



United States Department of the Interior



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In Reply Refer To:
1610 (P010)

Dear Reader:

Enclosed is the Bureau of Land Management's (BLM) Record of Decision (ROD) for the APS Sun Valley to Morgan 500/230kV Transmission Line Project and Bradshaw-Harquahala Resource Management Plan Amendment (RMPA). This ROD/RMPA is being released to inform the public and interested parties of the BLM's decisions on the Project. The BLM's decisions have taken into account public comments received during the scoping effort, public comments in response to the Draft EIS/Draft RMPA, which was published in November 2012; and public comments and protests to the Final EIS/Proposed RMPA, which was published in June 2013.

This document has been developed in accordance with the National Environmental Policy Act of 1969 and the Federal Land Policy and Management Act of 1976, as amended. The BLM prepared the draft and final EIS documents in consultation with several cooperating agencies, including the U.S. Air Force - Luke Air Force Base, the U.S. Environmental Protection Agency, Arizona State Land Department; the Maricopa Association of Governments, the cities of Peoria and Surprise, Arizona. However, the decisions contained in the ROD/RMPA apply only to BLM-managed public lands; other agencies are responsible for issuing their own permits and applicable authorizations for the Project.

Printed copies of the ROD/RMPA are available for review at the Hassayampa Field Office and the Arizona State Office. The document may also be viewed at public libraries in Maricopa County, Arizona.

- City of Peoria Public Library, 8463 W Monroe St, Peoria, AZ 85345
- Sunrise Mountain Public Library, 21109 N 98th Ave, Peoria, AZ 85382
- Northwest Regional Library, 16089 N Bullard Ave, Surprise, AZ 85374
- Phoenix Public Library, Burton Barr Central Library, 1221 N Central Ave, Phoenix, AZ 85004

You may also access the document on the Internet at:

<http://www.blm.gov/az/st/en/prog/energy/aps-sunvalley.html>

Sincerely,

Rem Hawes
Field Manager

**APS Sun Valley to Morgan
500/230kV Transmission Line Project
Record of Decision**

BLM



January 2014

**RECORD OF DECISION FOR THE
APS SUN VALLEY TO MORGAN 500/230KV
TRANSMISSION LINE PROJECT AND
BRADSHAW-HARQUAHALA RESOURCE MANAGEMENT
PLAN AMENDMENT
MARICOPA COUNTY, ARIZONA**

Lead Agency:

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January 2014



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EXECUTIVE SUMMARY

This document constitutes the United States Department of the Interior (DOI) and Bureau of Land Management's (BLM) Record of Decision (ROD) for the Arizona Public Service (APS) Sun Valley to Morgan 500/230kV Transmission Line Project (referred to as the Project). This ROD approves the amendment of the Bradshaw-Harquahala Resource Management Plan (RMP) to allow for the designation of new utility corridors and a revision to the Visual Resource Management (VRM) classes on BLM-managed public lands. This ROD also approves the right-of-way (ROW) that would allow for construction, operation, maintenance, and decommissioning of the portion of the transmission line crossing approximately nine miles of public lands in Maricopa County, Arizona, the majority of which would be within the newly designated utility corridors. These actions were analyzed in the *APS Sun Valley to Morgan 500/230kV Transmission Line Project Final Environmental Impact Statement and Proposed Resource Management Plan Amendment* (final EIS and proposed RMPA; BLM 2013), issued on July 19, 2013, through the Environmental Protection Agency's Notice of Availability published in the *Federal Register*.

The BLM's purpose and need for this action is to respond to APS's application under the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. § 1761) ROW grant to construct, operate, maintain, and decommission a 500/230kV transmission line in compliance with FLPMA, BLM ROW regulations, and other applicable Federal laws. APS is the Project proponent. The proposed transmission line would be approximately 38 miles long connecting the Sun Valley (formerly known as TS-5) Substation, located in the Town of Buckeye, with the Morgan (formerly known as TS-9) Substation, which is located in the City of Peoria. Because the existing Bradshaw-Harquahala RMP does not contain any utility corridors along the SR 74 portion of the requested ROW and the Project would conflict with the established VRM class for those federal lands, the RMP requires amendment to establish utility corridors that would contain approximately seven miles of the Project. In addition, a two-mile segment of the Project would be on BLM-managed public lands within an existing utility corridor northeast of the Sun Valley Substation.

Alternatives that were considered in the final EIS were Alternative 1, Proposed Action with Additional Corridor; Alternative 2, ROW South of SR 74; Alternative 3, Carefree Highway Route, and the No Action alternative. At the request of the Arizona State Land Department the final EIS also analyzed a sub-alternative route that would replace a four-mile section of the Proposed Action route occurring on State Trust lands. The BLM had identified the Proposed Action with modifications as the Agency Preferred Alternative.

Several technological and routing options were eliminated from consideration for detailed analysis because they were found to be technologically or economically impractical or not feasible, or did not meet the BLM's purpose and need.

This ROD provides a summary of the application process undertaken by APS with the Arizona Corporation Commission and the BLM, identifies and summarizes the alternatives studied in the final EIS, describes the decisions selected and the rationale for approving those decisions, and discusses relationships to other plans, policies, and programs (e.g., the BLM land-use plan, county and local plans, and National Historic Preservation Act). Applicant-committed environmental protection measures are described in **Section 5**. These are actions, practices, or design features that are part of all Action Alternatives. Mitigation measures and

monitoring requirements can be found in **Sections 6** and **7**, as well as in **Attachment B**. These are measures to reduce or eliminate potential environmental impacts that were considered in the final EIS and are adopted as required measures in the ROD.

The BLM has taken a variety of steps to inform the public; special interest groups; and local, state, and federal agencies, as well as Tribes, about the Proposed Action and alternatives for the Project, and to solicit feedback from these interested parties to help shape the scope and alternatives of this Project. A formal 30-day public and agency scoping period was held in 2011. Public and agency scoping meetings were held in various locations in Maricopa County. The BLM also issued a newsletter in February 2012 to inform the public about the status of the Project. The BLM provided a 90-day comment period following issuance of the draft EIS in November 2012. Finally, the BLM provided a 30-day protest period following publication of the final EIS in July 2013.

This ROD contains two types of decisions:

Land Use Planning Decision: The BLM decision to amend the Bradshaw-Harquahala RMP to 1) establish utility corridors, and 2) change the VRM classes on public lands administered by the Hassayampa Field Office. The RMP decision will establish a single-use utility corridor on public lands north of SR 74, and a multiuse utility corridor south of SR 74.

Implementation/Project Decision: Issuance of a ROW grant on federal lands to APS, to develop the 500/230kV transmission line.

The RMP amendment and ROW grant are analyzed in the final EIS as BLM's Agency Preferred Alternative, which is also the Selected Alternative in this ROD. This ROD reflects careful consideration of the information generated from the environmental review process, and further reflects resolution of the issues by BLM and the Department of the Interior.

This ROD applies only to the BLM-managed lands, and to the BLM's decisions on the Project. Other agencies are responsible for issuing their own permits and applicable authorizations for the Project. Other permits and applicable authorizations are listed in the final EIS in Table 1.5-3 (Summary of Potentially Required Local, State, or Federal Permits, Licenses, or Authorizations).

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACC	Arizona Corporation Commission
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
Applicant	Arizona Public Service
APS	Arizona Public Service
APZ	Accident Protection Zone
ARS	Arizona Revised Statutes
ASLD	Arizona State Land Department
BLM	Bureau of Land Management
BMP	Best Management Practice
CAP	Central Arizona Project
CEC	Certificate of Environmental Compatibility
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOI	Department of the Interior
EIS	Environmental Impact Statement
EJ	Environmental Justice
EMF	Electromagnetic Frequency
EO	Executive Order
EPA	Environmental Protection Agency
FLPMA	Federal Land Policy and Management Act
IBLA	Interior Board of Land Appeals
IM	Instruction Memorandum
KOP	Key Observation Point
kV	Kilovolt
LAFB	Luke Air Force Base
Legislature	Arizona State Legislature
LORS	Laws, Ordinances, Regulations and Standards
LR	Lands and Realty
MAG	Maricopa Association of Governments

Acronym/Abbreviation	Definition
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NTP	Notice to Proceed
OHV	Off Highway Vehicle
POD	Plan of Development
Project	APS Sun Valley to Morgan 500/230kV Transmission Line Project
Proponent	Arizona Public Service Company (APS)
RMP	Resource Management Plan
RMPA	Resource Management Plan Amendment
ROD	Record of Decision
ROW	Right-of-way
SR	State Route
SHPO	State Historic Preservation Office
SRMA	Special Recreation Management Area
THPO	Tribal Historic Preservation Office
US	United States
U.S.	United States
USC	United States Code
VRM	Visual Resource Management

1 INTRODUCTION

Population growth and continued expansion of urban development into previously undeveloped areas in Arizona have increased the demand for electric transmission resources. The transmission line will establish a 500kV and 230kV connection between the Sun Valley and Morgan Substations, co-located on the same structures, to provide savings in ROW and easement costs to ratepayers. The 500kV transmission line was identified in APS' 2003 Ten-Year Transmission System Plan. Additionally, in APS' Renewable Transmission Action Plan, the Sun Valley to Morgan 500kV transmission line was identified as a project that could be beneficial to renewable resource development in Arizona, because the transmission line would connect renewable resource generation projects to the Phoenix metropolitan area load center (APS 2009). Additionally, the 500kV transmission line will increase the reliability of the electrical infrastructure in Arizona by providing another 500kV source to the Pinnacle Peak Substation. The co-located 230kV transmission line will serve future loads that are expected to develop in currently undeveloped areas in the Town of Buckeye, City of Surprise, City of Peoria, and unincorporated Maricopa County, as identified in APS' Renewable Transmission Action Plan.

This Record of Decision (ROD) contains two types of decisions:

Land Use Planning Decision: The Bureau of Land Management's (BLM) proposal to amend the Bradshaw-Harquahala Resource Management Plan (RMP) to 1) establish utility corridors, and 2) change the Visual Resource Management (VRM) classes on public lands administered by the Hassayampa Field Office within Maricopa County, Arizona.

Implementation/Project Decision: Issuance of a right-of-way (ROW) grant to Arizona Public Service Company (APS), to construct, operate, maintain, and decommission a 500 Kilovolt (kV) and 230kV transmission line on portions of BLM-managed public lands between two substations (the Sun Valley Substation [formerly called TS-5] and the existing Morgan Substation [formerly called TS-9]).

Generally the transmission line would head north-northeast out of the Sun Valley Substation, which will be located in the northwest portion of the Town of Buckeye; to north of State Route (SR) 74 and then east to the Morgan Substation, which is located in the City of Peoria. This proposed RMP amendment and transmission line project was described in the Sun Valley to Morgan 500/230kV Transmission Line Project Proposed Resource Management Plan Amendment (RMPA) and Final Environmental Impact Statement (EIS).

Approximately nine miles of the Proposed Action route crosses BLM-managed public lands, while the remainder of the route crosses mainly private lands and those lands managed by the Arizona State Land Department (ASLD). Because the ROW over public lands is integral to APS' proposed Project, spanning approximately 38 miles on mostly non-federal lands, BLM needed to analyze the impacts of the entire transmission line; however, the BLM decisions would only apply to the portion of the transmission line route on the subject BLM-managed public lands. Those with jurisdiction by law over the remaining portions of the route will make their own decisions to approve or deny all or part of the Project.

Cooperating Agencies that participated in this Project include the U.S. Air Force - Luke Air Force Base (LAFB), the U.S. Environmental Protection Agency (EPA), ASLD, the Maricopa Association of Governments (MAG), the City of Peoria, and the City of Surprise. Each of the

cooperators provided special expertise related to the affected lands and resources they administer.

This ROD provides the background on the RMPA and the transmission line project; identifies and summarizes the alternatives studied in the final EIS; describes the decisions selected, and the rationale for approving those decisions. Two protests were received on the proposed RMP amendment.

1.1 Purpose and Need

1.1.1 Purpose of the Action

The purpose of the BLM action is to respond to the APS request for a ROW across public lands in order to construct, maintain, and decommission a co-located 500/230kV transmission line between the Sun Valley and Morgan Substations. The BLM is only issuing decisions on the APS request for a ROW on BLM-managed public lands.

1.1.2 Need for the Action

The need for the BLM action is established by the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) (43 United States Code [USC] § 1761) as amended, to respond to a request for a ROW grant while avoiding or minimizing adverse impacts to other resource values and to locate the uses in conformance with land-use plans.

FLPMA also requires that the BLM "develop, maintain, and when appropriate, revise land-use plans" (43 USC §1712). At the time APS submitted a ROW application for the proposed transmission line project, the Phoenix RMP (BLM 1988) was in effect, but the BLM was in the process of developing the Bradshaw-Harquahala RMP. The development of the Bradshaw-Harquahala RMP included an 8-year planning period that resulted in publication of the proposed RMP and final EIS in August 2008, which replaced the Phoenix RMP. The Bradshaw-Harquahala RMP provides management direction for public lands including the Project area, and also establishes designated corridors for major utilities.

The BLM Land Use Planning Handbook (BLM 2005) states that RMP amendments are prompted by consideration of a proposal or action that does not conform to the RMP. Neither the Phoenix RMP (which was in place at the time APS submitted a ROW application) nor the Bradshaw-Harquahala RMP contained utility corridors along SR 74 where the transmission line was proposed to be located in the ROW grant request submitted by APS.

An amendment to the Bradshaw-Harquahala RMP is necessary because utility corridors on public lands in the location of the requested ROW along SR 74 were not established and high-voltage transmission lines crossing public lands are required to be within designated utility corridors under the current RMP. RMP Decision LR-30 states that no new utility corridors were designated within the Castle Hot Springs Management Unit. In addition, the existing VRM Class designation will be amended and downgraded from VRM Class III to VRM Class IV for certain lands managed under the RMP.

2 ALTERNATIVES

APS proposes to construct, operate, maintain, and decommission a 500/230kV co-located overhead transmission line within a 200-foot wide ROW. The double circuit transmission line in

most instances would typically be constructed on single-pole steel structures, approximately 135 to 195 feet tall, with non-reflective conductors. The line may need to be constructed as two, single circuits at various angle locations along the route. The 500kV circuit would be installed for a proposed 2018 in-service date and the 230kV circuit would be strung on the same structures in the future when necessitated by load growth, currently projected beyond 2021. The design of the structures and selected structure type (monopole, lattice, or H-frame) may vary based on engineering criteria due to terrain features, and visibility of the structures.

2.1 Overview of Alternatives Considered in the Final EIS

2.1.1 Alternatives Background

The Arizona State Legislature (Legislature) established the Arizona Corporation Commission (ACC), which has jurisdiction over the quality of service and rates charged by public service utilities. The Arizona Revised Statutes (ARS) in Section 40-360 *et seq.* established a siting process requiring, “Every utility planning to construct a...transmission line...in this state shall first file with the commission an application for a Certificate of Environmental Compatibility” (CEC; Arizona State Legislature 2007). APS initiated a siting process through siting studies conducted in 2007 through 2009 for the transmission line, as established by the Legislature. In July 2008, APS submitted an application for a CEC to the ACC. After several public hearings and an extensive public review process, the ACC issued APS a CEC, which specified or “certificated” a route that differed from the route proposed by APS in the siting process.

The route certificated by the ACC was not APS’ original preferred route from the siting process, but was a blend of their preferred route and portions of their proposed alternative routes. The ACC-certificated route was not in conformance with the former Phoenix RMP, nor is it in conformance with the current Bradshaw-Harquahala RMP. Nevertheless, this was the route that the ACC directed APS to follow for the Sun Valley to Morgan transmission line project. As a result, APS proceeded with efforts to acquire federal approval for the proposed transmission line on subject BLM-managed public lands. The route certificated by the ACC became the route requested by APS in their ROW application to the BLM, which is the Proposed Action route analyzed in the final EIS.

