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Western Area Power Administration  
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October 2012  
**DOE/EA-1863**

**Department of Energy**  
**Western Area Power Administration**  
**Finding of No Significant Impact**  
**Glen Canyon – Pinnacle Peak 345 kV Transmission Lines**  
**Vegetation Management Project**  
**Coconino and Yavapai Counties, Arizona**

**Summary** – The U.S. Department of Energy (DOE) Western Area Power Administration (Western) proposes to develop and implement a vegetation management and right-of-way maintenance project on the Coconino National Forest (CNF) in Coconino and Yavapai Counties, Arizona (project). The Proposed Action consists of two primary components: (1) initial vegetation removal within and adjacent to Western's rights-of-way, and (2) vegetation management and right-of-way maintenance for Western's desired right-of-way condition.

Western is the Federal agency responsible for preparing the environmental assessment (EA). The EA, titled "Draft Environmental Assessment for the Glen Canyon to Pinnacle Peak 345 kV Transmission Lines Vegetation Management Project within the Coconino National Forest (DOE/EA-1863)", was distributed on November 20, 2011, for review by Federal, state, tribal, and local agencies that have jurisdiction or permitting authority for the Proposed Action. In response to comments received, a final EA was prepared to clarify and correct information in the draft EA. The final EA is approved concurrently with this finding of no significant impact (FONSI).

Based on findings and analysis in the EA, Western has determined that with project conservation measures, the project (Proposed Action) would not result in any significant environmental impacts. Therefore, preparation of an environmental impact statement (EIS) will not be required. The basis for this determination is described in this FONSI.

Additional information and copies of the EA and FONSI are available to all interested persons and the public through the following contact:

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**Purpose and Need** – The purpose of the project is to maintain Western’s existing transmission line and access road rights-of-way in a manner that: (1) is consistent with applicable laws, orders, standards, practices, and guidance, and (2) protects environmental resources to the extent practicable, while improving the efficiency and effectiveness of vegetation management and right-of-way maintenance activities.

Western’s policy on Transmission Vegetation Management Program Western Order (O) 450.3A specifies that *“Western’s desired condition beneath and adjacent to its transmission line facilities is characterized by stable, low growth plant communities free from noxious or invasive plants. These communities will typically be comprised of herbaceous plants and low growing shrubs which ideally are native to the local area. Vegetation on the bordering areas of transmission line rights-of-way can be managed so that increased tree height is allowed in relation to an increasing distance from the transmission line. Accumulations of vegetation debris from intensive or repetitive vegetation treatments may require mitigation to reduce risks from wildfire and enhance the fire survivability of the transmission facilities.”*

Since completion of construction for the transmission facilities in 1966, vegetation within and adjacent to the project rights-of-way has primarily been managed on a reactive basis, where only immediate vegetative hazards have been treated. This has resulted in dense stands of vegetation within the project rights-of-way that pose a potential hazard to project facilities and this is not consistent with Western’s policy (Western O 450.3A, Section 7).

Because of the potential for service outages from trees growing into the line, falling into the line, or creating a fire hazard to the transmission lines and structures, and because standards regarding vegetation along transmission lines have recently become more strict, a comprehensive vegetation management and right-of-way maintenance project is needed. Failure to address vegetation clearance and fuel hazards could result in wildfires, major power outages, and injury to life or property. The need for the Proposed Action includes:

- Providing safe and efficient transmission of power along existing lines.
  - Eliminating vegetation that interferes with the safe and reliable operation of the transmission lines and towers. Vegetation near transmission lines may pose a threat to public safety and the environment because of the risk of:
    - Wildfire resulting from arcing (a luminous discharge of current that is formed when a strong current jumps a gap in a circuit or between two electrodes). In the case of the Project, the current jumps the gap from energized conductor to the ground or tree.
    - Trees falling, growing, or bending into the transmission lines and/or structures.
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- Complying with NERC reliability standards (FAC-003-1 [NERC 2006] and FAC-003-2 [NERC 2011]) that deal with vegetation inspections and treatment, to maintain transmission lines in safe and reliable operating conditions as well as various aspects of the planning and operation of the power system.
- Performing operation and maintenance activities in a manner that benefits the public by virtue of uninterrupted service, and minimizes Western's potential for costly fines for NERC noncompliance.
- Maintaining the transmission line rights-of-way and access roads to ensure that Western's maintenance crews have safe access to right-of-way facilities.

