbance of graves, associated funerary objects, sacred objects, and items of cultural patrimony	Federal land-managing agency	Consultation with affected Native American group regarding treatment of remains and objects	Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001)

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Cultural resources (continued)	Investigation of cultural and paleontological resources	Affected land-managing agencies	Permit for study of historical, archaeological, and paleontological resources	Antiquities Act of 1906 (16 USC 432-433)
	Investigation of cultural resources	Affected land-managing agencies	Permits to excavate and remove archaeological resources on Federal lands; American Indian tribes with interests in resources must be consulted prior to issuance of permits	Archaeological Resources Protection Act of 1979 (16 USC 470aa) to 470ee (43 CFR 7)
	Protection of segments, sites, and features related to national trails	Affected land-managing agencies	National Trails System Act compliance	National Trails System Act (PL 90-543) (16 USC 1241 to 1249)
Paleontological resources	Ground disturbance on Federal land or Federal aid project	BLM	Compliance with BLM mitigation and planning standards for paleontological resources of public lands	FLPMA of 1976 (43 USC 1701-1771) Antiquities Act of 1906 (16 USC 431-433)
Air Traffic	Location of towers in regards to airport facilities and airspace	Federal Aviation Administration (FAA)	A "No-hazard Declaration" required if structure is more than 200 feet in height	FAA Act of 1958 (49 USC 1501) (14 CFR 77)
			Section 1101 Air Space Permit for air space construction clearance	FAA Act of 1958 (49 USC 1501) (14 CFR 77)

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Rate regulation	Sales for resale and transmission services	FERC	Federal Power Act compliance by power seller	Federal Power Act (16 USC 792)
<b>STATE</b>				
<b>NEW MEXICO</b>				
Right-of-way encroachment	Crossing state highways	New Mexico Department of Transportation	Encroachment permit	New Mexico Department of Highways rules and regulations
	Crossing state lands	New Mexico State Land Office	Right-of-way permit	State Lands Office Rule #10
	Construction and operation	State Public Utility Commission	Certificate of convenience and necessity - new construction for utility franchise	New Mexico Statutes Annotated (NMSA) 1978 Compilation) Article 9-1 Sec 62-9-1 to 62-9-3
Ground disturbance and water quality degradation	100-year floodplain, streams and rivers, waters of the state	New Mexico Environment Department	Floodplain use permits Clean Water Act 401, 402, and 404 permits	New Mexico Statutes - State Water Quality Certification rules

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Cultural resources	Construction and operation	Office of Historic Preservation	Section 106 consultation	National Historic Preservation Act of 1966 (16 USC 470) Advisory Council on Historic Preservation Regulations (36 CFR 800)
	Investigation of cultural resources on state lands	New Mexico Cultural Properties Review Committee	Permits to conduct archaeological survey or excavation	New Mexico Cultural Properties Act (NMSA 18-6-1 to 18-6-17) (1978 Compilation)
	Disturbance of human burials on non-Federal or non-Indian lands in New Mexico	New Mexico Cultural Properties Review Committee	Human burial excavation permit	New Mexico Cultural Properties Act (NMSA 18-6-11) (1978 Compilation)
Biological resources	Ground disturbance in areas with sensitive plant species	New Mexico Department of Energy, Minerals, and Natural Resources	Permit	New Mexico Endangered Plant Species Act (NMSA 9-10-10)
	Habitat modification in areas of sensitive animal species	New Mexico Department of Game and Fish	Permit	New Mexico Wildlife Conservation Act (NMSA 17-2-37 to 17-2-46)

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<b>ARIZONA</b>				
Right-of-way encroachment	Encroachment into state lands	State Land Department	Right-of-way permit	Title XII, Article 8, R12-5-164
	Encroachment into state roadway	Arizona Department of Transportation	Encroachment permit	Arizona Revised Statutes (ARS) 28-1870
Utility siting	Construction and operation	Corporation Commission-Utilities Division-Power Plant and Transmission Line Siting Committee	Certification of Environmental Compatibility	ARS 40-360-6.2
Ground disturbance and water quality degradation	Crossing 100-year floodplain, streams and rivers, waters of the state	Department of Environmental Quality	Floodplain use permits; Clean Water Act 401, 402, and 404 permits	ARS - State Water Quality Certification rules
Cultural and paleontological resources	Investigation of archaeological and vertebrate paleontological resources on state lands	Arizona State Museum, Arizona State Land Department	Permit to investigate	Arizona Antiquities Act (ARS 41-841 et seq.)
	Disturbance of graves, associated funerary objects, and items of cultural patrimony on state and private lands	Arizona State Museum	Notification of discoveries, consultation with affiliated groups	Arizona Antiquities Acts (ARS 41-841 to 41-846) (ARS 41-65)
Biological resources	Loss of special status plant species	Arizona Department of Agriculture	Permit to remove plants	Native Plant Law (ARS Ch. 7)