The BLM analyzed the Proposed Action, three Action Alternatives, and one Sub-alternative route for the transmission line in detail (**Figure 2.1-1, Attachment A**), in addition to the No Action Alternative in the draft RMPA/EIS (BLM 2012) and in the proposed RMPA/final EIS (BLM 2013). Two of the Action Alternatives and Sub-alternative considered different routes to replace portions of the Proposed Action route. All portions of the Project west of US 60 and to the Sun Valley Substation are identical and common to the Proposed Action, as well as each of the Action Alternatives, including the Sub-alternative. The description and details for the facilities, construction, operation, and decommissioning activities would also apply to each of the Action Alternatives and Sub-Alternative.

With exception of Alternative 1, the alternatives have segments outside the ACC-certificated route. Implementation of those routes could only occur if the ACC amended the CEC that has been issued for the Project. The ACC’s consideration for amending the CEC would open the entire route decision up for public review and consideration, and would not be limited to discrete portions; a process that could conceivably be as lengthy and involved as the consideration of the original ACC application filed by APS, possibly amounting to years of delay (depending on

whether the route would be a modification to an existing alternative or a new alternative route). As a result, construction of the 500kV transmission line would be delayed, and potentially the 230kV line as well, depending on the length of the ACC amendment process.

All Action Alternatives analyzed in the final EIS include temporary access for construction and long-term access for maintenance and operation of the transmission line over the life of the Project.

Several other alternatives were considered and ultimately eliminated from detailed analysis, as explained in **Section 2.4** below.

2.1.2 Proposed Action

The Proposed Action route (**Figure 2.1-1, Attachment A**) is the route that the ACC certificated to APS in the CEC. From the Sun Valley Substation, the Proposed Action route follows the Central Arizona Project (CAP) canal for approximately two miles, portions which are on BLM land and within an existing BLM designated utility corridor, to approximately the 275th Avenue alignment. The route then turns northwest for approximately two miles following an existing 500kV transmission line. At the Happy Valley Road alignment the route turns north for approximately 4.5 miles, then east for approximately five miles paralleling the Lone Mountain Road alignment to the north. The route then turns north following 235th Avenue for approximately 3.5 miles then east following the Joy Ranch Road alignment, for approximately seven miles until it approaches SR 74. The route parallels the south side of SR 74 for approximately two miles before crossing and paralleling SR 74 to the north on BLM-managed public lands for approximately five miles. The route again crosses SR 74 to parallel the south side of the highway for approximately three miles, crossing the Agua Fria River. The route then turns south for one mile, and turns east for less than one mile following the Cloud Road alignment to connect to the Morgan Substation.

The Proposed Action would amend the Bradshaw-Harquahala RMP to establish the needed 200-foot wide ROW (100 feet on each side of the proposed centerline of the transmission line) as a single-use utility corridor on BLM-managed land paralleling SR 74. In addition, the existing VRM Class designation would be amended from VRM Class III to VRM Class IV for those areas of BLM-managed land where views would be dominated by the transmission line, and thus would not meet the objectives of the current VRM designation. The VRM Class designation would also be changed for those public lands north and south of SR 74 surrounding the proposed transmission line ROW (i.e. the existing transportation corridor north of SR 74 and the key-shaped public lands piece south of SR 74) in order to avoid creating narrow linear strips designated as different VRM Classes. Approximately 3,375 acres would be changed from VRM Class III to VRM Class IV (**Figure 2.1-2, Attachment A**).

The total length of the Proposed Action route would be approximately 38.2 miles. Approximately nine miles of the Proposed Action route would be located on BLM-managed public lands within the Bradshaw-Harquahala Resource Management Plan area; approximately seven miles of which would be within the newly designated utility corridors along SR 74, and approximately two miles of which would be within an existing BLM designated utility corridor northeast of the Sun Valley Substation. In addition to crossing BLM-managed public lands, the route crosses a substantial amount of State Trust land administered by the ASLD, USBR land,

and privately owned lands. The ROW would contain a total of 926 acres, 219 acres of which would occur on BLM-managed public lands.

2.1.3 Alternative 1: Proposed Action with Additional Corridor

This alternative was developed to evaluate the establishment of a multiuse utility corridor as opposed to a single-use utility corridor as described under the Proposed Action. Co-location of future utilities within the corridor would be environmentally advantageous by consolidating similar land uses and disturbance in a discrete area.

Under this alternative, the route of the transmission line between the Sun Valley and Morgan Substations would be the same as the Proposed Action route. However, a multiuse utility corridor would also be established on BLM-managed public lands that would begin at the centerline of SR 74 and extend 0.5 mile north, and also include the entire block of BLM lands south of SR 74 (**Figure 2.1-3, Attachment A**). This alternative would also require an RMPA to change those areas' VRM designation from VRM Class III to VRM Class IV to accommodate the proposed Project, as well as any future utilities within the multiuse utility corridor that may not meet VRM Class III objectives. Approximately 3,375 acres would be included in the multiuse utility corridor and changed from VRM Class III to VRM Class IV. Additionally, a ROW for the portions of BLM-managed public lands within an existing BLM-designated multiuse corridor near the Sun Valley Substation would still be required under this alternative.

BLM-managed public lands that would lie within the multiuse utility corridor along SR 74 are already contained within a transportation corridor designated by the Bradshaw-Harquahala RMP to allow for future planned expansion of SR 74. This allows BLM to consider additional linear ROWs within the same corridor. Any additional ROW applications would be considered on a case-by-case basis.

The total length of the Alternative 1 route would be the same as the Proposed Action - approximately 38.2 miles, approximately nine miles of which would cross BLM-managed public lands. The structures would require a ROW width of 200 feet, for a total of 926 acres, 219 acres of which would occur on BLM-managed public lands.

2.1.4 Alternative 2: ROW South of SR 74

This alternative was developed in order to eliminate multiple crossings of SR 74 by keeping the transmission line on one side of SR 74 in response to visual and safety concerns. In addition, it would reduce the amount of BLM-managed public lands that would potentially be impacted, by moving the line onto private lands.

Under Alternative 2, a five-mile long segment that parallels the south side of SR 74 from the 163rd Avenue alignment to just west of the El Mirage Road alignment on private land would replace an approximately 5-mile long segment of the Proposed Action north of SR 74 on public lands, likewise being located within a 200-foot wide ROW.

Besides this five-mile long segment, all other segments of the Alternative 2 route would remain within the ACC-certificated route and would follow the Proposed Action route (**Figure 2.1-1, Attachment A**).

Alternative 2 would also include an RMPA to establish a multiuse utility corridor on the entire key-shaped block of BLM-managed public lands immediately south of SR 74 and to change the

VRM designation from VRM Class III to VRM Class IV in this same entire block area, approximately 1,013 acres (**Figure 2.1-4, Attachment A**). A ROW for the portions of BLM-managed public lands within an existing BLM-designated multiuse corridor near the Sun Valley Substation would still be required under this alternative.

The total length of the Alternative 2 route would be approximately 37.4 miles, four miles of which would be on BLM-managed public lands. The structures would require a ROW width of 200 feet, for a total of 907 acres, 96 acres of which would occur on BLM-managed public lands. The multiuse utility corridor that would be designated by the RMPA under Alternative 2 would be approximately 1,013 acres south of SR 74.

2.1.5 Alternative 3: Carefree Highway Route

This alternative was developed in order to eliminate the need for an RMPA for both the establishment of a utility corridor and VRM Class change, and to reduce the amount of BLM-managed public lands that would potentially be impacted. However, a ROW for the portions of BLM-managed public lands within an existing BLM-designated multiuse corridor near the Sun Valley Substation would still be required under this alternative. Additionally, this alternative would move the transmission line onto private lands planned for residential and commercial land uses.

Alternative 3 would replace an approximately nine-mile long segment of the Proposed Action route north of SR 74 from the 179th Avenue alignment to the Morgan Substation by using the Carefree Highway alignment (**Figure 2.1-1, Attachment A**). This alternative was the original APS proposal to the ACC during the State CEC process. The alternative extends south from the Proposed Action route at SR 74 along the 179th Avenue alignment and continues south two miles to the Carefree Highway alignment. The route then follows the Carefree Highway alignment east for about 8 miles to about 99th Avenue, where the alignment approaches the existing Salt River Project Navajo 500kV and Western Area Power Administration 230kV transmission line corridor. From that point, Alternative 3 turns northeast and follows the transmission corridor to the Morgan Substation.

Aside from this nine-mile long segment, all other segments of the Alternative 3 route would remain within the ACC-certificated route and would follow the Proposed Action route.

The total length of the Alternative 3 route would be approximately 38.4 miles, approximately 2.5 miles of which would cross BLM-managed public lands near the Sun Valley Substation that are within a BLM-designated multiuse corridor. The structures would require a ROW width of 200 feet, for a total of 931 acres, 45 acres of which would occur on BLM-managed public lands. No new corridors would be designated on BLM-managed public lands under this alternative and no changes to existing VRM classifications would be needed, thereby eliminating the need for an RMPA.

2.1.6 Sub-alternative: State Trust Land Route Variation

The Sub-alternative (**Figure 2.1-1, Attachment A**) was developed in response to a request made to the BLM by the ASLD, a Cooperating Agency in the NEPA process and a major governmental land management agency responsible for administration of State Trust lands along the Proposed Action route. The Sub-alternative would replace a four-mile section of the Proposed Action route that would also be common to all Action Alternatives; therefore it could

be combined with any of the Action Alternatives. The Sub-alternative route would begin at the intersection of 235th Avenue and the Cloud Road alignment, just north of US 60. From that intersection point, the Sub-alternative would parallel the north side of the Cloud Road alignment east for three miles to the intersection with 211th Avenue. The Sub-alternative would then parallel the west side of 211th Avenue for one mile north, where it would rejoin the portion of the Proposed Action route that is common to all Action Alternatives, at the Joy Ranch Road alignment. The Sub-alternative route would cross State Trust lands exclusively. The entire four-mile length of the Sub-alternative route would be outside the ACC-certificated route. Therefore, implementation of the Sub-alternative route could only occur if the ACC amended the CEC that has been issued for the Project.

This route was analyzed and presented only for environmental analysis purposes as requested by ASLD, and does not affect the BLM's decision-making process as it would not require the BLM issuance of a ROW or an RMPA.

2.1.7 No Action Alternative

Under the No Action Alternative, BLM would not approve either of the proposed portions of the ROW grant on BLM-managed public lands and the Bradshaw-Harquahala RMP would not be amended to designate a utility corridor (single-use or multiuse) or change the existing VRM designation. The 500/230kV transmission line would not be constructed across BLM-managed public lands as proposed by APS. The No Action Alternative would not provide APS with a ROW for the approximately two miles of BLM-managed public lands near the Sun Valley Substation which is in a BLM-designated multiuse corridor. Any future requests for a ROW grant on BLM lands in this area not analyzed in the draft or final EIS, or other existing NEPA documents, would require additional NEPA analysis.

2.2 Agency Preferred Alternative

Both the draft EIS/RMPA and the final EIS/proposed RMPA prepared by the BLM identified the Proposed Action route for the transmission line crossing BLM-managed public lands as the Agency Preferred Alternative route for the proposed transmission line, including Best Management Practices (BMPs) and mitigation measures, with modifications, as necessary. Modifications could consist of minor route deviations for micrositing of structures or segments of the line at the time of route engineering to minimize impacts to visual and other sensitive resources, as indicated in the mitigation measures; however, all potential modifications would still allow for the transmission line route to remain within the ACC-certificated route.

Under the Agency Preferred Alternative, the BLM would approve a 200-foot wide ROW within the existing designated utility corridor northeast of the Sun Valley Substation. In addition, the BLM would amend the Bradshaw-Harquahala RMP to:

- Designate a single-use 200-foot wide utility corridor on BLM-managed public lands north of SR 74 for a total of 219 acres,
- Designate a multiuse utility corridor on 1,013 acres of BLM-managed public lands south of SR 74 to address potential future BLM management considerations, and

- Change the existing VRM Class designation of 2,362 acres north of SR 74 and 1,013 acres south of SR 74 from VRM Class III to VRM Class IV to allow for the use of the newly established utility corridors (**Figure 2.1-5, Attachment A**).

Upon amendment of the Bradshaw-Harquahala RMP, the BLM would approve a 200-foot wide ROW for the transmission line and centerline access following the Proposed Action route within the newly designated corridor. The transmission line ROW on BLM-managed public land north of SR 74 would directly correspond to the newly designated single-use utility corridor.

2.3 Environmentally Preferred Alternative

The Council on Environmental Quality (CEQ) regulations require the ROD to identify one or more environmentally preferred alternatives. The environmentally preferred alternative is the alternative(s) that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. Because it will cause the least damage to the biological and physical environment, the BLM has determined that the No Action alternative is the environmentally preferred alternative.

2.4 Alternatives Considered but Eliminated from Detailed Analysis

The National Environmental Policy Act (NEPA) requires federal officials to rigorously explore and evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 Code of Federal Regulations (CFR) § 1502.14).

Several technological and routing options were eliminated from consideration for detailed analysis because they were found to be technologically or economically impractical or not feasible, or did not meet the BLM's purpose and need. Alternatives eliminated from further evaluation in the final EIS and summaries of the reasons why they were eliminated from further consideration are discussed in **Table 2.7-1** of the final EIS.

3 SELECTED ALTERNATIVE

The Agency Preferred Alternative presented in the proposed RMPA/final EIS and summarized in **Section 2.2** is hereafter referred to as the Selected Alternative in this ROD. The Selected Alternative adopts all practicable means to avoid or minimize environmental harm, which were considered under the Agency Preferred Alternative. These BMPs and mitigation measures are noted in **Attachment B** of this ROD.

3.1 Rationale for Choosing the Selected Alternative and Management Considerations

The Selected Alternative will reasonably accomplish the purpose and need for the federal action, while fulfilling the BLM's statutory mission and responsibilities, giving consideration to environmental, economic, and technical factors.

3.1.1 Rationale

There is a clear need to provide transmission infrastructure to developing areas while minimizing impacts to socioeconomics and other aspects of the local community. The Selected Alternative accomplishes this, and the Approved Plan Amendment allows for implementation of the Selected

Alternative while avoiding, minimizing, and mitigating adverse impacts to recreation and natural resources on BLM-managed public lands.

3.1.1.1 Relationship to Other Plans, Policies, and Programs

The Selected Alternative must comply with various federal laws, statutes, regulations, and Executive Orders (EOs). FLPMA mandates that the BLM manage public lands on the basis of multiple use and sustained yield (43 U.S.C. § 1701(a)(7)). For the Selected Alternative to be implemented, APS must acquire applicable federal, state, county, and local permits and other approvals, as necessary. Applicable or potentially applicable approvals (permits, licenses, compliance, or reviews) are listed in Table 1.5-3 of the final EIS.

Pursuant to provisions of the FLPMA (43 U.S.C. § 1702(c)(9)), the BLM has worked extensively with other federal, state, and local government entities (primarily involving the Cooperating Agencies) throughout the EIS process to coordinate Project requirements and consider the planning parameters and processes of the other entities.

The Cooperating Agencies have not voiced any concern regarding the BLM Preferred Alternative in the final EIS, which has become the Selected Alternative in this ROD. Luke Air Force Base had originally voiced concern about any alternative along the CAP that would intersect the Base's Auxiliary Field #1; this alternative was eliminated from further analysis in the draft EIS. The Selected Alternative is the only alternative that complies with the City of Peoria General Plan. The EPA's comments on the draft EIS have been addressed to their satisfaction, especially regarding impacts to jurisdictional waters of the United States. The BLM is making no decision on the Sub-Alternative route, which is wholly located on State Trust lands administered by the ASLD, outside of the BLM's jurisdiction. Letters of support for what is now the Selected Alternative have been received from Senators McCain and Flake, as well as eight Congressional Representatives. Likewise, the Governor's Office considers the Selected Alternative to enhance the reliability and stability of the grid, and sees no conflict with State statutes or the missions of State agencies.