**Project Description** – Western proposes to develop and implement a vegetation management and right-of-way maintenance project on the CNF consisting of two primary components: (1) initial vegetation removal within and adjacent to Western's rights-of-way, and (2) vegetation management and right-of-way maintenance for Western's desired right-of-way condition. Based on a total length of approximately 90 miles and a project area width of 420 feet, the project area is estimated at approximately 4,580 acres, assuming flat ground; however, the project crosses canyons, areas of steep slope, drainages, and washes. Project facilities span many of these areas at such a height that vegetation within these areas will not interfere with safe and reliable transmission line operation. In such areas, this vegetation may not need to be removed or maintained by Western.

Western's intent is to establish and maintain rights-of-way that minimize vegetative threats to the safe and reliable operation of the transmission system, and ultimately require infrequent (i.e., once every 5 years) treatments for vegetation management. Achieving Western's desired right-of-way condition is an evolutionary process that may take several iterations of vegetation removal over an extended period of time. Once achieved, the desired condition will be proactively maintained through ongoing corridor vegetation management.

### Initial Vegetation Removal

Because of the risk that vegetation typical to the vegetation communities within Western's rights-of-way poses to the safe and reliable operation of the transmission lines, and because vegetation has not been substantially removed from the project rights-of-way since approximately 1966, Western proposes to remove nearly all vegetation (with the exception of grasses, forbs, and some small shrubs) within the rights-of-way to initiate the Project. This will establish a baseline condition from which Western can safely and effectively manage vegetation and maintain Project facilities.

In addition to vegetation removal within the limits of the right-of-way, danger trees that pose an immediate hazard to the safe and reliable operation of the project beyond the right-of-way would also be removed. Management of danger trees beyond Western's rights-of-way will be administered through a special-use permit granted by the CNF. The special-use permit will cover up to 60 feet immediately beyond Western's rights of way for the entire length that Western's Glen Canyon-Pinnacle Peak 345 kV transmission lines traverse the CNF. These danger trees are defined as trees located within or adjacent to the right-of-way that present a hazard to employees, the public, or power system facilities. Characteristics used in identifying a danger tree include but are not limited to the following:

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- encroachment within the safe distance to the conductor as a result of the tree bending, growing, swinging, or falling toward the conductor
- deterioration or physical damage to the root system, trunk, stem or limbs, and/or the direction and lean of the tree
- vertical or horizontal conductor movement and increased sag as a result of thermal, wind, and ice loading
- potential for arcing with Project facilities in the event of wildfire, or providing wildfire fuel within the right-of-way

### Vegetation Management and Right-of-Way Maintenance

After Western has sufficiently removed vegetation within and adjacent to the rights-of-way, Western would implement routine vegetation maintenance. Western would conduct routine vegetation maintenance for the Project rights-of-way according to a 5-year vegetation maintenance cycle. Routine vegetation maintenance would involve the identification and removal of vegetation within or adjacent to the rights-of-way that are incompatible with Western's desired condition. Western would use aerial patrols and ground patrols to identify routine vegetation maintenance needs, as described in sections 1.4.1 through 1.4.3 of the Final EA for this project. Growth cycles specific to target species for the Project would be considered according to the 5-year maintenance cycle. Any vegetation that would conflict with Western's desired condition within the 5-year routine maintenance cycle would be removed. All work would be conducted using predominantly mechanical mowers, with hand crews used only in areas where the mowers cannot access or where project conservation measures (PCM) require (e.g., cultural resource sites, etc.).

Initial vegetation removal is intended to identify and remove danger trees within and adjacent to the Project rights-of-way. However, as vegetation continues to grow on the periphery of the rights-of-way or beyond its boundaries, new or existing trees may become danger trees. As environmental conditions continually change, trees adjacent to the transmission lines and Project rights-of-way may present a danger of falling into the lines due to wind, leaning, decay, or other causes of instability. In accordance with Western's Integrated Vegetation Management Guidance Manual, danger trees must be removed. Danger trees within the right-of-way would be removed using either mechanical or manual methods, while danger trees outside of the right-of-way would only be removed using manual methods.

**Agency Consultation and Public Participation Process** – In November 2011 notification letters were sent to nine tribes describing the project, requesting feedback, and offering involvement in the project. Western sent letters in January 2011 to notify Federal, state, and local agencies of the Proposed Action.

Western solicited public/agency comment through two public open houses that were advertised in local newspapers for the City of Flagstaff and the Town of Camp Verde. The first public open house meeting was held on February 8, 2011 in the Coconino High School Theater, and the second public open house meeting was held on February 9, 2011 in the Camp Verde Town Hall.