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Biological resources (continued)	Disturbance or loss of special status animal species habitat	Arizona Game & Fish Department	Consultation and review	Threatened Native Wildlife in Arizona (ARS Ch. 17)
<b>NEVADA</b>				
Right-of-way encroachment	Encroachment into state roadway right-of-way	Nevada Department of Transportation	Right-of-way encroachment permit	Nevada Revised Statutes (NRS) 408.423 NRS 408.210
Ground surface disturbance	Project construction	Division of Environmental Protection (NDEP)	Registration certificate	Nevada Administration Code (NAC) 445.704
	Construction of electric transmission line	Public Service Commission	Authority to construct and certificate of need	NRS 704.330 NRS 704.820 NRS 704.701
Ground disturbance and water quality degradation	100-year floodplain, streams and rivers, waters of the state	NDEP	Floodplain use permits, Clean Water Act 401, 402, and 404 permits	Nevada State Statutes - State Water Quality Certification rules
Stormwater and water quality degradation	Pollution discharge	NDEP	Storm water pollution prevention plans (SWP3) SPCC plan	Nevada State Statutes - State Water Quality Certification rules

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Cultural and paleontological resources	Crossing state lands	Division of State Lands	Easement onto state lands	NRS 321.001
	Investigation of paleontological, archaeological, and historic sites	Nevada State Museum	Permit to investigate antiquities	Nevada Antiquities Law (NRS 381.195 to 381.227)
	Disturbance of American Indian burial sites on state and private lands	Nevada State Historic Preservation Office	Notification of discoveries, consultation with affiliated groups	Nevada Protection of Indian Burial Sites (NRS 383.150) (NRS 383.190)
Air quality	Construction and operation	NDEP	Authority to construct, permit to operate	NRS.445
Biological resources	Modification of sensitive plant species habitat	Division of Forestry	Compliance to survey for identification of plant species	NRS 527.270 NRS 527.050
	Disturbance of special status plant species	Division of Forestry	Permit for lawful take of protected plant	NRS 527.250
	Construction and operation in areas of rare and endangered animal species	Division of Wildlife	Compliance	NRS 501 NAC 503
	Modification of habitat of threatened and endangered species	Division of Wildlife	Special permit	NAC 5-4.510 through 4.550

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<b>LOCAL</b>				
<b>NEW MEXICO</b>				
Right-of-way encroachment	Crossing county roads and land	San Juan County	Right-of-way easement	County rules and regulations
<b>ARIZONA</b>				
Land use	Construction and operation of transmission lines	Coconino County, Department of Community Development	Conditional-use permit	County rules and regulations
Right-of-way encroachment	Encroachment onto county rights-of-way	Mohave County Public Works Department	Standard right-of-way agreement	Mohave County ordinance
	Encroachment onto City of Page land	City of Page	Right-of-way easement	Disposition of Public Land City Code Article 3-5
<b>NEVADA</b>				
Air quality	Construction activities	Clark County Health District-Air Pollution Control Division	Dust permit	Clark County Health District Rules, Section 17
Ground surface disturbance	Construction and operation	Clark County Planning and Zoning	Conditional-use permit	Clark County Ordinance Title 29.66

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Biological resources	Construction and operation in areas with special status species - desert tortoise (Mohave population)	Clark County, FWS, and Nevada Department of Wildlife	Incidental Take Permit	Habitat Conservation Plan (Section 1 [1a, 1b]) Endangered Species Act (16 USC 1531 to 1543)
<b>TRIBAL</b>				
<b>NAVAJO</b>				
Biological resources	On-ground investigations for tribal or Federally protected species	Navajo Department of Fish & Wildlife	Biological Investigation Permit	Government Services Committee Resolution SFCF-3-94
	Pre-construction activities, construction, operation, and maintenance	Resources Committee of the Navajo Nation Council	Formal written approval	2 Navajo Tribal Codes (NTC) 164
	Wetlands	US EPA Region IX Navajo Nation EPA	NPDES Permit	Navajo Nation Council (NNC) CJA-16-96