The Proposed Action route for the transmission line was approved by the ACC, which is the State line siting regulatory authority in Arizona. The transmission line route under the Selected Alternative tracks with the Proposed Action route, and is the only routing alternative that complies with the CEC issued by the ACC. Therefore, in order to implement the Proposed Action route for the transmission line under the Selected Alternative and comply with the CEC issued by the ACC, the Bradshaw-Harquahala RMP must be amended. The current Bradshaw-Harquahala RMP designated a corridor along and encompassing the existing SR 74, which is specifically for transportation purposes; however, that corridor designation did not allow for utility development within the corridor. Consequently, the RMP is being amended to allow for utility corridors in this location, which would allow the BLM to issue a ROW for the proposed transmission line. In addition, the portion of the newly designated utility corridor on BLM-managed public lands south of SR 74 will be a multiuse corridor, allowing the BLM to prospectively address likely social and economic growth in that area without future costly amendments of the Bradshaw-Harquahala RMP.

3.1.1.2 Socioeconomics and Environmental Justice

Market value impacts to private property values from the Project are expected to occur to private property located within 200 feet of the transmission line or to private property adjoining the ROW. Research cited in the proposed RMPA/final EIS indicates the potential adverse effects on

undeveloped private land values range from 0 to 34.0 percent, depending on location, available amenities, and current market conditions.

There are no residences within 200 feet of the Selected Alternative route, or any Action Alternative route affecting BLM-managed public lands; therefore there will be no impact to value of existing residences under the Selected Alternative. The Selected Alternative will potentially reduce the value of approximately 101 acres of undeveloped private land, while the Alternative 2 and 3 routes would potentially impact the value of 176 and 229 acres of undeveloped land, respectively. Thus, the Selected Alternative will potentially reduce the value of the fewest acres of private undeveloped land of the Action Alternatives analyzed in the final EIS. This is because the Selected Alternative places the transmission line north of SR 74 on BLM-managed public lands, avoiding private property south of SR 74.

Economic effects will occur to property taxes on affected private land and the resulting tax revenue, as the Project will change land use patterns and potentially affect the property taxes paid on the affected land. The Selected Alternative would result in potential increased tax revenue of 648 percent over existing revenue, while Alternatives 2 and 3 would result in a 294 and 202 percent increase, respectively. Therefore, compared to the other Action Alternatives analyzed, the Selected Alternative will result in the greatest increase in estimated property tax revenue realized by Maricopa County. However, when compared with county revenue, the net effect of the increased revenue to Maricopa County would be similar under all Action Alternatives.

While the Selected Alternative will have the least impact on market values of the Action Alternatives, non-market socioeconomic values (such as recreation values, natural amenities, and quality of life) will be impacted by the Selected Alternative in greater quantities and intensities than impacts under the other Action Alternatives analyzed. The Selected Alternative offers no potential beneficial aspects to recreation values, and potential adverse impacts could occur through changes in the quality of the recreation experience on BLM-managed public lands. Construction will require the removal of some habitat for wildlife and special status species. Communities closest to the Project might feel that their current rural quality of life will be adversely affected with the presence of the transmission line and permanent loss of wildlife habitat. The changes in the natural amenities could permanently lessen the quality of life experience for some residents.

Comments submitted in conjunction with protests on the proposed RMPA (see **Section 10**) expressed concern that the environmental justice issues of the Project had not been addressed. Analysis in Section 4.10.2.3 of the final EIS discloses potential impacts to the identified environmental justice community, and found that the Project would not have a disproportionate impact on the environmental justice community.

3.1.2 Management Considerations

Impacts to resources identified below highlight management considerations in selecting the approved plan amendment and Selected Alternative. Many impacts that would result from the Project were common among the Action Alternatives analyzed in the final EIS, as described in **Section 3.1.1**, below. The ultimate decision for the Selected Alternative was defined by the relationship of the Selected Alternative to other plans, policies, and programs; and impacts to recreation, socioeconomics, visual resources, and sensitive species, considering BMPs and

mitigation. The BMPs and mitigation measures identified in the final EIS are provided in **Attachment B** of this ROD.

As noted in the final EIS, the impacts that would result from Alternative 1 to most resources would be the same as those predicted for the Proposed Action, as the only difference between the two alternatives is the size and type of corridor that would be designated on BLM-managed public lands. While future development within the multiuse corridors proposed under Alternative 1 could lead to cumulative impacts that would differ from the Proposed Action, there are no reasonably foreseeable projects within the multiuse corridors; therefore cumulative impacts would be the same. For this reason, impacts from Alternative 1 are not listed for comparison purposes in the following sections.

3.1.2.1 Bradshaw-Harquahala RMP Amendment

Under the Selected Alternative, the APS Sun Valley to Morgan 500/230kV transmission line does not comply with the existing Bradshaw-Harquahala RMP; therefore, the main management consideration for the decision to amend the Bradshaw-Harquahala RMP is to make changes to allow for authorization of a ROW grant for the APS Sun Valley to Morgan 500/230kV transmission line. The RMP is being amended to designate the newly established utility corridor north of SR 74 as single-use, corresponding with the ROW grant for the transmission line portion of the Selected Alternative. The existing VRM Class designation of 2,362 acres north of SR 74 and 1,013 acres south of SR 74 is being changed from VRM Class III to VRM Class IV to allow for use of the newly established utility corridors (**Figure 2.1-5, Attachment A**). The multiuse portion of the newly designated utility corridor on 1,013 acres of BLM-managed public lands south of SR 74 will allow the BLM to address potential future management considerations. As a result of designation of the utility corridors, Decision LR-30, specific to the Castle Hot Springs Management Unit, Land and Realty Management, which states, “No new utility corridors are designated within this Management Unit” will be revised to reflect the newly established utility corridors.

The decision to amend the Bradshaw-Harquahala RMP to establish a utility corridor on BLM-managed public lands north of SR 74 (which would be designated single-use in this portion of the newly established utility corridor) aligns the utility corridor within an existing transportation corridor, designated to allow for future consideration of expansion of SR 74. The ROW south of SR 74 within the multiuse corridor on BLM-managed public lands will also be situated within this existing transportation corridor. The decision to amend the RMP and locate the single-use portion of the newly established utility corridor on public lands north of SR 74 will minimize socioeconomic impacts to private lands south of SR 74.

Because the portion of the newly established utility corridor north of SR 74 will be single-use, the corridor will not be available for additional future ROW uses. Future site-specific environmental review would be conducted should additional ROW uses be proposed within the multiuse portion of the newly established corridor on public lands south of SR 74; however, there are no reasonably foreseeable projects within the multiuse corridor that would contribute to cumulative impacts.

3.1.2.2 Impacts in Common among Analyzed Action Alternatives

The analysis contained in the proposed RMPA/final EIS revealed that the impacts of many aspects of the Project were similar, if not the same across the action alternatives. Because of the similarity, the following described impacts did not distinguish between the alternatives analyzed:

- The length of the route under the Selected Alternative is 38.2 miles, requiring approximately 40 miles in permanent access and 10 miles in temporary access. Route length between the Action Alternatives varied only by one mile, as did permanent access. Temporary access route distances varied by two miles.
- Maximum pollutant emissions from construction varied only slightly among the alternative routes. Greenhouse gas emissions were estimated to be the same under all alternatives, and none of the alternatives would result in violations of National Ambient Air Quality Standards.
- All impacts associated with hazardous materials and wastes would be the same for all Action Alternatives.
- There are no known paleontological resources that would be affected by any of the Action Alternatives, and the potential for significant paleontological resources/vertebrate fossils is very low/unlikely.
- The Selected Alternative disturbs the greatest number of acres of soils in the short or long term; however, the number of acres of soils disturbed would only vary by 10 percent or less among the Action Alternatives, a variance between alternatives of a maximum of six acres. All Action Alternatives would disturb the same amount of prime farmland and have a poor reclamation suitability rating.
- A concern expressed repeatedly by the public, beginning with scoping and extending to comments on the draft EIS, was the potential for exposure of the public in existing and planned residential communities to electromagnetic fields (EMF), which are thought to contribute to human health concerns. Analysis in the proposed RMPA/final EIS found that EMFs and their effects were essentially equivalent among all Action Alternatives. During normal operation and maintenance, the expected range of EMFs is between 8 and 20 milliGauss, which also accounts for additive effects of paralleling other 500kV and 230kV lines that may be crossed. Other, smaller (69kV) lines may also be crossed, but would result in EMFs less than or similar to the projected range. The expected range of EMFs is at least two orders of magnitude less than the recommended exposure limit of 2,000 milliGauss under all Action Alternative routes.
- The portion of the Project that has potential to impact an environmental justice (EJ) community was common to all Action Alternatives analyzed, and does not involve BLM-managed public lands. Proportions of the Action Alternative routes affecting private developed/occupied property within the EJ community versus outside the EJ community, and proximity of the ROW to private developed/occupied property do not indicate a disproportionate effect under any of the Action Alternatives.
- Changes in traffic volume due to construction would be identical for, and the line would be parallel to a single landing strip at a private air facility, under all Action Alternatives.
- Impacts to water resources would be similar under all Action Alternatives. The number of drainages crossed by the transmission line and access roads would only vary by approximately 15 percent among the Action Alternatives. There would be small quantities and temporary alteration of existing uses of surface water for construction, and the limited size of the construction corridor would not measurably increase local runoff levels under all Action Alternatives. There would be no new groundwater withdrawals to affect groundwater levels; and there are no known areas of shallow groundwater that would be susceptible to hydrocarbon spills or releases under all Action Alternatives. U.S.

Army Corps of Engineers Section 404 permits would need to be obtained before filling any jurisdictional waters of the United States.

- Impacts to suitable wildlife habitat would be the same or similar under Action Alternatives where the same habitat is present across the alternatives; not all habitat types are present under all Action Alternatives. Construction could result in mortality, habitat loss, and impacts from noise and vibration. In addition, there would be short-term noise impacts to Southwestern willow flycatcher (*Empidonax traillii extimus*) riparian habitat along the Agua Fria River under all Action Alternatives. Upon completion of the Project, there would be potential for mortality from bird collisions with the transmission line.

3.1.2.3 Cultural Resources

Nine National Register-eligible cultural resource sites (i.e., historic properties) are known to be within the Selected Alternative ROW, compared to eight along the Alternative 2 route, and six along the Alternative 3 route. As final designs for the transmission line are prepared, cultural resources will continue to be considered in accordance with the identified Best Management Practices. All sites will be avoided where practicable by Project design, such as locating transmission towers, access routes, and other facilities outside site boundaries; or by using helicopters for construction in sensitive areas. If avoidance is not feasible due to technical issues or resource conflicts, BLM will develop a Memorandum of Agreement (MOA) to address the adverse effect. The greatest challenge for avoiding impacts on National Register eligible properties is along the east side of the Agua Fria River on non-federal land. Regardless of whether an MOA is required, BLM and ASLD will work with APS to develop a Discovery Plan, and if warranted, a monitoring Plan, which would define procedures for evaluating and treating discoveries of unrecorded cultural resources or recognition of unanticipated adverse effects.

3.1.2.4 Recreation

The Selected Alternative will cross an area heavily used for off-highway vehicle (OHV) and other recreation within the Castle Hot Springs Special Recreation Management Area (SRMA) on BLM-managed public lands north of SR 74, which is accessed from The Boulders Staging Area.

Under the Selected Alternative, the two-track OHV trail routes that will be impacted by the Project represent approximately three percent of the OHV two-track trails in the Study Area, which is comprised of a two mile area surrounding the Selected Alternative route. The two-track OHV trail routes that are impacted by construction will be opened again after construction is completed. To mitigate for the impact of the centerline construction access on recreation, the road will be designated an Administrative road, which will be closed to recreational use after completion of construction. The road will be patrolled by the BLM and the prohibition of recreational use enforced; however, single-track OHV trail users will be permitted to intersect the centerline access road and continue along the existing and well-established single-track routes. As a result, under the Selected Alternative there will be no loss of single-track OHV trails. The Boulders Staging Area will not be affected.

The BLM will enter into an Memorandum of Understanding (MOU) with the Arizona OHV Coalition to implement additional voluntary mitigation measures to be funded by APS that are intended to reduce adverse impacts to recreation that are anticipated to result from construction of the transmission line.

3.1.2.5 Vegetation

Impacts to vegetation communities would be the same under all Action Alternatives. Comments submitted in conjunction with protests on the proposed RMPA (see **Section 10**) expressed concern that the ROW would be denuded of vegetation. Removal of some vegetation within the ROW is a necessary part of the Project, as described in Section 2.4.2.4 of the final EIS. However, Section 2.4.3.4 of the final EIS explains how vegetation will be managed within the wire zone and border zone of the ROW in order to maintain vegetation in areas that are not to be disturbed for the long term. In addition, **Attachment B** to this ROD contains detailed procedures for handling of saguaro cactus within the ROW.

3.1.2.6 Visual Resources

Impacts to visual resources on BLM-managed public lands under the Selected Alternative will be greater in extent and intensity than under the other Action Alternatives (with the exception of Alternative 1, which would have the same impacts as the Selected Alternative) because the transmission line would be routed north of SR 74 on BLM-managed public lands. As analyzed in the proposed RMPA/final EIS, the overall long-term impact of the Selected Alternative on visual resources includes the following:

- Within the existing transportation corridor on BLM-managed public lands north of SR 74, impacts will be major.
- Within the Castle Hot Springs SRMA and Hieroglyphic Mountains RMZ, impacts will be minor to moderate.
- For travelers along portions of SR 74 where the transmission line would parallel the highway, impacts will be moderate.

As a result of changes to VRM Classes implemented under the RMPA, the transmission line will now conform to the VRM classes for the BLM-managed public lands crossed by the Project. Mitigation measures including micrositing of structures, the use of a surface treatment resembling selected BLM environmental colors, and the use of monopole structures will help reduce impacts to visual resources somewhat; however, major impacts to visual resources on public lands will be unavoidable.

The Selected Alternative will be the least impacting to visual resources on private property of the Action Alternatives analyzed in the proposed RMPA/final EIS.

3.1.2.7 Sensitive Species

Of the Action Alternatives analyzed in the proposed RMPA/final EIS, the Selected Alternative will disturb the most Sonoran desert tortoise (*Gopherus agassizii (morfakii)*) habitat. In addition, the Selected Alternative is the only alternative that will disturb Category II desert tortoise habitat. Under the Selected Alternative, the transmission line ROW will cross 135 acres of Category II and 192 acres of Category III desert tortoise habitat. However, desert tortoise habitat will be compensated following the Compensation for Desert Tortoise report (DTCT 1991), and there will be no net loss of desert tortoise habitat under the Selected Alternative.

4 CONSISTENCY AND CONSULTATION REVIEW

4.1 Cooperating Agencies

Cooperating Agencies include those federal, state, or local agencies that have jurisdiction by law and/or special expertise (40 CFR Section 1508.5). In March 2011, the BLM sent letters to numerous agencies at the federal, state, and local level inviting participation as a Cooperating Agency in preparation of the EIS. A total of 33 agencies were sent a letter inviting them to participate as a Cooperating Agency. Six agencies accepted: LAFB, the EPA, the ASLD, the MAG, the City of Peoria, and the City of Surprise. Those with special expertise or information assisted in development of the analysis in the proposed RMPA/final EIS. Those with jurisdiction by law will make their own decisions to approve or deny all or part of the Project.

4.2 Agency Consultation

4.2.1 National Historic Preservation Act (Section 106 Consultation)

In accordance with Section 106 of the NHPA, the BLM formally initiated consultation with the State Historic Preservation Office (SHPO) on April 8, 2011. In its initiation letter, the BLM identified the area of potential effect (APE) and clarified that a Class III cultural resources survey of the entire APE, except private lands, would be conducted. A copy of this correspondence is included in the Project Record. The BLM accepted the Class III cultural resources surveys. Both the report and the BLM's recommendations of eligibility were forwarded to the SHPO for further consultation in July 30, 2012. By letter dated August 29, 2012, the SHPO concurred with BLM's determinations of National Register eligibility and adequacy of the survey reports. SHPO requested further information on the results of tribal consultations; BLM will continue to update SHPO as to the ongoing consultation with the Tribes.

The Project will have No Adverse Effect because APS will be able to effectively avoid all of the eligible historic properties. A 3D aerial flyover was used to orient the location of each site in respect to proposed access roads and tower locations. Tower and access road locations in the vicinity of the archaeological and historical sites have been designed in more detail to verify means of avoidance. As a result of this determination, neither a letter to the Advisory Council on Historic Preservation (ACHP) nor an MOA were required.