Western distributed a Draft EA for pre-approval review of the proposed project on November 20, 2011, to the federal, tribal, and state resource agencies. Copies were also placed in the public library of Flagstaff and Coconino County for public viewing as well as posted on two websites:

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- <http://energy.gov/nepa/ea-1863-vegetation-management-glen-canyon-pinnacle-peak-transmission-lines-spanning-coconino>
- <http://www.fs.fed.us/nepa/fs-usda-pop.php/?project=35015>

Comments received on the Draft EA were incorporated into the Final EA and considered in Western's determination of whether an EIS is required. The Final EA is approved concurrently with this FONSI.

Several responses were received as a result of the agency/public scoping process and Draft EA review. At the public open houses, two comments were received and no attendees opposed the project. One group, the Center for Biological Diversity (Center), responded to the Draft EA with a letter concerning Management Indicator Species, amphibians, Mexican spotted owl, and invasive weeds. This letter, complete with responses to the Center's comments, is included as Appendix F of the Final EA.

Consultation with the Arizona State Historic Preservation Office (SHPO) in accordance with procedures provided in Section 106 of the National Historic Preservation Act (36 CFR Part 800, "Protection of Historic Properties") was conducted for the Proposed Action. In addition to a complete survey of the project area of potential effect (APE), Western is developing a programmatic agreement between the Arizona SHPO, Advisory Council on Historic Preservation, Western, and the Coconino National Forest. Western determined that the Proposed Action will not adversely affect historic properties. Western received concurrence on its findings of no adverse effect from the Arizona SHPO.

The nine Indian tribal governments contacted regarding this project to determine if they had concerns or issues regarding cultural resources, traditional cultural properties, or religious practices were the Ft. McDowell Apache, Hopi Tribe, Navajo Nation, Yavapai, Havasupai, Tonto Apache, White Mountain Apache, Yavapai-Apache Nation and Yavapai-Prescott. These Tribes were also offered opportunities to review and comment on the Draft EA and draft cultural resource survey reports. Only two of the tribes responded to the notification: the Hopi Tribe and the Ft. McDowell Apache Tribe. The Hopi Tribe wished to review and comment on the cultural resource survey reports and participate in future site visits to the project area, and the Ft. McDowell Apache Tribe did not wish to be contacted again regarding this project.

In January 2012, the United States District Court for the District of Arizona issued a preliminary injunction prohibiting all tree-cutting activities within and immediately adjacent to Mexican spotted owl Protected Activity Centers (PAC) on the CNF. Specifically, under the injunction, no tree-cutting activities were permitted in or within 0.25 mile of sixteen PACs identified in Table 6 from Biological Opinion (BO) 22410-2007-F-0365 issued July 17, 2008 for the Biological Assessment for Threatened and Endangered Species – Phase II Maintenance in Utility Corridors on Arizona Forests. These 16 PACs were identified by US Fish and Wildlife Service (USFWS) and US National Forests (including CNF) as having transmission lines which transect a portion of the PAC rather than occurring along the edge; therefore tree removal could have a higher potential to cause adverse effects.

While six of the sixteen PACs identified by USFWS and US National Forests occur on the CNF, the EA completed for this project has demonstrated that none of the six PACs on the CNF are

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within 0.25 mile of the Proposed and No Action alternatives. In any case, the injunction limiting tree-cutting activity on the CNF was lifted in May 2012.

**Alternatives** – DOE’s NEPA regulations require that an EA include a discussion of the No Action Alternative (10 CFR 1021.362[c]). Under the No Action Alternative, Western would not substantially remove vegetation throughout their rights-of-way on the Coconino National Forest or manage their rights-of-way to achieve their desired condition. Western would continue to manage vegetation reactively, only removing vegetation under emergency conditions when the safe and reliable operation of the transmission facilities is immediately threatened.

**Environmental Impacts** – Findings on the impacts and their significance resulting from the Proposed Action are based on information contained in the Final EA. In reaching conclusions about the Proposed Action’s environmental impacts, Western considered PCMs and vegetation management practices as defined in the Final EA. The existing environmental conditions and potential environmental impacts were identified and evaluated for the following resources: biological resources (including vegetation, special-status plants, wildlife, and special-status wildlife), cultural resources, land use, recreation, wildland fire, visual resources, water resources, geology and soils, public health and safety, air quality, noise, transportation, socioeconomics, and environmental justice. Cumulative impacts are also addressed in the EA.

Western has concluded that the Proposed Action would not result in any significant impacts. The basis for Western’s conclusion is summarized below.