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Issue	Action Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review	Relevant Laws and Regulations
Right-of-way over Navajo Tribal Trust Lands (NTTL) under Federal Trust Management (BIA)  sensitive animal and plant species  cultural resources  right-of-way encroachment	Permission to survey on NTTL for surveying, map legal description, environmental assessment, ethnographic and archaeological studies  construction disturbance in areas of sensitive animal and plant species  construction disturbance in areas of cultural resources  encroachment of all existing rights-of-way	Navajo Nation reviewing departments (*)  *Project Review Office  Navajo Fish & Wildlife *Natural Heritage Program  *Historic Preservation Department  Navajo Nation reviewing departments	Navajo Nation Council consent letter or permit per Resource Committee  Review and approval by Navajo Nation  Review and approval by Navajo Nation  Navajo Nation consent letter	2 NTC 695 25 CFR 169  25 CFR 169.4 to 169.5  25 CFR 169.5  25 CFR 169.3
Right-of-way over NTTL under Federal Trust Management (BIA)	Construct, operate, and maintain right-of-way  Restoration of right-of-way	Resource Committee of Navajo Nation Council; BIA agencies or area office  Navajo Nation EPA	Resource Committee Resolution and Navajo Nation consent letter  Review and approval	2 NTC 695 (B)(6)  25 CFR 169.5

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Issue	Action Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review	Relevant Laws and Regulations
Cultural resources	Cultural resource investigations on Navajo Nation lands	Navajo Nation Historic Preservation Department; BIA, Navajo Area Office	Class B inventory permits, Class C excavation permits, Archaeological Resources Protection Act (ARPA) permits for disturbance to archaeological resources	Navajo Nation Cultural Resource Protection Act (CRPA-19-88) ARPA (43 CFR 47)
Forest and woodland resources	Clearing, transporting, selling, trading, or bartering any Navajo Forest product	Navajo Nation Forestry Department	Commercial permit	Resource Resolution RCJN-69-88; 23 NTC 902 (c); 17 NTC 525; 18 USC 1853; 18 USC 1855; 18 USC 1850
Water resources	Potential effects on the water of Navajo Nation lands	Department of Water Resources Management	Water use permit	Chapter 7, NTC 254 22 NTC 1101 et seq.
Earth resources	Survey activities for geologic or paleontologic resources	Navajo Nation Minerals Department	Reconnaissance permit	Government Services Committee Resolution GSCAP-20-94
	Removal of fossil resources for study purposes	Navajo Nation Minerals Department	Collection permit	Government Services Committee Resolution GSCAP-20-94

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<b>HOPI</b>				
Cultural resources	Preconstruction activities: 1) historical or scientific research 2) conducting archaeological surveys and excavations	Hopi Tribal Council	1) License authority 2) Tribal approval	Hopi Indian Tribe Ordinance No. 26
	Preconstruction activities - site visit	Hopi Tribal Council	Written permission from Hopi Tribal Council chairman to visit archaeological or historical site	Hopi Indian Tribe Executive Order 78-1
Ground surface disturbance	Construction in or removal of range improvements	Hopi Tribal Department of Range Management	Written authorization from Hopi Department of Range Management	Hopi Indian Tribe Ordinance No. 43
	Construction in or removal of woodlands	Hopi Department of Natural Resources	Permit to harvest woodland products	Hopi Indian Tribe Ordinance No. 47
<b>HUALAPAI</b>				
Cultural resources	Cultural resource monitoring during construction	Hualapai Tribal Council Office of Cultural Resources	Hualapai Tribal Council Cultural Resources Department	Constitution of the Hualapai Tribe (Amended March 13, 1991)

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Right-of-way on Hualapai land	Construction, operation, and maintenance	BIA Truxton Cañon Realty Office Hualapai Tribal Council	Lease agreement approval Tribal Council resolution	Constitution of the Hualapai Tribe (Amended March 13, 1991)
Biological resources	Entering Hualapai land for preconstruction and construction activities	Hualapai Tribe Natural Resources Department	Permit	Wildlife Conservation Ordinance No. 24-70 (1990 Revision)
Land use	Construction activities in rangeland (grazing) areas	Hualapai Tribe Natural Resources Department (Agricultural Program)	Trespass fee	Proper Utilization of Range Resources Ordinance No. 28 (1990 Revision)