4.2.2 Native American Consultation

The BLM engaged several federally recognized tribes in formal, government-to-government consultation regarding the Project. Consultation with tribes is required under Section 106 of the National Historic Preservation Act (NHPA), as well as NEPA and other laws and EOs. Agencies must consider effects on places of traditional cultural and religious importance. Section 106 of the NHPA requires that federal agencies consult with the appropriate SHPO and Tribal Historic Preservation Officer (THPO) if the federal agencies determine that activities under their control could affect historic properties. Under NHPA, any adverse effects to NRHP-eligible properties are to be resolved through consultations that identify appropriate mitigation and treatment measures.

In April 2011, the BLM contacted the following eight American Indian tribes to notify them of the Proposed Action and initiate formal consultation in preparation of the EIS: Gila River Indian

Community, Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, Tohono O'odham Nation, Yavapai Prescott Tribe, Yavapai Apache Nation, Fort McDowell Yavapai Nation, and the Hopi Tribe.

Certified letters were sent to elected tribal leaders, with copies to tribal cultural resource staff, describing the proposed Project and draft RMPA, requesting comments, offering the opportunity to meet, and describing plans to conduct cultural resource inventories and to share the inventory results with tribes. Aside from requests to review inventory results, at that time tribes did not identify concerns related to specific places within the Study Area. Cultural resource inventories were completed in the spring of 2012. In June 2012, BLM sent correspondence to the tribes providing an update on the EIS process and a detailed summary of the cultural resource inventory results and National Register eligibility recommendations. In July 2012, BLM presented information with an opportunity for discussion at a meeting of the Four Southern Tribes Cultural Resources Group consisting of representatives of the Gila River, Salt River, Ak-Chin, and Tohono O'odham tribes.

BLM described efforts to coordinate with APS and the ASLD to design the Project to avoid impacts to sensitive prehistoric sites along the Agua Fria River near the Morgan Substation. On July 30, 2012, BLM provided the tribes with copies of the survey report for their review and comment. The Yavapai Prescott Tribe provided comments on the report. The Gila River Indian Community concurred with BLM's evaluations of National Register eligibility, but requested more information on the preferred alternative (which had not yet been identified) in order to comment on the effects of the Project. The Hopi and other tribes also requested continuing consultations.

On November 14, 2012, certified letters were sent to the eight tribes regarding the availability of the Draft EIS and summarizing previous consultation and coordination with the tribes. This letter was also an invitation for the tribes to attend the public hearings to be held regarding the draft EIS. No comment letters were received from any of the tribes regarding the draft EIS.

The final EIS along with a transmittal letter was sent to the above listed tribes on July 17, 2013. A letter updating the tribes on the Project and providing information on the Supplemental Cultural Resource Report was sent to the tribes along with a copy of the report on July 31, 2013. The Hopi Tribe Cultural Preservation Office responded with a letter dated August 6, 2013 indicating that an administrative meeting to consult on the Project and potential adverse effects on cultural resources significant to the Hopi Tribe would not be necessary if all identified eligible prehistoric properties are avoided by the Project. The Gila River Indian Community THPO responded with a letter dated August 28, 2013 stating they concur with the finding of no adverse effect.

4.2.3 Governor's Consistency Review

The Governor's Office initiated its consistency review of the proposed RMPA/final EIS on July 2, 2013 and in a letter dated August 22, 2013, they did not identify any inconsistencies concerning state or local plans, policies, and programs in accordance with the planning regulations at 43 CFR Part 1610.3-2(e).

5 ENVIRONMENTAL PROTECTION MEASURES; BEST MANAGEMENT PRACTICES; AND LAWS, ORDINANCES, REGULATIONS AND STANDARDS APPLICABLE TO THE SELECTED ALTERNATIVE

5.1 Applicant-committed Environmental Protection Measures

Applicant-committed environmental protection measures are actions, practices, or design features that are part of the Selected Alternative and will be implemented by APS. Under the Selected Alternative, APS will implement the applicant-committed environmental protection measures and BMPs (outlined in detail in Section 2.9, of the final EIS) to minimize adverse impacts of the Project to sensitive environmental resources. These measures include actions and design features related to air quality, cultural resources, geology and minerals, hazardous materials and hazardous and solid waste; public health and safety; paleontology; recreation and special designations; socioeconomics and environmental justice; soils; transportation and traffic; vegetation resources, including saguaro cactus, noxious and invasive weeds, and special status plants; visual resources; and wildlife resources including special status wildlife and migratory birds. These are conditions of approval for the ROW authorization by the BLM, and they are binding in the event that the facility should be transferred or operated by another entity.

5.2 Other Features, Management Prescriptions, and Considerations for the Selected Alternative

There are a number of management prescriptions and other considerations for the Selected Alternative. They are included for one or more of the following reasons: 1) they are already required by law or regulation, 2) they are BMPs or management techniques that could be readily applied to reduce impacts regardless of alternative, 3) they were developed to address issues specific to the Project Area and could be readily applied to reduce impacts, 4) they pertain to actions and/or plans already occurring and/or over which the BLM has no jurisdiction, and 5) they pertain to BLM decisions related to the Project Area that are independent of decisions with respect to the Selected Alternative (i.e., BLM decisions regarding the Selected Alternative would not necessitate changes to decisions related to these items and vice versa).

5.2.1 Plan of Development

A Plan of Development (POD) is required before the BLM decides to issue a ROW grant pursuant to BLM Instruction Manual (IM) No. 2011-060 (Feb. 7, 2011) and 43 CFR § 2804.25(b). The BLM ROW policy requires that the installation of the transmission line be consistent with the approved POD. If there were to be any unanticipated changes to the POD, the BLM would assess the potential effects of the post-final EIS alterations to the POD by preparing a determination of NEPA adequacy. APS has prepared and submitted a sufficient POD to the BLM that addresses pertinent aspects of Project development, including but not limited to transmission line and access road construction and maintenance; vegetation removal; natural, cultural, and biological resources mitigation and monitoring; and site reclamation. The final POD will incorporate, as applicable, a variety of site-specific plans. A final POD is required, and will be attached to any Notices to Proceed (NTPs) to construct.

5.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Under the Selected Alternative, APS must comply with all applicable laws, ordinances, regulations, and standards (LORS), and must obtain and meet the requirements of all needed permits.

5.2.3 Future ROW Requests

The Selected Alternative establishes a 200-foot-wide single-use utility corridor on BLM-managed public land north of SR 74 that directly corresponds to the 200-foot-wide ROW for the Project. The nature of this corridor designation limits development on BLM-managed public lands north of SR 74 to the Project; any future requested ROWs for additional development would require consideration of amending the RMP, as the corridor designated by the Selected Alternative is exclusive only to the Project.

The Selected Alternative also establishes a multiuse utility corridor on BLM-managed public land south of SR 74. As described in Section 4.1.3 of the final EIS, future development of linear utilities within the multiuse utility corridor would require site-specific analyses of the impacts to resources within the corridor prior to authorization of such utilities.

6 MITIGATION MEASURES

As required in the BLM *NEPA Handbook*, H-1790-1, and 40 CFR § 1505.2(c), all practicable mitigation measures to avoid or minimize environmental harm from the Selected Alternative have been adopted according to federal laws, rules, policies and regulations. The Project includes measures, terms, and conditions including avoidance, minimization, and mitigation measures provided in the final EIS Chapter 4 (Environmental Consequences), as included in this ROD (see **Attachment B**).

The complete language of these measures, terms, and conditions is also provided in the current POD for the Project, and will be stipulated in the ROW grant for compliance purposes.

Comments submitted in conjunction with protests on the proposed RMPA (see **Section 10**) emphasized the need for wildlife surveys in the Project Area. Section 4.16.3 of the final EIS, which contains mitigation measures for wildlife resources including special status wildlife and migratory birds states, “Pre-construction surveys would be implemented during the migratory bird nesting season to locate raptor and other migratory bird nests. Surveys would be conducted in the layout/project planning phase so that sensitive areas (such areas with a high density of tortoises) can be identified and avoided if possible; and then again immediately prior (within a few days) to construction.” Additionally, as a part of consideration of any future ROW requests submitted for the multiuse corridor on BLM-managed public land south of SR 74, the need for wildlife surveys would be evaluated in conjunction with required environmental analysis described in Section 4.1.3 of the final EIS.

7 MONITORING AND ENFORCEMENT

A monitoring and enforcement program will be adopted and summarized where applicable for any mitigation (40 CFR § 1505.2(c)). Agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation (40 CFR § 1505.2(c))

and other conditions established in the final EIS and committed as part of the decision will be implemented by the agency or other appropriate consenting agency. The agency will:

- include appropriate conditions in grants, permits, or other approvals;
- condition funding of actions on mitigation;
- upon request, inform cooperating or commenting agencies on the progress in carrying out mitigation measures that have been proposed and that were adopted by the agency making the decision; and,
- upon request, make available to the public the results of relevant monitoring (40 CFR § 1505.3).

The BLM or its designated representative will monitor on-site conditions during and after construction, as described in **Attachment B** of this ROD. The environmental and construction compliance monitoring plan for the Project will be an attachment to the final POD and will be included in the NTP. This plan establishes the team and process with which the BLM will monitor compliance with the required mitigation measures, stipulations, and other conditions of approval, including establishing criteria for successful implementation as applicable. The plan will be implemented and revised as needed to ensure environmental compliance.

As the federal lead agency for the Project under NEPA, the BLM is responsible for ensuring compliance with all adopted mitigation measures (**Attachment B**) for the Project in the final EIS. The complete language of all the measures is required by, and will be contained in the ROW grant as terms and conditions, and is in the current POD. Failure on the part of APS, as the grant holder, to adhere to these terms and conditions could result in various administrative actions up to and including a termination of the ROW grant and requirement to remove the facilities and rehabilitate disturbances.

8 PUBLIC INVOLVEMENT

The BLM has taken a variety of steps to inform the public throughout the EIS process. Special interest groups, American Indian tribes, and local, state, and federal agencies were informed about the Proposed Action and alternatives for this Project, and feedback was solicited from these interested parties to help define the scope and alternatives for this Project.

8.1 Scoping

The public was provided a 45-day scoping period at the beginning of this Project and the EIS process to identify potential issues and concerns associated with the Proposed Action. As part of NEPA requirements, a Notice of Intent (NOI) to prepare the EIS was posted for public inspection on the *Federal Register* website on April 8, 2011, and published in the *Federal Register* on April 11, 2011.

A notice for the Project was published in local newspapers and a news release was sent to media outlets. A scoping letter was prepared and sent to a list of 538 interested individuals, agencies, and organizations compiled using contact lists from previous projects. The BLM contacted eight Indian tribes to notify them of the Proposed Action and initiate formal consultation in preparation of the EIS. Certified letters were sent to elected tribal leaders, with copies to tribal cultural resource staff, describing the proposed Project and draft RMPA, requesting comments,

offering the opportunity to meet, and describing plans to conduct cultural resource inventories and to share the inventory results with tribes.

Three public scoping meetings and one agency scoping meeting were held for the Project at locations around the State of Arizona. Attendees at the scoping meetings were provided with handouts describing the Project, the RMPA process, as well as the NEPA process. Comment forms were also provided to all attendees to facilitate submission of written scoping comments. The public was given the option to provide comments during the meeting, using regular mail, fax, or e-mail. In addition, information regarding the Project and the NEPA process was posted on the BLM's project website and on a toll-free telephonic information line. In addition to the public scoping, on June 8, 2011, an Economic Strategies Workshop was conducted for this Project to comply with the BLM's Land Use Planning Handbook during the EIS and Land Use Plan Amendment process. The purpose of the workshop was to identify BLM management opportunities that further the social and economic goals of area communities.

The official scoping period for the Sun Valley to Morgan Transmission Line Project occurred April 11 through May 27, 2011. However, the BLM continued to accept and consider written comments for inclusion in the scoping process until June 2011, and has continued to accept comments for general consideration in accordance with NEPA guidelines. A detailed description of the scoping process, scoping comment analysis, and preliminary issues, concerns, and opportunities is contained in the Scoping Report dated August 10, 2011, and available online at <http://www.blm.gov/az/st/en/prog/energy/aps-sunvalley.html>.

Newsletters that provided a project status/update were mailed to 37,085 addresses on February 27, 2012.

8.2 Draft EIS Availability and Comments Received

The draft EIS review period was initiated by publication of the Notice of Availability in the *Federal Register* on November 9, 2012 with the 90-day comment period ending February 8, 2013. The Draft EIS was distributed as follows:

- A Notice of Availability (NOA) was published in the *Federal Register* specifying dates for the comment period and the date, time, and location of the public comment meetings.
- A news release was provided by the BLM at the beginning of the comment period on the draft EIS. The news release was submitted to the same news organizations as for the initial public scoping announcement.

The mailing list for notifying the public about the APS Sun Valley to Morgan Transmission Line Project was originally compiled from multiple sources including BLM mailing lists for other area projects, APS' mailing list, the ACC intervener list, known special interest and environmental group lists, and area research. Additions were made to the mailing list via public meeting sign-in sheets and individual requests. Addresses that came back as undeliverable were removed from the mailing list. The distribution of the draft EIS and the final EIS was based on responses to a postcard mailing announcing the upcoming publication of the documents to the project mailing list.

There were a total of 1,005 contacts on the Project mailing list. Post cards were sent to everyone on the Project mailing list to determine which contacts were interested in receiving the draft EIS. CDs and hard copies of the draft EIS were distributed as requested by the post card recipients.

- A total of 131 CDs and/or hardcopies of the draft EIS were distributed to interested parties identified in the EIS mailing list.
- Copies of the draft EIS were made available for review at local libraries as well as the BLM's Arizona State Office, the Phoenix District Office, and the Hassayampa Field Office.
- The draft EIS was made available via the Project website at <http://www.blm.gov/az/st/en/prog/energy/aps-sunvalley.html>.

Three public hearings were held at locations around the State of Arizona where BLM and APS personnel, were available to answer questions from the public about the EIS analysis and proposed Project, respectively.

The BLM received a total of 1,279 comment letters and emails on the draft EIS. This included one special interest group form letter (i.e., email campaign) and five other email form letters originating from individual interested parties; and the oral comments presented at the draft EIS Public Hearings. All comments on the draft EIS that were received, were read, and given careful consideration, with necessary changes incorporated into this final EIS.

9 FINAL EIS AVAILABILITY

An NOA for the final EIS was published in the *Federal Register* on July 19, 2013. Prior to publication of the final EIS, 2,081 post cards were sent to addresses on the Project mailing list to determine which contacts were interested in receiving the final EIS.

- A total of 159 CDs and/or hard copies of the final EIS were distributed to interested parties identified in the EIS mailing list.
- Copies of the final EIS were made available for review at local libraries as well as the BLM's Arizona State Office, the Phoenix District Office, and the Hassayampa Field Office.
- The final EIS was made available via the Project website at <http://www.blm.gov/az/st/en/prog/energy/aps-sunvalley.html>.

The public was provided a 30 day protest period for the proposed RMPA, with a deadline for receipt of protests of August 19, 2013.

10 PROTEST RESOLUTION

Pursuant to BLM's land use planning regulations in 43 CFR 1610.5-2, any person who participated in the land use planning process for the Project and who has an interest that is or may be adversely affected by the planning decision may protest approval of the proposed Bradshaw-Harquahala RMP amendment contained in the final EIS within 30 days from the date the EPA publishes the NOA in the *Federal Register*. Detailed information on protests may be found on the BLM Washington Office website: http://www.blm.gov/wo/st/en/prog/planning/planning_overview/protest_resolution/protestreports.html.

- The RMP amendment decision considered whether to 1) establish a single-use utility corridor on public lands north of SR 74, and a multiuse utility corridor south of SR 74; and 2) change the existing VRM Class designation of 2,362 acres north of SR 74 and 1,013 acres south of SR 74 from VRM Class III to VRM Class IV to allow for the use of the newly established utility corridors. The BLM received 2 protest letters during the 30-day protest period provided for the proposed RMPA and a total of three protest issues were identified in the protest letters. The identified issues are: The BLM did not satisfactorily disclose the impacts of the Proposed Action on the SR 74 scenic corridor.
- Because of inadequate wildlife surveys, it is likely the vast majority of species present in the Study Area were not identified. There is no way the BLM can assume that the impacts are negligible based on such limited data.