### Biological Resources

#### *Vegetation*

Project-related activities would have an impact on vegetation. Most of the existing vegetation would be removed throughout the rights-of-way, resulting in a change of the mid-late seral to subclimax successional status of the project area to a pre-successional condition. Vegetation management is anticipated to occur on a 5-year cyclical basis throughout the entire project area. The primary impacts resulting from both mechanical and manual methods of vegetation management and danger tree removal could include increased disturbance to surrounding non-target vegetation (e.g., trees falling on vegetation outside the right-of-way), sensitive plant communities such as riparian habitats or wetlands, special-status plants, trees that should remain in place, and local alteration of vegetation type within Western’s rights-of-way through changes to density and species composition. Impacts would be minimized through implementation of PCMs presented in Table 2-2 of the Final EA.

It is anticipated that this impact would not ultimately result in an irretrievable loss of resources. As has been exhibited in the time since construction of these transmission lines, the large woody species and natural succession would ultimately reclaim the right-of-way area after decommissioning of the Project.

#### *Special Status Plants*

Within the Project area there are three sensitive plant species with known occurrences: Cinder Phacelia (*Phacelia serrata*), Five Scale Bitterweed (*Hymenoxys quinquesquamata*), and Sunset

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Crater Beardtongue (*Penstemon clutei*). Under the Proposed Action, the removal of vegetation could affect special-status species, regardless if mechanical or manual methods were utilized. Individual plants could be trampled or otherwise damaged during vegetation management or right-of-way maintenance activities. To minimize this possibility, a botanist would identify and flag plants to be avoided in areas of known occurrences or suitable habitat. Methods of vegetation removal would be altered as appropriate to avoid impacts to special-status plant species.

As all three species are known to occur in open areas within woodlands, it is not anticipated that removal of trees or other large vegetation will have a long-term detrimental impact to the habitat for these species or curtail their populations.

### *Wildlife*

Managing vegetation along the project area has the potential to affect wildlife, including Management Indicator Species (MIS) identified by the Coconino National Forest (CNF). Individuals may be directly harmed and habitat may be lost, fragmented, or degraded; however, the direct wildlife population loss would not result in species being listed or proposed for listing as endangered or threatened. Given that the transmission facilities were built in the 1960's, the faunal assemblage in the immediate vicinity of the project area consists of those species that are supported by modified habitat conditions and associated human activities. Habitat within the project area has been previously disturbed and degraded to varying degrees from construction of the transmission facilities. As such, the Proposed Action is not likely to exacerbate the impacts of habitat fragmentation that have already occurred. Wildlife that is highly sensitive to human disturbance has likely permanently moved away from the existing rights-of-way. Similarly, animals that tend to avoid openings will no longer use the right-of-way and animals that prefer openings will have their habitats somewhat improved through the Proposed Action.

Environmental consequences for each Management Indicator Species (MIS) are based on the amount of habitat impacted by project activities and the severity of that impact. Those MIS for which there is potential for an effect, it is unlikely to impact overall population viability or contribute to a trend toward Federal listing.

### *Special Status Wildlife*

The Proposed Action is anticipated to affect some of the special-status wildlife species in the project area (including species identified as Threatened or Endangered under Section 7 of the Endangered Species Act), as described below. Impacts to special status wildlife would be minimized through implementation of the PCMs presented in Table 2-2 of the Final EA.

### *Fish*

It is not anticipated that any of the special-status fish species or their critical habitat would be impacted as a result of Project-related activities. There should be no direct impacts to waterways, as PCMs would require that machinery remain outside of wetlands, creeks, rivers, and tanks. PCMs have been established that would not allow debris to fall into streams, creeks, or rivers. This would allow water flow to remain unimpeded. Additionally, as the Proposed Action would typically not result in a bare-ground condition within the right-of-way, the level of sediment potential transported to Fossil Creek and/or the Verde River would be insignificant.

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### Amphibians

The Chiricahua leopard frog and the northern leopard frog are limited to wetlands and waterways. These species are not expected to be impacted as a result of project-related activities. PCMs have been developed restricting the use of machinery in wetlands or saturated areas. If saturated areas cannot be avoided, efforts will be taken to rid vehicles of debris and to decontaminate them with quaternary ammonia to kill the chytrid fungus (*Batrachochytrium dendrobatidis*) prior to moving to new areas.