Survey methodologies used for birds do not provide an adequate representation of species in the area, nor are the potential impacts to several species from loss of habitat provided adequate attention.

The BLM analyzed the protest issues and determined that the proposed plan amendment and accompanying NEPA analysis complied with applicable laws, regulations, and BLM policies. Accordingly, there is no basis for changing the proposed planning decision and the protests have been denied as explained in the Director's separate Protest resolution report that can be found on the website provided above.

11 NOTICE OF MODIFICATIONS AND CLARIFICATIONS MADE TO THE SELECTED ALTERNATIVE BASED ON PROTESTS

No modifications or clarifications were made to the Selected Alternative as a result of protests.

12 ERRATA TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

The errata section of this ROD illustrates the BLM's revisions to the final EIS.

On August 12, 2013, the BLM received a letter from Mr. George E. Molnar indicating that Appendix 4B to the final EIS, Past, Present, and Reasonably Foreseeable Projects, Developments, Disturbances and Activities, did not contain six mining claims held by Mr. Molnar. The following addition is made to Appendix 4B on page 4B-15.

The addition of the mining claims to Appendix 4B does not affect the impact analysis contained in the final EIS. However, the text on page 4-34, Section 4.4.2.2, Proposed Action, first sentence of the second paragraph is revised as follows (revised text is in bold):

Presently there are **four** active lode mining claims or portions of claims, and one metallic mineral district including or adjacent to these claims, located within the Proposed Action.

Appendix 4B
Past, Present, and Reasonably Foreseeable Projects, Developments, Disturbances, and Activities (Continued)

Project, Development, Disturbance, or Activity	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Within CIA	Status	Source
G.E.M #3*	T6N R1W Sections 30 and 31	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC419575		All	Present	BLM
M.R.S. #5	T6N R2W Section 25 SE	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC355752.		All	Present	BLM
M.S. #1	T6N R2W Section 25 SW SE	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC388019.		All	Present	BLM
M.S. #2	T6N R2W Section 25 SW	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC388020.		All	Present	BLM
M.S. #3	T6N R2W Section 25 NW SW	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC388021.		All	Present	BLM
M.S. #4	T6N R2W Section 25 SW T6N R2W Section 26 SE	Minerals	Active mining claim held by George E. Molnar. Serial Number AMC388022.		All	Present	BLM

*This claim was located 10/02/12, which was after publication of the draft EIS.

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13 FINAL AGENCY ACTION

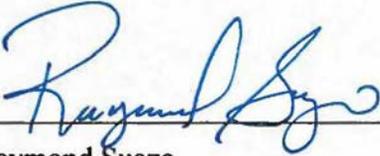
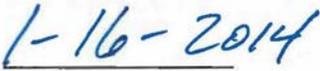
13.1 Bradshaw-Harquahala RMP Amendment Decision

The decision is hereby made to amend the Bradshaw-Harquahala RMP to:

- Designate a single-use 200-foot wide utility corridor on approximately 219 acres of BLM-managed public lands north of SR 74, corresponding to the Sun Valley to Morgan ROW grant, which will follow the Proposed Action route, and be named Sun Valley to Morgan North.
- Designate a multiuse utility corridor on 1,013 acres of BLM-managed public lands south of SR 74, named Sun Valley to Morgan South.
- Change the existing VRM Class designation of 2,362 acres north of SR 74 and 1,013 acres south of SR 74 from VRM Class III to VRM Class IV, to allow for the newly established utility corridors (**Figure 2.1-5, Attachment A**).

It is my decision to amend the Bradshaw-Harquahala RMP as detailed above. This decision is effective on the date this Record of Decision is signed.

Approved By:

 _____ Raymond Suazo	 _____ Date
State Director, Arizona State Office Bureau of Land Management	

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13.2 Right-of-Way Grant Decision

The decision is hereby made to issue a ROW on BLM-managed public lands following the route described in the Selected Alternative, presented and analyzed as the Preferred Alternative in the proposed RMPA/final EIS dated June 2013, and subject to the BMPs and mitigation measures appended to and made a part of this ROD and the ROW grant. The BLM approves issuance of a 30-year ROW grant to APS to construct, operate, maintain, and decommission for the portion of a 500/230kV transmission line and centerline access that will be located on BLM-managed public lands. In conjunction with approving construction of centerline access along the transmission line route, the decision is also hereby made to designate the centerline access on BLM-managed public lands north of SR 74 to be used for construction, operation, and maintenance of the transmission line as an Administrative Access Route. This designation is under the authority of 43 CFR 8342, and limits use of the Access Route to BLM authorized use only.

The approved ROW grant will be within the newly established utility corridors along SR 74 and within the utility corridor previously designated in the RMP along the CAP, northeast of the Sun Valley Substation. Any work on BLM-managed public lands outside the ROW will require additional authorization by the BLM.

APS will post a performance bond to ensure adequate adherence to all terms and conditions and stipulations (see **Attachment B** of this ROD) of the ROW grant and any other BLM authorizations. The bond will apply to the following:

- Restoration and reclamation of disturbed areas and other requirements relative to the construction phase of the Project.
- Liability for damages or injuries resulting from APS' activities relative to construction, operation, maintenance, and decommissioning of the approved facilities.
- Termination of the ROW in the event the holder fails for whatever reason to comply with the terms, conditions, and special stipulations of the ROW grant.

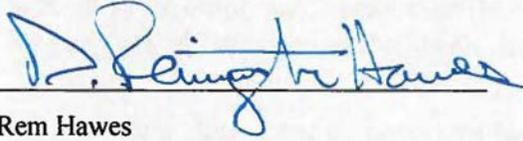
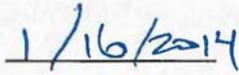
Portions of the bonded amount may be released as specific tasks are completed and accepted by the BLM authorized officer. A portion of the bond will be retained for the life of the grant to ensure continued compliance with the conditions of the grant. This bond may be periodically adjusted by the authorized officer when, in his/her sole determination, conditions warrant such a change. In addition, when requested by the authorized officer, the holder shall furnish a report within 90 days estimating all costs for the BLM to fulfill the terms and conditions of the grant in the event that the holder was not able. The ROW grant will contain the legal description of the ROW, the amount of the required bond, and the construction monitoring plan.

As previously discussed in **Section 3.1.1.1** above, the Cooperating Agencies have not voiced any concern regarding the BLM Preferred Alternative in the final EIS, which has become the Selected Alternative in this ROD. Those with jurisdiction over any portion of the Project route will issue separate decisions/authorizations as they deem necessary. Once ROW documents have been approved by BLM, and all affected land owners and/or land management agencies have issued all required decisions/authorizations, actual on-site construction or other surface disturbing activities on BLM-managed public lands will be authorized by the issuance of one or more written NTPs by the BLM authorized officer. These NTPs will contain the final POD, and

will specify authorized activities, location of the authorized activities, and the timing of the authorized activities. Should non-compliance issues, environmental issues, or other problems be encountered during authorized activities, the BLM authorized officer may amend or rescind any previously issued NTPs.

It is my decision to approve a ROW grant to APS Company as described above, subject to the terms, conditions, stipulations, POD, and environmental protection measures developed by the Department of the Interior, Bureau of Land Management, and reflected in this Record of Decision. This decision is effective on the date this Record of Decision is signed.

Approved by:

	
Rem Hawes	Date
Field Office Manager, Hassayampa Field Office Bureau of Land Management	

13.3 Administrative Remedy Process

This decision may be appealed to the Interior Board of Land Appeals (IBLA, the Board), Office of the Secretary, in accordance with regulations contained in 43 CFR, Part 4 and Form 1842-1. If an appeal is taken, your notice of appeal must be filed within 30 days from receipt of this decision. The appellant has the burden of showing the decision appealed is in error. Your notice of appeal must be mailed to:

Bureau of Land Management
APS Sun Valley to Morgan Project
Phoenix District Office
21605 North 7th Avenue
Phoenix, Arizona 85027

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision, to the IBLA, and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- The relative harm to the parties if the stay is granted or denied;
- The likelihood of the appellant's success on the merits;
- The likelihood of irreparable harm to the appellant or resources if the stay is not granted; and,
- Whether the public interest favors granting the stay.

A copy of the appeal, statement of reasons, and all other supporting documents should also be sent to:

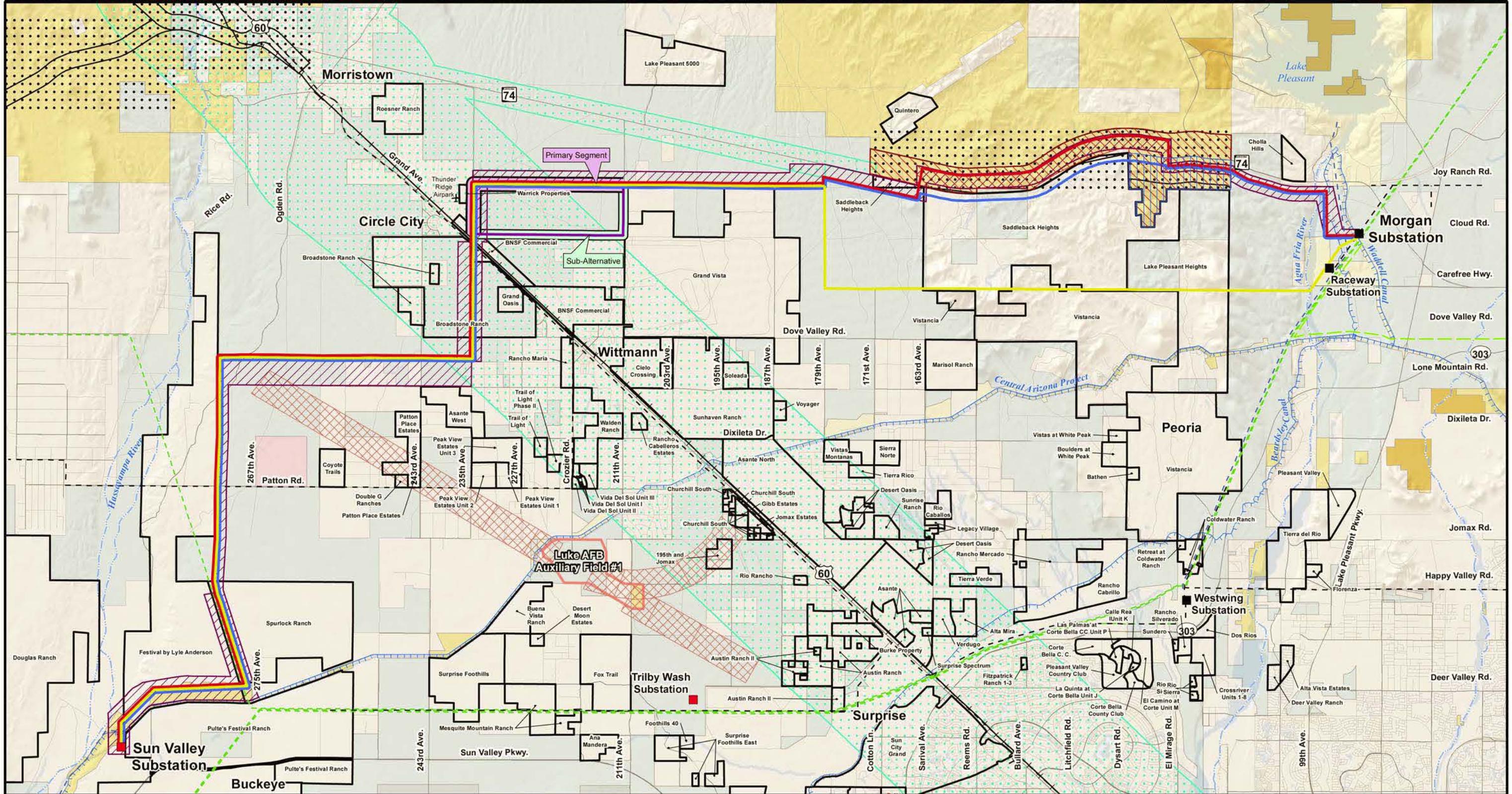
Office of the Field Solicitor, USDO I
Attention: John Guadio
Sandra Day O'Conner U.S. Courthouse, Suite 404
401 West Washington Street, SPC 404
Phoenix, Arizona 85003-2155

14 REFERENCES

- APS (Arizona Public Service Company). 2009. Renewable Transmission Action Plan.
- Arizona State Legislature. 2007. 40-360.03. Applications prior to construction of facilities. <http://www.azleg.state.az.us>. March 7, 2013.
- BLM (Bureau of Land Management). 2013. APS Sun Valley to Morgan 500/230kV Transmission line Project Final Environmental Impact Statement and Proposed Resource Management Plan Amendment. June 2013.
- BLM (Bureau of Land Management). 2012. APS Sun Valley to Morgan 500/230kV Transmission Line Project Draft Environmental Impact Statement and Draft Resource Management Plan Amendment. October 2012.
- BLM (Bureau of Land Management). 2005. Land Use Planning Handbook. Bureau of Land Management Handbook H-1601-1. Washington, D.C.
- BLM (Bureau of Land Management). 1988. Phoenix Resource Management Plan and Environmental Impact Statement.
- DTCT (Desert Tortoise Compensation Team). 1991. Compensation for the desert tortoise. A report prepared for the Desert Tortoise Management Oversight Group. Approved November 1991.

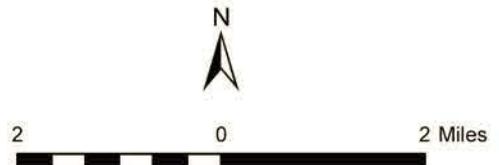
Attachment A

Figures



- Legend**
- Sun Valley to Morgan Proposed Action Right-of-Way
 - Alternative 1 Proposed Action with Additional Corridor
 - Alternative 2 South of SR 74
 - Alternative 2 Corridor South of SR74
 - Alternative 3 Carefree Highway
 - Sub-alternative: State Trust Land Route Variation
 - ACC Certificated Route
 - BLM Transportation Corridor
 - Existing High-Voltage Substation
 - Approved High-Voltage Substation
 - Existing 500kV Transmission Line
 - Existing 230kV Transmission Line
 - Existing 69kV Transmission Line
 - Luke Air Force Base (AFB) Auxiliary Field #1
 - Auxiliary Field #1 Accident Potential Zones
 - Existing and Future Development Areas
 - Maricopa County Scenic Corridor

- Surface Land Management**
- BLM
 - USBR
 - County
 - Military
 - Local or State Parks
 - State Trust Lands
 - Private



Base Map: ESRI Shaded Relief accessed at ArcGISOnline.com

Figure 2.1-1
Action Alternatives
Sun Valley to Morgan 500/230kV Transmission Line EIS Project

Under Current RMP

The Boulders Staging Area

74

74

Castle Hot Springs Rd

After RMP Amendment

The Boulders Staging Area

74

74

Castle Hot Springs Rd

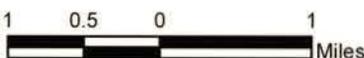
Single-use Utility Corridor

Legend

- Sun Valley to Morgan Proposed Action Route
- 200-foot-wide ROW & Single-use Utility Corridor
- The Boulders Staging Area

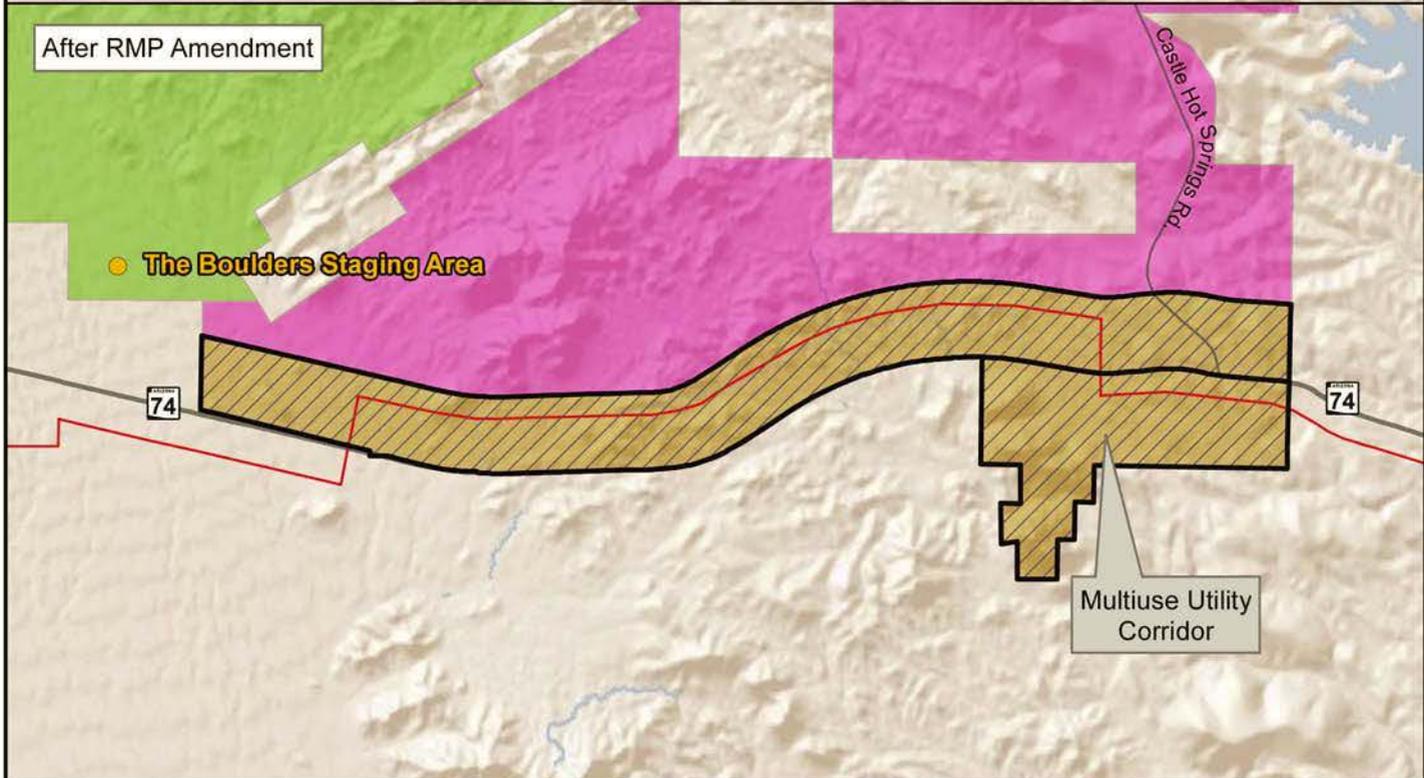
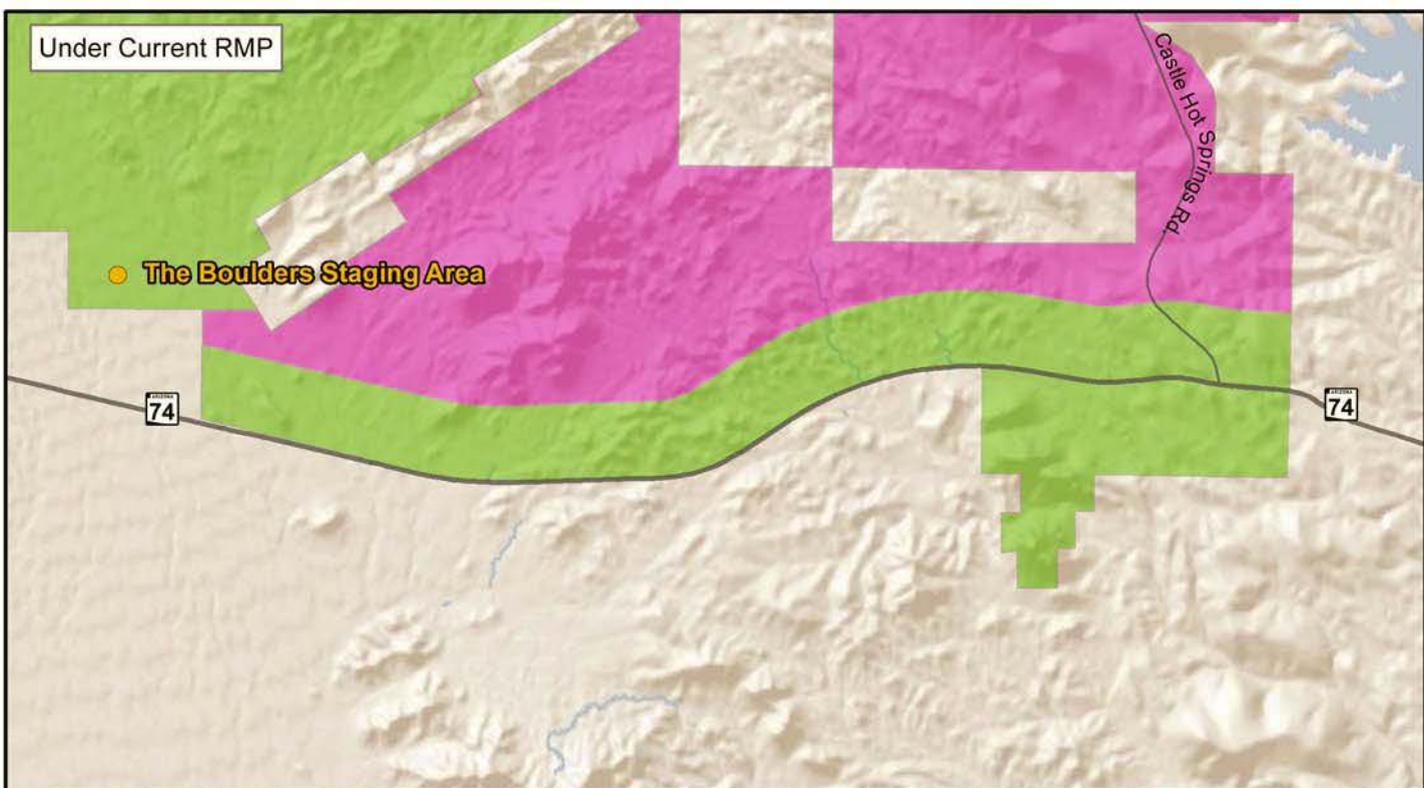
VRM Class

- II
- III
- IV



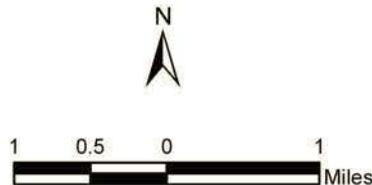
Base Map: ESRI Shaded Relief accessed at ArcGISOnline.com BLM 2011

Figure 2.1-2 Proposed Action - RMP Amendments Sun Valley to Morgan 500/230kV - Transmission Line EIS Project



Legend

-  Sun Valley to Morgan Proposed Action Route
 -  Multiuse Utility Corridor
 -  The Boulders Staging Area
- VRM Class**
-  II
 -  III
 -  IV



Base Map: ESRI Shaded Relief accessed at ArcGISOnline.com
BLM 2011

Figure 2.1-3
Alternative 1 -
RMP Amendments
Sun Valley to Morgan 500/230kV -
Transmission Line EIS Project

Under Current RMP

The Boulders Staging Area

Castle Hot Springs Rd

74

74

After RMP Amendment

The Boulders Staging Area

Castle Hot Springs Rd

74

74

Multiuse Utility Corridor

Legend

- Alternative 2 Route
- Multiuse Utility Corridor
- The Boulders Staging Area
- VRM Class II
- VRM Class III
- VRM Class IV

Base Map: ESRI Shaded Relief accessed at ArcGISOnline.com BLM 2011



Figure 2.1-4 Alternative 2 - RMP Amendments Sun Valley to Morgan 500/230kV - Transmission Line EIS Project

Under Current RMP

The Boulders Staging Area

74

74

Castle Hot Springs Rd

After RMP Amendment

The Boulders Staging Area

74

74

Castle Hot Springs Rd

Single-use Utility Corridor

Multiuse Utility Corridor

Legend

- Sun Valley to Morgan Proposed Action Route
- 200-foot-wide ROW & Single-use Utility Corridor
- Multiuse Utility Corridor
- The Boulders Staging Area

VRM Class

- II
- III
- IV



Base Map: ESRI Shaded Relief accessed at ArcGISOnline.com BLM 2011

Figure 2.1-5 Preferred Alternative - RMP Amendments Sun Valley to Morgan 500/230kV - Transmission Line EIS Project

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Attachment B

Terms, Conditions, and Stipulations Including:

- **Best Management Practices**
- **Monitoring and Mitigation Measures**

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Best Management Practices

A number of Best Management Practices (BMPs) will be implemented to reduce the potential for short- and long-term impacts to identified resources. These BMPs will be implemented by APS, its agents, and contractors during construction and operation of the Sun Valley to Morgan 500/230kV Transmission Line Project and will be incorporated into all construction specifications and contract documents, as appropriate. All construction personnel will be required to follow them.

Air Quality

1. Project activities will be in compliance with all applicable federal, state, and local laws and regulations concerning prevention and control of air pollution during construction and operation. The current POD contains, and the ROW Grant will include these BMPs.
2. APS and/or the construction contractor will obtain necessary air quality (i.e., fugitive dust control) permits before starting construction or operating equipment that would result in regulated atmospheric or fugitive dust emissions.
3. Project personnel will be required to implement measures to minimize fugitive dust emissions from construction activities. To accomplish this, the following measures will be implemented:
 - For the duration of construction activities, actively disturbed areas will be stabilized through the use of water or BLM-approved chemical dust suppressants as required to meet dust control plans and permits issued by state and local regulators. Disturbed areas, including soil storage piles, will be maintained and stabilized as appropriate to minimize fugitive dust emissions. Active stabilization may not be required if local conditions (i.e., soil moisture, natural crusting, low winds) are adequately maintaining ambient air impacts within requirements of the dust control permit and plan.
 - Bulk soil material stored onsite that is a possible fugitive dust source will be actively wetted, compacted, contoured, protected by wind breaks, controlled with BLM-approved chemical suppressants or a combination of these practices as needed, to minimize air quality impacts.
 - Fugitive dust emissions will be minimized by enforcing construction vehicle speed limits on dirt/gravel roads and a combination of active and passive dust suppression measures, including:
 - Unpaved roads and yards onsite and within the authorized ROWs will be watered as necessary when being used. If dust suppressants other than water were to be proposed by the construction contractor, it will require prior approval by the BLM and possible NEPA analysis.

- Combustion emissions from mobile sources will be minimized by proper maintenance and tune-up of equipment.

Landscape Preservation and Impact Avoidance

1. All construction vehicle movement outside the ROW will be restricted to predesignated access, contractor-acquired access, or public roads. To the extent practicable, construction vehicle movement within the ROW will be limited to predesignated disturbance areas and access routes.
2. To the maximum extent practical, all trees, native shrubs, and other vegetation will be avoided or protected during construction activities except where safety clearances are required for structures and equipment, approved construction and permanent roads, construction yards and staging areas, and excavation operations.
3. All areas around transmission line structures will be backfilled, recontoured, and returned as close as possible to the original condition and grade.
4. Wherever possible stream channels, steep slopes, or sensitive environmental areas will not be used for equipment or materials storage or stockpiling; construction staging or maintenance, field offices, hazardous material or fuel storage, solid waste, handling, or temporary access roads.
5. Excavated or graded materials will not be stockpiled or deposited on or within 100 feet of any steep slopes, where defined, or seasonally active ephemeral drainages.
6. The width of construction and new temporary access roads will be kept to the absolute minimum needed, avoiding sensitive areas where possible, and limiting disturbance to vegetation.
7. When and where applicable, landscaping standards, including clearing of native vegetation, will be followed as prescribed by local land use and management agencies when work is within their jurisdictions. The BLM Authorized Officer will specify required special handling and recovery techniques to comply with the Arizona Native Plant Law.
8. Project facilities within the authorized rights-of-way will be managed for safe and reliable operation while maintaining vegetation and wildlife habitat to the maximum extent feasible.

Erosion and Sediment Control

1. Planting of native grasses, forbs, trees, or shrubs beneficial to wildlife, or placing of riprap and other materials as appropriate, will be used to prevent and minimize the potential for erosion during construction of project facilities and during the period needed to reestablish permanent vegetative cover on disturbed sites. Sediment fences will be used where appropriate to limit wind and water erosion. Application of water or chemical suppressants, as approved by BLM, will be used in disturbed areas during construction to limit wind erosion.
2. Final erosion control and site restoration measures will be initiated as soon as practical after a particular area is no longer needed for construction, stockpiling, or access. Clearing schedules will be arranged to minimize exposure of soils.
3. Cuts and fills for access roads and work areas will be sloped to prevent erosion and to facilitate revegetation.
4. Where appropriate (i.e., adjacent to sensitive areas or resources), signs will be placed along access roads to discourage off-road vehicle use and Project personnel from driving into unauthorized adjacent areas.
5. Soil or rock stockpiles, excavated materials, or excess soil materials will not be placed near sensitive habitats, including perennial, intermittent, and ephemeral drainage channels, where they may erode into these habitats or be washed away by high water or storm runoff. Long-term soil stockpiles will be revegetated to prevent wind and water erosion.
6. Treading on areas not immediately involved in Project construction activities will be avoided to reduce potential wind erosion and fugitive dust generated during construction.
7. When excessive soil moisture conditions are present in a construction area, construction activities will be relocated or diverted to drier areas to avoid excessive surface rutting in those areas. If wet areas cannot be avoided, weight dispersing systems (i.e., wide-track or balloon tires) or materials to minimize damage to the substrate (i.e., geotextile cushions, pre-fabricated pads, etc.) will be utilized.

Transmission Line ROW

1. Where existing soil and terrain conditions allow, the upper 12 to 18 inches of soil will be removed from structure foundation excavation areas and stockpiled for later use in site restoration.
2. Surface elevations will be returned to approximate pre-Project conditions as practicable.

3. Where roads that service transmission facilities cross fences, a wire gate will be installed to standard BLM specifications. The gates will be built prior to the construction activities and will be kept closed except during active construction at the fence site.
4. If construction activities cause damage to existing range improvements (such as pipelines, fences, troughs, etc.), they will be fixed using material that meets or exceeds the quality of the existing improvement. If damage occurs, the BLM and livestock operator will be notified immediately. If damage occurs during active livestock grazing, repairs will be made within 24 hours.
5. To promote public safety in proximity to transmission line facilities within areas of frequent visitation by the public, fence panels will be installed at the base of guy wires on transmission line structures, and the first 10 feet of guy wires will be marked with safety reflectors, high-visibility tape or plastic, or a similar material to make them highly visible to the public.

Biological Resources

1. The Project will adhere to an integrated pest management plan prepared for the Project (see POD).
2. Current guidelines and methodologies (APLIC 2012, 2006) will be used in the design of the proposed transmission facilities to minimize raptor and other bird electrocution and collision potential.

Cultural Resources

Specific cultural resource inventory and protection measures to be employed for the Project will be outlined in the Project-specific Section 106 Memorandum of Agreement, if needed. If needed, the Programmatic Agreement will be on file at the BLM's Phoenix District Office, and the Arizona State Historic Preservation Office. The POD contains the Section 106 Memorandum of Agreement, which will contain the following provisions:

- Development of a Historic Properties Treatment Plan defining the treatment to be implemented at specific historic properties to avoid and mitigate adverse effects in compliance with Section 106 of the NHPA.
- Completion of additional Class III field inventories if the approved alternative contains previously unsurveyed areas, including portions of the area of potential effect on private land.
- Development and implementation of a Monitoring Plan that will specify procedures for monitoring of avoided historic properties during construction and through the life of the Project.