### Birds

#### *Mexican Spotted Owl*

The Proposed Action will likely have an effect on the Mexican spotted owl. Approximately 4 miles of the project area alignments are located within Protected Activity Centers (PAC). Approximately 19.5 miles of project area alignments are located within designated Critical Habitat. Table 3-9 of the Final EA lists PCMs established in the February 2008 Biological Assessment for this project. These PCMs would be implemented in all areas where required (Figure 3-5 of the Final EA). Through implementation of these PCMs, it is anticipated that impacts to owls, chicks, and eggs will be minimized.

Impacts to Mexican spotted owl habitat would occur as a result of project-related activities. This includes areas within PACs, potentially within the core areas. Within PACs, work would not occur between March 1 and August 31. This would avoid the courtship, breeding, nesting, and fledging periods. Additionally, use of loud machinery within 0.25 mile of the PACs would not occur during this period. While the Proposed Action is likely to result in an effect to individual Mexican spotted owl, it is unlikely that the Proposed Action will have an impact on forest-wide population trends of Mexican spotted owl.

#### *Northern Goshawk*

The Proposed Action may have a direct effect on northern goshawk. The proposed action will implement PCMs such as seasonal avoidance to minimize impacts to northern goshawk; however, the trees most likely to be hazardous to the transmission line are trees likely to be utilized by goshawks. As goshawks are known to forage along forest edges and the Proposed Action includes retention of coarse woody debris which provides habitat for prey species. Northern goshawks are anticipated to withstand the project-related impacts with little discernible effects to population trends.

#### *Bald and Golden Eagles*

There are known bald and golden eagle nests within the vicinity of the project area, but no known nests within the project area itself. To reduce the potential for nest abandonment or impacts to foraging while nesting, ground work and use of loud machinery would be avoided during the breeding season (late January to September) within 1 mile of known nesting territories, unless the territory is confirmed to be inactive. Ground activities should also avoid winter roosting areas by 0.25 mile from October 15 to April 15.

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Based on the above findings, Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to biological resources.

### Cultural Resources

The intensive Class III pedestrian survey conducted within the project APE revealed the presence of numerous Prehistoric, Protohistoric, or Historic-era archaeological sites, all of which are considered either eligible for listing on the National Register of Historic Properties (NRHP), or their NRHP eligibility remains unevaluated. Western treats all unevaluated or potentially eligible properties in the same manner as properties that are determined eligible for NRHP listing.

A total of 145 cultural sites not determined to be ineligible for listing on the NRHP were recorded and evaluated in the Phase I recording area (southern 83 miles of the project area). Approximately 73 cultural sites are present in the Phase II recording area (northern 7 miles of the project area) and remain to be fully recorded and evaluated in accordance with the programmatic agreement being developed for this project.

Through implementation of the PCMs, Western would ensure that impacts to significant cultural resources are avoided to the greatest extent possible. No mechanical vegetation removal methods would occur within the boundaries of cultural sites; rather, vegetation within the boundaries of site that are NRHP eligible or unevaluated for their NRHP eligibility would be removed using manual methods (hand crews). At sites with standing architecture or petroglyphs, monitoring of vegetation removal activities by a Western- and CNF-approved archaeologist would be conducted to ensure those features are not damaged by the felling of large trees. Although it is possible that undiscovered cultural resources exist in the APE (e.g., buried cultural sites, etc.), implementing the PCMs would also help to ensure that adverse impacts to such resources are avoided. This would be accomplished by instructing vegetation removal crews in the identification of cultural resources and by monitoring vegetation removal activities in archaeological and historic architectural sensitive zones. PCMs applicable to cultural resources are listed in Table 2-2 of the Final EA.

Western has determined, with the implementation of PCMs, the Proposed Action would not cause a significant direct, indirect, or cumulative impact to cultural resources.

### Land Use

The Proposed Action would result in vegetation removal and management of up to approximately 4,300 acres of CNF land. The Proposed Action would also include the potential for selective removal of danger trees within a 1,310-acre area of CNF land. These land uses are compatible with the CNF Land and Resource Management Plan standards and guidelines, as well as the individual Management Area standards and guidelines.

The Proposed Action would also result in vegetation clearing and management, and selective removal of danger trees within private land under the jurisdiction of Coconino County. For these private parcels, which fall under the Coconino County zoning classifications of General and Open Space and Conservation, "utilities" is an approved conditional use; therefore activities undertaken as part of the Proposed Action, namely maintenance associated with the "utility" use,

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are compatible with the Coconino County Comprehensive Plan and the Coconino County Zoning Ordinance.

Western has determined the Proposed Action would not cause a significant direct, indirect, or cumulative impact to land use and ownership.