- Development and implementation of a Discovery Plan with procedures and timeframes for ceasing work, notifying the BLM and ASLD, protecting and evaluating the discovery, and conducting consultations to determine appropriate treatment and resumption of construction.
- The Discovery Plan will include procedures for addressing discoveries of human remains and other items protected under the Native American Graves Protection and Repatriation Act on federal land and applicable State laws on State, County, municipal, and private lands.
- Cultural resource sensitivity training for Project workers to avoid damage to cultural resources and ensure that Project personnel understand procedures in the Monitoring and Discovery Plan.

(If needed, the general guidance for Treatment of Historic Properties from a Programmatic Agreement will be added as appropriate.)

Paleontological Resources

1. If paleontological resources are discovered during construction, the BLM will be notified immediately and measures will be taken to protect the resource. An appropriately sized buffer zone will be demarcated around any discovery and construction will not resume within this buffer zone until authorization is given by the BLM Authorized Officer. The significance of the resource will be evaluated and whether or not avoidance was possible. Stabilization and measures to mitigate construction damage might also be required even if avoidance was possible. Should avoidance prove infeasible, further procedures to protect the resource will be determined by the BLM.

Noxious and Invasive Weed Management

1. A noxious and invasive weed survey will be completed prior to any earth disturbing activity including cross-country travel. Noxious or invasive weeds that may be located on the site will be managed according to methods tiered to the BLM's Phoenix District Offices' Weed Management Plans. Should chemical methods be approved, the lessee must submit a Pesticide Use Proposal to the Authorized Officer 60 days prior to the planned application date. A Pesticide Application Report must be submitted to the Authorized Officer by the end of each fiscal year following chemical application.
2. To eliminate the introduction of noxious and invasive weed seeds, roots, or rhizomes; all straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities will be certified free of plant species listed on the Arizona noxious weed list or specifically identified by the BLM Phoenix District Office.
3. To eliminate the introduction of noxious and invasive weed seeds, roots, or rhizomes; all source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation will be inspected and found to be free of plant species listed on the Arizona noxious weed list or specifically

identified by the BLM Phoenix District Office. Inspections will be conducted by a BLM-approved weed scientist or qualified biologist.

4. To eliminate the transport of vehicle-borne noxious and invasive weed seeds, roots, or rhizomes, all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities will be cleaned of soil and debris capable of transporting weed propagules prior to entering or leaving the work site or project area in a manner acceptable to the BLM Phoenix District Office Weed Coordinator or designated contact person.
5. Prior to entry of vehicles and equipment to a Project area, areas of concern will be identified, flagged, and recorded in the field by a weed scientist or qualified biologist in a manner acceptable to the BLM Phoenix District Office Weed Coordinator or designated contact person.
6. Prior to construction commencement, APS will ensure that all contractors, operators, or permit holders will receive information and training regarding noxious and invasive weed management and identification to all personnel who will be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and the importance of controlling existing populations of weeds will be explained.
7. To eliminate the transport of soil-borne noxious and invasive weed seeds, roots, or rhizomes, infested soils or materials will not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
8. Prior to Project approval, a site-specific noxious and invasive weed survey will occur and a weed risk assessment will be completed and provided to the BLM. Monitoring will be conducted for a period no shorter than the life of the permit or until bond release and monitoring reports will be provided to the BLM. If the spread of noxious and invasive weeds is noted on Project areas, appropriated weed control procedures will be determined in consultation with BLM personnel and will be in compliance with the appropriate BLM Handbook sections and applicable laws and regulations. All weed control efforts on BLM-managed public lands will be in compliance with BLM Handbook H-9011, H-9011-1 Chemical Pest Control, H-9014 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management. A pesticide Application Report must be submitted to the Authorized Officer by the end of the fiscal year following any chemical application.
9. Removal and disturbance of vegetation will be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).

10. Mixing of herbicides and rinsing of herbicide containers and spray equipment will be conducted only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
11. When managing weeds in areas of special status species, impacts of the treatment on such species will be carefully considered. Wherever possible, hand spraying of herbicides will be the preferred method in compliance with an approved Integrated Weed Management Plan and associated environmental impact analyses.

Reclamation

1. Reclamation will normally be accomplished with native species, if available. These will be representative of the indigenous species present in the adjacent habitat. Rationale for potential planting with selected non-natives will be documented. Possible exceptions could include use of non-natives for a temporary cover crop to out-compete weeds.
2. Seeding will occur during November through March to ensure a greater chance of success.
3. Reclamation release criteria are as follows:
 - Achieve an agreed upon percentage of the baseline perennial plant cover of selected comparison areas, normally like adjacent habitat. If the adjacent habitat is severely disturbed, a range site description may be used as a cover standard. Cover is normally crown cover as estimated by the point intercept method. Selected cover can be determined using a method as described in *Sampling Vegetation Attributes, Interagency Technical Reference* (BLM 1996). The reclamation plan for the project area will identify the site-specific release criteria and associated statistical methods in the reclamation plan or permit.
 - No noxious and invasive weeds will be allowed on the sites for reclamation release. Control of noxious and invasive weeds will follow an integrated pest management plan approved by the authorizing officer. A list of Arizona noxious weeds will be provided by the Authorized Officer.
4. Where local conditions allow, up to the first 12 to 18 inches of growth medium will be salvaged, where soil and terrain conditions allow, and stockpiled prior to disturbance for all areas to be reclaimed after construction. All disturbance areas to be reclaimed will be recontoured to blend as nearly as possible with the natural topography prior to revegetation. All compacted portions of the disturbance will be ripped to a depth of 12 inches unless solid rock is encountered. Adequate, fine-grain seedbed will be established to provide good seed to soil contact. Large blocks and clumps of soil with deep pockets will be avoided. This normally requires some type of tillage procedure after ripping.

5. All portions of access roads not needed for other uses as determined by the Authorized Officer will be reclaimed as soon as possible.
6. Mulching of the seedbed following seeding may be required under certain conditions, such as severe erosion.
7. Respread weed-free vegetation removed from the right-of-way to provide protection, nutrient recycling, and seed source.
8. The success of the vegetative growth on a reclaimed site may be evaluated for release no sooner than during the third growing season after earthwork and planting have been completed. Where it has been determined that revegetation success criteria have not been met, the agencies and the operator will meet to decide on the best course of actions necessary to meet the reclamation goal.
9. Where applicable, the following agencies will be consulted to determine the recommended plant species composition, seeding rates, and planting dates:
 - U.S. Fish and Wildlife Service
 - U.S. Natural Resources Conservation Service
 - U.S. Bureau of Land Management
 - Arizona Game and Fish Department
10. Grasses, forbs, shrubs, and trees appropriate for site conditions and surrounding vegetation will be included on the BLM-approved plant and seed mix list. Species chosen for a site will be matched for site drainage, climate, shading, resistance to erosion, soil type, slope, aspect, and vegetation management goals. Upland revegetation shall match the plant list to the site's soil type, topographic position, elevation, and surrounding natural communities.
11. Construction areas, including storage yards, will be free of waste material and trash accumulations, unless stored in appropriate containers.
12. All unused materials and solid waste will be removed from construction and storage sites during the final phase of work. Unused material may be sold or relocated to other work sites other than the Project. Solid waste will be placed in existing permitted solid waste management facilities.
13. Upon completion of construction, any land disturbed will be graded to provide proper drainage and blend with the natural contour of the land. Following grading and where appropriate, it will be revegetated using plants native to the area, suitable for the site conditions, and beneficial to wildlife.
14. Following completion of construction, all temporary staging areas and construction yards, will be removed from the site.

15. All construction roads not needed for ongoing operations and maintenance activities will be restored to the original contour, and made to discourage vehicular traffic when no longer needed for construction. Culverts will be removed as appropriate, road escarpments will be contoured and vegetated, and all road surfaces will be scarified to establish conditions appropriate for reseeded, drainage, and erosion prevention.

Visual Resources

1. The transmission structures will be finished with flat finish, similar in color Shadow Gray from the BLM color chart; the finish will be approved by the BLM.
2. Non-specular conductors and non-reflective and non-refractive insulators will be used to reduce conductor and insulator visibility.
3. In areas of frequent visitation by the public, the base of guy-wires on transmission structures will have fence panels, and the first 10 feet of guy wires will be marked with safety reflectors, high-visibility tape or plastic, or a similar material to make them highly visible to the public.
4. During the implementation of vegetation treatments, irregular margins will be created around treatment areas to better maintain the existing scenic character of the landscape.

Water Pollution Prevention and Monitoring

1. Water needs for soil stabilization during facility construction will be transported by truck or other methods from local water sources.
2. All federal and state laws related to control and abatement of water pollution will be complied with. All waste material and sewage from construction activities or project-related features will be disposed of off-site according to federal and state pollution control regulations.
3. All disturbed drainage channels will be reclaimed as soon as practical, to a standard for aesthetic value comparable to what existed prior to disturbance. Where appropriate, native species capable of bank stabilization will be used to revegetate all disturbed stream banks.
4. Diversion structures will be used to re-direct flows from any drainages potentially impacted by facility features and will be designed to minimize potential destabilization and erosion of adjacent and downgradient drainages.
5. Stormwater management plans will be implemented for Project construction and facility operation to minimize and control erosion from stormwater runoff, and are contained in the POD. During project construction, stormwater will be managed in compliance with applicable state and federal regulations, including compliance with requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater general permits, which will be obtained for the project. Stormwater management elements will include:

- Application of BMPs for erosion, sedimentation, and stabilization control during construction activities, and management of oils and other substances during operation to minimize contact with stormwater;
 - Structural controls during operation that could include stabilized stormwater conveyance systems (swales); and
 - Monitoring and maintenance to ensure long-term effectiveness of the management system.
6. Construction specifications will require construction methods that prevent pollutants from accidentally entering or spilling into flowing or dry watercourses, and ground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil and other petroleum products, aggregate processing tailings, mineral salts, drilling mud, and thermal pollution.
 7. Any construction wastewater from construction operations will be directed to on-site temporary retention basins designed for zero discharge. The water may be reclaimed for construction purposes or evaporated. The residual as a result of evaporation will be removed.

Noise Prevention

Personnel will be required to comply with all applicable federal, state, and local laws and regulations concerning prevention and control of noise during project construction and operation.

Hazardous Material Storage, Handling, and Disposal and Safety Measures

1. Personnel, contractors, and transporters involved with hazardous materials management will be required to comply with federal and state regulations established for the transportation, storage, handling and disposal of hazardous substances, materials and wastes. "Hazardous material" means any substance, pollutant, or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 USC 9601 et seq., and its regulations (CERCLA). The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended 42 USC 6901 et seq., and its regulations.
2. The potential for adverse impacts from oil and fuel spills will be reduced through careful handling and designation of specific equipment repair and fuel storage areas. In the event that hazardous or regulated materials such as diesel fuel or gasoline are spilled, measures will be taken to control the spill and the National Response Center and/or Arizona Department of Environmental Quality will be notified immediately.
3. The permittee is responsible for clean-up and assumes liability for any and all releases of hazardous substances disposed on public lands in accordance with state, federal and local laws and regulations. The permittee will immediately notify the BLM Authorized Officer of any and all releases of hazardous substances on public lands.

4. Outdoor oil storage and use areas will be bermed with a capacity sufficient to contain the oil inventory contained in the single largest tank or equipment unit plus sufficient freeboard to prevent overflow. Outlets from these containment areas will be equipped with a normally closed valve. Regular inspections will determine if there had been a leak requiring special attention.
5. Waste materials known or found to be hazardous will be disposed of in approved off-site, permitted treatment or disposal facilities in accordance with federal, state, and local regulations, standards, codes, and laws.
6. Generation of wastes during construction will be minimized through detailed estimating of materials needed and through efficient construction practices. Wastes generated during construction will be recycled to the extent feasible. Concrete waste will be removed to a local licensed landfill. Non-recyclable wastes will be collected and transported to a local licensed landfill.
7. Fuels, lubricant chemicals, and welding gases used during construction will be in controlled storage until used. Any empty containers or waste material will be segregated in storage and properly recycled or disposed of by licensed handlers.
8. Wastewater from concrete truck washdown and cleaning of construction equipment will be managed such that there will be no discharge offsite or discharge to surface waters.
9. Portable toilets or a packaged treatment system will be provided at construction locations along the ROW. Sewage from the portable toilets will be removed regularly and disposed of off-site in accordance with applicable federal and state pollution control regulations. There shall be no dumping of black water, sewage or litter.

Treatment of Saguaro Cactus within the ROW

Saguaros around transmission lines pose a safety threat to the public as they are very conductive to electricity due to their height and high water density. Saguaros that approach close to the transmission line conductors can electrocute someone coming into contact with that saguaro or arc to the transmission line conductors possibly tripping the line. These circumstances pose a safety hazard and thus saguaro treatment under the transmission line conductors is very necessary. Saguaros taller than 10 feet that are within a 50-foot horizontal distance of the outermost wires will require removal or transplant except in areas where vegetation is far below the transmission lines due to a canyon or slope. The following procedures for the treatment will be implemented for the portion of the Project on BLM-managed public lands.

Construction

Prior to construction, APS will inventory all vegetation within the ROW, including saguaros, that will be impacted or will pose a hazard as a result of the Project, and evaluate vegetation for transplant suitability. Either a designated BLM representative (BLM employee or BLM-approved contractor) will participate with APS in the inventory and evaluation, or the inventory will be reviewed and approved by the BLM, at the agency's discretion. Saguaros within the ROW will be removed and transplanted prior to construction, as indicated during the inventory

process. All cultural sites will be located and flagged with a 50 foot buffer prior to saguaro removal and relocation. Saguaros in cultural sites will not be transplanted, but will be removed by hand crews, to avoid disturbance of the cultural site. Saguaros within the ROW on BLM-managed public lands that are identified through the inventory process will be relocated and transplanted along the edge of or portion of the ROW near to where they were removed so that they may continue to be beneficial to local wildlife that may have been using the plant. Transplant sites will be identified that do not interfere with the future operation of the line.

Transplanting or removal of saguaros will not occur between February 15 and August 1 to avoid impacts on the migratory bird nesting season. Transplanting will be performed in accordance with procedures agreed upon between the BLM and APS, or their designated agents. Determination of procedures to be used will be based on information contained in “Salvage Techniques for Saguaro Cacti, Barrel Cacti and Ocotillo” (NRCS 2009). BLM-designated representatives will monitor transplanting activities.

Operations and Maintenance

Saguaros requiring removal will be transplanted where possible and reasonable. Because saguaros that will be impacted by the Project or could pose a hazard as a result of the Project will be removed prior to construction, saguaros that will be treated during the operations and maintenance phase of the Project should be small, new growth. Evaluation of vegetation within the ROW during the operations and maintenance phase of the Project will occur at intervals (to be agreed upon between the BLM and APS, and specified in the final POD) such that any new saguaros found to be growing in the ROW will be small. This will allow for safe and easier transplant opportunities, as well as greater potential for transplant success. Saguaros will be treated using the following methods:

- Where possible, APS will relocate saguaros that meet all the following criteria:
 - The saguaro is less than or equal to 10 feet in height
 - The saguaro is within the wire zone of the lines or could potentially grow to become a hazard to the lines in the future
 - The saguaro is greater than 22 feet, vertical distance, from the transmission line conductors at their maximum load conditions
 - The saguaro does not occur within a cultural site
 - Terrain, access, and other environmental or logistical factors are favorable to relocation of the saguaro
 - The saguaro is in good health as determined by BLM or BLM-approved contractor in conjunction with APS
- Saguaros within approximately 100 foot radial distance from the footers of the transmission line towers may be salvaged. This area, under many circumstances, is safe for salvage. Saguaros outside of the 100 foot radial distance may be unsafe to salvage, depending on the size of the plant, and may require removal of the plant through hand crew cutting or mulching with a mower, or pruning.
- APS will work with the BLM to determine which saguaros may be salvageable. Factors such as terrain, access, health of the saguaro, and the number of arms on a saguaro, will

determine whether a saguaro may be salvaged within the 100 foot distance around the transmission line towers. Salvage potential of a saguaro will be determined on an individual plant basis.