### Recreation

While no initial vegetation removal or routine vegetation maintenance would occur within any of the wilderness areas within the project rights-of-way, selective danger tree removal could, at some point, be necessary on the outer boundary of the West Clear Creek and/or Mazatzal Wilderness Areas located within the project area (Figures 3-6 and 3-7 of the Final EA). No danger trees are currently identified in either of these areas; however, it is possible that a hazard situation could develop over the useful life of the transmission lines. In such a case, no mechanical vegetation removal methods or motorized vehicles would be allowed within Wilderness Areas. These techniques would be completed in a manner consistent with CNF management guidelines and the 1964 Wilderness Act.

Vegetation clearing and selective tree removal activities are expected to occur within the Verde Scenic River corridor, but will take place in an area that, due to topography, is not visible to recreationalists on the river. Vegetation clearing and selective tree removal activities are also expected to occur within the Fossil Creek Scenic River corridor, and may be visible to recreationalists on the creek; however, any actions taken within this corridor would be consistent with the CNF Land and RMP standards and guidelines.

The portions of the Arizona National Scenic Trail and the General Crook National Recreation Trail that cross the existing rights-of-way and Project area do so in regions of sparse existing vegetation. Given the current recreational settings, vegetation clearing within these areas is not anticipated to impact recreationalists.

The Proposed Action would not modify the Recreation Opportunity Spectrum (ROS) classification in the area and would be in compliance with ROS management objectives. No new access roads would be constructed; however, maintenance to existing access roads may occur, as necessary.

Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to recreation resources.

### Wildland Fire

Proposed vegetation removal and management for this project should reduce the potential for wildfire outbreak in the vicinity of the transmission lines because of the substantial reduction of biomass fuels. Vegetation removal would also minimize the potential for arcing between the transmission conductors and nearby trees, further reducing the likelihood of igniting wildfires. The area of cleared vegetation could act as a firebreak, especially in the case of wildfire in the crowns of pines on either side of the Project. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to wildland fire.

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## Visual Resources

The majority of the project area is associated with Low Scenic Integrity Objective (SIO) data (approximately 79 miles). In Low SIO areas, landscape alterations may begin to dominate the landscape view. Isolated areas of Moderate SIO data (approximately 10 miles) are associated with portions of the project near Bargaman Park and the Arizona National Scenic Trail, West Clear Creek Wilderness, Fossil Springs Wilderness, Mazatzal Wilderness, and the Verde River. Moderate SIO refers to landscapes where the valued landscape character appears slightly altered, but alterations are visually subordinate to the overall landscape.

The existing structures and modifications to vegetation within the rights-of-way and Project area have altered the scenic integrity of the landscape. Existing contrast resulting from removal of vegetation within the project area from construction of the transmission facilities in the 1960's is evident, and the existing transmission line structures generally dominate the setting. Nevertheless, Concern Level 1 roads/streams and/or use areas for the CNF (see Section 3.8.3.2 of the Final EA) occur intermittently throughout the project area. In Concern Level 1 areas where high visual contrast would result from the Proposed Action, PCMs to retain all non-danger tree vegetation would be implemented, thus minimizing impacts to visual resources. Visual contrast as a result of the Proposed Action would be weakest on flat, sparsely vegetated topography, and strongest on steep to rolling topography occupied by dense woodland vegetation. The effects of the Proposed Action on the project area would be consistent with the CNF management objectives for visual resources. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to visual resources.

## Water Resources

The Proposed Action may impact water resources present within the study area. Nineteen water bodies are found within 600 feet of the centerline. Most of these water bodies represent small stock ponds; however, several larger waterbodies, approaching 1 mile in length, are found within the project study area east of Mormon lake. Six wetlands are present within the project study area, mostly in an area east of Mormon Lake, some of which are associated with the waterbodies listed mentioned previously. The project area also crosses a wetland area associated with the Verde River at the southern-most portion of the study area. A total of one well and two springs is recorded within 600 feet of the centerline of the project study area.

Two types of impacts could potentially affect water resources: (1) direct impacts resulting from loss of vegetation associated with wetlands or riparian areas, or the accidental spillage of fuel or other hazardous substance into a water resource; and (2) indirect impacts resulting from increased sedimentation due to loss of vegetation. Very little ground disturbance is anticipated for the Proposed Action. Existing roads will be used for vegetation removal and management. These existing roads would be repaired where needed, which could include removal of obstacles and repairing minor erosion. Appropriate and effective implementation of best management practices (BMP) would minimize impacts to water resources within the project area. To protect groundwater quality from project-related leaks and spills, Western or its contractor would prepare a Spill Prevention Notification and Cleanup Plan prior to initiation of project activities. The contractor would also prepare and implement a Stormwater Pollution Prevention Plan in compliance with the Arizona Pollution Discharge Elimination System. In addition, PCMs

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specific to the protection of water resources have been developed (Table 2-2 of the Final EA) to further minimize impacts. Western has determined the Proposed Action would not cause a significant direct, indirect, or cumulative impact to water resources.

## Geology and Soils

### *Geological Hazards*

Quaternary faults and earthquakes are unlikely to affect vegetation removal. Flooding within the identified floodplain areas may affect vegetation removal by sweeping away vegetation debris left in the Project area. Vegetation debris would be left in the Project area following vegetation removal, in order to stabilize the land surface and mitigate the potential for erosion of the land surface. If this stabilizing debris is removed, erosion rates may increase for these areas within the Project area.

### *Mineral Resources*

The Project area includes no known mineral resources or active mining areas. Vegetation removal would not limit access to or permanently occupy mineral resources within the Project area.

### *Soil Resources*

Vegetation removal has the potential to impact soil resources by increasing the amount of exposure of susceptible soils to water or wind erosion at the land surface. While bare-ground conditions would not be a typical result of this action, in isolated areas this potential could result in a degradation of the land surface, reduced long-term soil productivity through loss of topsoil material, and nonpoint pollution as eroded soil material is washed into nearby streams or water bodies.

The greatest potential impact to soil resources would occur during the initial vegetation removal phase, where mechanical and/or manual methods would be used to clear the Project right-of-way of vegetation. As vegetation is removed, it would be dispersed across the right-of-way as wood chips (mechanical vegetation removal) or as scattered limbs/logs and stumps cut flush with the ground surface (manual methods). The application of this debris to the cleared land surface would assist in minimizing impacts to soil resources by intercepting rainfall, limiting impact erosion, and slowing surface runoff, further limiting erosion. For areas that have been classified as having moderate and severe erosion hazards, appropriate and effective implementation of BMPs would mitigate adverse effects to soil resources within the Project area (Figure 3-9 of the Final EA).

Western has determined the Proposed Action would not cause a significant direct, indirect, or cumulative impact to geology, mineral resources, and soils.

## Public Health and Safety

Due to the remote nature of the Project area, potential impacts to public health and safety would be minimal. Project implementation would not result in significant impacts to emergency

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infrastructure, transportation, and public and worker safety. PCMs have been identified for implementation during construction so the Proposed Action would not result in serious injuries to the public or workers in the area or interfere with emergency response capabilities or resources. During construction, standard health and safety practices would be conducted following Occupational Safety and Health Administration (OSHA) policies and procedures and Western's Power System Safety Manual.

Project activities would be designed to meet all applicable standards to reduce the risk of an accidental release of hazardous materials. It is not anticipated that any hazardous materials will be stored onsite. Should onsite refueling be necessary, appropriate BMPs will be implemented to avoid spills or contamination. Western's Construction Standard – Standard 13 Environmental Quality Protection, would be adhered to. Within Standard 13 are procedures that are designed to avoid contamination and spills by hazardous materials.

Through the implementation of BMPs, PCMs, and Western's Construction Standards, it is anticipated that there would be no impacts to public or worker health and safety. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to public health and safety.

#### Air Quality

Project activities that could affect air quality include use of vehicles and equipment, transportation to and from the project site, and vegetation removal activities. The primary sources of air pollution during Project construction would include construction vehicles and equipment which would produce short-term exhaust emissions including particulate matter (PM)<sub>10</sub>, PM<sub>2.5</sub>, carbon monoxide, nitrogen dioxide, and volatile organic compounds. Construction activities may produce fugitive dust from disturbed soils including PM<sub>10</sub> and PM<sub>2.5</sub>. The principal sources of emissions during vegetation management activities would be attributed to the vehicles used by personnel traveling along the transmission line.

Because these emissions would be temporary and localized, and the Proposed Action includes PCMs to minimize impacts to air quality resources, potential air quality impacts would not exceed Federal and state air quality standards and would be minimal. No Clean Air Act permit is required for the Proposed Action. Vegetation removal and management would not alter the existing Environmental Protection Agency designation of the region and would not expose sensitive receptors to detrimental air pollution. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to air quality.

#### Noise

Construction noise resulting from initial vegetation removal activities, typically ranging from 70 to 85 dBA at a distance of 50 feet, would be temporary or short term; although due to the nature of initial vegetation removal activities, they would generally be of a longer duration than vegetation management activities. Sensitive noise receptors such as isolated residences, recreational facilities, and wildlife habitat could potentially be disturbed by noise generated from these activities. For vegetation management and right-of-way maintenance activities, recreation areas and sensitive habitats within the vicinity of the Project may be disturbed during aerial

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inspection by a helicopter, as well as by activities when vegetation removal and maintenance is required along the right-of-way. However, aerial inspections would typically only occur four times a year and would disturb an area along the right-of-way for less than 2 minutes (based on typical cruising and inspection rates as described in Section 1.4.1 of the Final EA). Implementation of PCMs and keeping initial vegetation removal activities to a relatively short duration would ensure that any noise or vibration generated by the initial vegetation removal activities would not significantly adversely affect sensitive receptors or conflict with applicable federal or state noise guidelines. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact for noise.

### Transportation

Potential impacts that could result from initial vegetation removal and continued vegetation management and maintenance along the rights-of-way include short-term or temporary closure of interstates, state roadways, National Forest roadways, and county roadways. Very few major roads are crossed by the project study area; therefore, impacts to heavily traveled roads are expected to be minimal. Upon implementation, the CNF Travel Management Rule would limit travel on roads previously open to the public, and could create more Off-Highway Vehicle traffic on roads that remain open. While Western expects to use public roads and roads within its rights-of-way for initial removal and maintenance wherever possible, it may be necessary to utilize CNF administrative roads under agreement with the CNF. The minimal impacts that may occur as a result of the Proposed Action would be higher during the initial vegetation removal phase and significantly decrease during the routine 5-year vegetation management cycle described in Section 2 of the Final EA. Western is not proposing to improve or repair any roads as a part of this action unless permanent damage to CNF roads results from vegetation management and right-of-way maintenance activities. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to transportation.

### Socioeconomics

The Proposed Action is not expected to result in growth-inducing impacts, nor would it inhibit growth. Because the construction workforce would be small, with no permanent migration to the area, substantial effects are not expected for temporary housing demand or public services. The project would not impede the movement of people, goods, or services between communities and would not limit access to public facilities. Through the implementation of the Proposed Action, surrounding communities that receive power from the project would likely be at a lower risk of experiencing power outages, wildfires, and other threats to public safety that could be caused by the transmission lines. Impacts to population, housing, wages, and the local economy are expected to be minimal as a result of vegetation management and periodic right-of-way maintenance. A small number of temporary employment opportunities would result during each phase. Most of these opportunities would result from the initial clearing of the line, while fewer temporary opportunities would be created every 5 years as part of the regular vegetation management cycle. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to socioeconomic resources.

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Environmental Justice

The U.S. Census Bureau data confirmed that no protected populations are within the Proposed Action area. The Project is located in primarily undeveloped forest areas, with minimal permanent residents in the immediate vicinity. No measureable effects on minority or low-income populations are expected. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to protected populations.

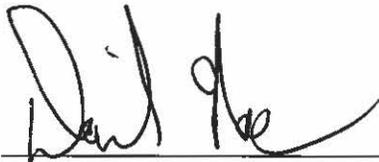
Intentional Destructive Acts

Electrical transmission lines, like other elements of the U.S. energy infrastructure, could be the target of vandals, terrorist attacks, or sabotage. Acts of vandalism and theft are more likely to occur than acts of sabotage and terrorism. Possible intentional destructive acts could vary from ordinary vandalism, such as people using firearms to shoot insulators, to a pre-meditated attempt to destroy one or more transmission structures with explosives, or an intentionally set wildfire intended to damage the transmission line or disrupt service to electrical customers. Environmental impacts from attacks to the transmission line would be most likely to cause local effects resulting from damage caused by the destruction of the facility as well as efforts to mitigate the impact by repair and reconstruction of damaged infrastructure. Larger scale regional impacts could result should the act result in a secondary effect, such as a wildfire ignition during particularly dry periods.

The existing Glen Canyon-Flagstaff and Flagstaff-Pinnacle Peak 345kV Transmission Lines in their current configuration are not likely to be considered a lucrative target for intentional destructive acts. Western has determined that the Proposed Action would not likely increase the likelihood of intentional destructive acts.

**Determination** – The analyses contained in the EA indicate that the Proposed Action, implemented with the PCMs, is not a major Federal action significantly affecting the quality of the human environment. Western has determined that preparation of an EIS is not required.

Issued:



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Darrick Moe  
Regional Manager  
Desert Southwest Region  
Western Area Power Administration  
U.S. Department of Energy

10/12/12  
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Date