- All saguaros to be salvaged will be flagged prior to initiating the saguaro salvage and removal portion of the vegetation work. The BLM or its contractor will review the flagged saguaros and provide comment.
- A Removal and Transportation Permit will be obtained from the Department of Agriculture for the saguaro salvage operation, if required.
- All saguaro treatment will be conducted within the permitted ROW for the transmission lines, unless otherwise authorized by the BLM.
- All cultural sites will be located and flagged with a 50 foot buffer prior to saguaro removal and relocation.
- Saguaros to be relocated will be moved to an area absent of cultural resources outside of the wire zone and away from the low sag area for these lines. Transplanted saguaros within the ROW on BLM-managed public lands will be relocated to an acceptable area or along the edge of the ROW near to where they were removed so that they may continue to be beneficial to local wildlife that may have been using the plant.
- If a saguaro occurs in a cultural site, the saguaro will not be relocated or treated using mechanical mowers. Saguaros in cultural sites that are within 22 feet vertical distance and 50 feet horizontal distance of the conductors at maximum load conditions will be cut using hand crews or else pruned.
- Saguaros that are greater than 10 feet tall will remain on site if they are greater than 22 vertical feet and 50 horizontal feet from the transmission line conductors at their maximum load conditions, are determined unsuitable for relocation, and/or that occur within a cultural site. These saguaros could be potentially treated in the future if they grow within the 22 or 50-foot violation distance.
- Saguaros greater than 10 feet tall, for which any portion of the plant comes within 22 feet vertical distance and/or 50 horizontal feet of the transmission line conductors at their maximum load conditions, will either be removed using mechanical mowers or hand crews or pruned; however, if evaluation of vegetation in the ROW occurs at regular intervals as described above, relocation should occur before the saguaro grows to a height that will require removal of the plant. Mechanical mowers will be used to mulch the saguaro in most cases, but hand crews may also be used. Only hand crews will be used if the saguaro is present within a cultural site. For plants that are identified for pruning, the plant will be topped or arms will be removed, making cuts at a 45-degree angle and sealing the wound with a sealing compound (C. Carter, BLM, personal communication April 29, 2013). Pruning may also be used as an alternative to relocation, as determined by the BLM.
- BLM or its designated representatives will monitor transplanting and any removal activities.

REFERENCES

- APLIC (Avian Power Line Interaction Committee). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.
- APLIC (Avian Power Line Interaction Committee). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA. PIER Final Project Report CEC-500-2006-022. Washington, D.C. and Sacramento, CA. Available online at <http://www.aplic.org/mission.php>.
- APS (Arizona Public Service Company). 2009. Amendment to Saguaro Treatment Protocol (500-2 APS Power Line Corridor Management Plan Amendment). April 2, 2009.
- APS (Arizona Public Service Company). 2008. 500-2 APS Power Line Corridor Management Plan, Saguaro Transplanting Section. October 2, 2008.
- BLM (Bureau of Land Management). 1996. Sampling Vegetation Attributes, Interagency Technical Reference. BLM.TD.DY-96/002+1730.
- NRCS (Natural Resources Conservation Service). 2009. Salvage Techniques for Saguaro Cacti, Barrel Cacti and Ocotillo. September 2009.

Monitoring and Mitigation Measures

Air Quality

Control of Construction Related Fugitive Particulate Emissions

Maricopa County Air Pollution Control Rule 310 requires any earthmoving project that disturbs greater than 0.1 of an acre to obtain a dust control permit from the Maricopa County Air Quality Department (MCAQD) and to have a Dust Control Plan detailing dust control measures for the project and contingency measures. Additionally, for any site requiring a dust control permit, all water truck and water-pull drivers must have successfully completed the Maricopa County Basic Dust Control Training Class within the last three years.

For project sites greater than one-tenth of an acre, additional requirements apply as follows: For projects disturbing greater than one acre, the soil texture of the site must be identified, either by a soil assessment report or by Appendix F (Soil Designations) of Maricopa County Air Pollution Control Rules, and the site superintendent is required to have completed the Basic Dust Control Training Class within the last three years (County Rule 310 Sec. 309). For project sites of two acres or larger (or sites where 100 cubic yards/day of bulk material is hauled on/off), a trackout control device is required at all exits. For project sites of five acres or greater, an on-site Dust Control Coordinator is required and must have successfully completed the Maricopa County Comprehensive Dust Control Training Class within the last three years. Additionally, for sites 5 acres or larger, a project information sign must be posted in accordance with Rule 310 Section 308 requirements. The sign must include the MCAQD complaint number allowing the public to report dust related complaints.

Maricopa County Rule 310 limits fugitive dust visible emissions to no more than 20 percent opacity and requires extensive monitoring of earthmoving activities to ensure compliance with this limit and all applicable requirements. Additionally, Maricopa County Rule 310.01 specifies requirements for open areas and vacant lots. Such areas will possibly be a source of particulate emissions during both the construction phase and post-construction operational phase. Section 302.5 of the rule specifies that the owner of open land areas or vacant lots must not allow any particulate matter visible emissions beyond the property line and also requires implementation of control measures, such as establishment of vegetative ground cover, application of palliatives, or other control measures approved by the County to minimize windblown dust emission. The rule also requires periodic evaluation and measurements of soil stability and surface conditions to ensure the effectiveness of control measures.

A variety of fugitive dust control measures are available to minimize fugitive dust emissions which include:

- Frequent watering to maintain visible moisture and/or form soil crust (stabilization)
- Treatment of actively disturbed areas with dust palliatives
- Trackout control devices such as grizzly bars, wheel washers, gravel pads located at all entrances and exits
- Utilize street sweepers to remove any visible soil/mud/dirt carried onto paved access roads
- Limiting vehicle speeds on access roads to less than 15 mph

- Covering haul truck cargo beds with tarps and maintain 3 inches of freeboard
- Cessation of construction on high-wind event days, and/or during periods of adverse meteorological conditions which could cause or contribute to NAAQS violations
- Revegetation to stabilize soil
- Minimization of disturbed land areas to the extent practicable with project design considerations
- Maintain a visible crust and sufficient moisture on any storage piles
- During the post-construction operational phase apply dust suppression measures such as watering (to form crust), application of dust palliatives, or gravel on vacant lots and disturbed areas in accordance with Maricopa County Rule 310.01

Minimization of Emissions from Mobile Sources and Construction Equipment

Emissions from mobile and construction equipment are due primarily to combustion of diesel fuel in engines. Ultra-low sulfur diesel fuel, limited to 15 parts per million (ppm) sulfur is now in widespread use in Arizona and is virtually the only type of diesel fuel available for use in both on-road and non-road construction vehicles in the United States. Use of ultra-low sulfur diesel fuel drastically reduces SO₂ emissions and will serve to mitigate the associated secondary fine particulate emissions (of which SO₂ is a precursor), thereby lessening overall particulate impacts. Use of ultra-low sulfur diesel also results in lower NO_x emissions. Additional mitigation measures for mobile sources and construction equipment include the following:

- Construction related trips of workers and equipment will be minimized
- Idling of heavy equipment will be minimized
- Manufacturer recommendations for engine maintenance and operation will be followed to optimize emission performance
- Newer equipment meeting the most stringent of applicable federal or state standards will be utilized as much as practicable
- Diesel engines, motors and equipment will be located as far as practicable from residential areas and other sensitive areas (schools, daycare centers, and hospitals).

Cultural Resources

Avoidance/Protection

APS will implement actions to ensure that historic properties that are avoided by Project design or redesign are not impacted during construction, operation, or maintenance activities. Such actions are subject to agency approval and may include, as appropriate, temporarily placing barriers or marking areas to be avoided during construction; construction monitoring by a professional archaeologist meeting the Secretary of the Interior standards (36 CFR Part 61) and qualification standards established by the Office of Personnel Management; and/or placing locked gates to restrict public access to transmission line access roads that may increase the potential for indirect impacts. BLM and ASLD will also work with APS to develop a long-term monitoring program for avoided properties at risk, involving regular monitoring and documentation by staff assisted by Arizona Site Steward Program volunteers.

Under the Proposed Action, Alternative 1, or Alternative 2, spanning the historic properties near the Agua Fria River will not be possible; therefore a supplemental Class III cultural resource survey was conducted (Rogge and Kirvan 2013), located within the ACC corridor, so that options for avoiding impacts by shifting the alignment to the east could be considered. The recently inventoried potential alignment shift (Rogge and Kirvan 2013) will avoid disturbance of all the National Register eligible sites between the river and the Morgan Substation. Four sites are present along the potential alignment shift, all eligible for the National Register. The alignment shift could span the one newly recorded small site (AZ T:3:358(ASM)), the Beardsley Canal (AZ T:3:55(ASM)), as well as the edges of two larger sites (AZ T:3:350(ASM) and AZ T:3:351(ASM)).

Mitigation Through a Data Recovery Program

Scientific data recovery may be implemented to mitigate impacts to historic properties that cannot be avoided. Procedures for scientific investigations, reporting, and long-term preservation of data and collections will be specified in a Historic Properties Treatment Plan implemented in accordance with the terms of a Section 106 Memorandum of Agreement (MOA) executed to address any identified adverse effect.

Mitigation of Visual Impacts

The impact analysis indicates negligible to minor impacts to the setting of historic properties within five miles of the Action Alternatives. Impacts could be reduced by selecting transmission line structures or facility designs and shades that will lessen visual contrast.

Geology and Minerals

Additional mitigation measures are not required.

Hazardous Materials and Hazardous and Solid Waste

If the Sub-alternative were selected as the preferred alternative, site-specific inquiries into the presence, if any, of pre-existing contamination from a Leaking Underground Storage Tank (LUST) site and a corral in the vicinity of the Sub-alternative alignment should be conducted in advance of locating structures for the power line.

Land Use and Range Resources

There is no mitigation proposed for land use and range resources.

Public Health and Safety

A number of mitigation actions related to public health and safety will be undertaken to reduce potential impacts from the Project during periods of construction and operations, maintenance, and decommissioning activities as described in the following sections. EPMs and BMPs established will also be followed for the Project.

General

Following construction and after the line were to be placed into service, APS will respond to complaints of line-generated radio interference (RI) or television interference (TI) by investigating the complaints and implementing appropriate mitigation measures. The

transmission line will be patrolled on a regular basis so that damaged insulators or other line materials that could cause interference are repaired or replaced.

As required by the ACC, through the conditions of a CEC, APS shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the transmission line and related facilities addressed in the CEC. APS shall maintain written records for a period of five years of all complaints of radio or television interference attributable to operation, together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution shall be noted and explained.

The transmission line configuration, hardware and conductor will limit the audible noise, RI, and TI due to corona. Tension will be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution will be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona to occur.

Noise

During construction, traditional large construction and ground moving equipment will be utilized, as outlined in Table 2.4-3 of the final EIS, which will create noise during use. Typical hours of construction will be 5:00 am to 4:00 pm in the summer, and 6:00 am to 5:00 pm in the winter. Noise-generating construction activities, such as the use of heavy equipment or helicopters, within 0.5-mile of residential areas, will be restricted to the hours of 7:00 am and 7:00 pm; thus avoiding generation of noise during the periods (7:00 pm to 7:00 am) when the Community Noise Equivalent Level (CNEL) measurements include a sound penalty for time periods when a quiet environment is expected.

During operation and maintenance of the Project, similar equipment to that described for construction may be used, which will generate noise. Generally, maintenance activities will be confined to typical workday hours, thus avoiding generation of noise during the periods (7:00 pm to 7:00 am) when the CNEL measurements include a sound penalty for time periods when a quiet environment is expected. Occasionally there may be emergency maintenance required, which may occur in the evening or nighttime hours, but that will take place very infrequently.

Fire

Contractor safety requirements provided in the appendix of the final POD will typically be employed during construction. APS employees receive annual health and safety training, which includes fire prevention and response. These requirements, together with information described in the Health and Safety Plan will cover fire protection efforts associated with this Project. Employees will be prohibited from smoking outside of company vehicles during dry summer months.

Fiber optic/static neutral cables will be installed at the top of the structures supporting the transmission lines, to serve as static wires. These static wires (sometimes referred to as shield wires) are grounded and installed at the very top of the structures to protect lower conductors from lightning.

Vegetation management will be undertaken by APS in accordance with their TVMP, as well as their IVM, which will include removal of all tall-growing vegetation within the wire zone, and

preservation of low-growing herbaceous and woody plant communities that do not interfere with overhead transmission lines, or pose a fire hazard or hamper access.

APS will comply with industry standard codes governing the design and operation of high-voltage electric utility systems. Equipment will be designed such that if, for some reason, an energized phase conductor were to fall to the ground and create a line-ground fault, high-speed relay equipment will sense that condition and activate circuit breakers to quickly de-energize the line. This will reduce the risk of fire from the high voltage transmission lines to a low level.

Paleontology

Awareness during subsurface excavations in the Project Area is recommended, but monitoring should not be required. Any fossils so discovered should be professionally recovered without impeding development. Any fossils recovered during mitigation should be deposited in a permanent scientific institution (e.g., Arizona Museum of Natural History (AZMNH)) for the benefit of current and future generations.

Recreation and Special Designations

The following mitigation measures will apply to BLM-managed public lands only:

- The BLM will not approve the use of any single-track routes for construction access. The BLM will work with APS to develop a Construction Access Plan that will strictly limit construction access and operation of construction equipment to specific routes.
- The BLM will designate the permanent centerline access route as an Administrative Access Route only; prohibition of recreational use of the centerline access (except for single-track trails crossing of the centerline access) and speed limits will be enforced by BLM. Appropriate signs will be installed.
- The BLM will require that all four-wheel OHV roads/trails accessed from SR 74, intersecting the ROW (for example, at Christian Church Camp [Church] Road), be gated along the ROW with associated fencing to a natural barrier, to prevent unauthorized four-wheel OHV use along the centerline access.
- APS' ROW authorization will require monitoring the centerline access route for unauthorized recreational use. APS will monitor the condition of the centerline access and all gated ROW access points in conjunction with other Project monitoring, and provide reports of the conditions to BLM. During the course of routine field work in this area, BLM resource and law enforcement staff will monitor conditions within the ROW for unauthorized access and use. Should gates/fencing be breached or determined to be ineffective, APS will work with the BLM to undertake additional reasonable and practicable steps to prohibit access and mitigate for adverse impacts resulting from unauthorized access.
- APS will fund additional long-term monitoring of the ROW (three to five years) by the BLM or other cooperating entities for unauthorized recreation and associated impacts.
- APS will work with the BLM to collect necessary data (such as cultural resource surveys) to facilitate transportation planning, including future OHV recreation planning and management, on specific trails in the area north of SR 74.

- As a result, after mitigation there will be no residual effects to single-track OHV users.

Socioeconomics and Environmental Justice

There is no mitigation proposed for socioeconomic resources.

Several mitigations are proposed to address EJ concerns and eliminate potential residual effects. They include:

- At least one public meeting on the Draft EIS was held at a time and location easily accessible to the identified EJ community; the meeting was well publicized using media that are prominent in the EJ community.
- The transmission line route through the EJ community will use public (state or federal) land to the extent possible to minimize direct impacts to the community.

Soils

Soil Stabilization

In order to minimize the potential for erosion, temporarily disturbed surfaces will be restored at or as near to the original contour of the land surface as possible. Water diversions will be constructed along the ROW, as needed, to control surface water and minimize soil erosion. Temporary construction access roads, not required for future maintenance access, will be restored after construction of the Project is complete. Areas of soil compaction, including temporary access roads, will be scarified as needed. Seeding will be used where appropriate to reestablish soil stability. APS will be required to meet the stabilization requirements and conditions of their Arizona Pollution Discharge Elimination System (AZPDES) permit.

Revegetation

Appropriate site-specific seed mixes for revegetation will be used where conditions vary. Salvaged native plants will be used for revegetation, if appropriate, along with seeding using BLM-recommended and approved seed mixes. Preferably, seed will be planted during months identified as most preferable for revegetation success following construction. Seed will be planted as directed by appropriate land managing agency.

Mitigation Practices

Mitigation practices that will be employed as a part of this Project to ensure that the soil resources are protected and/or impacts minimized include the following:

1. Vegetation will be cleared and the construction ROW will be graded only to the extent necessary. Vegetation within the ROW will be trampled or cut at or near the ground level. Except for the area to be excavated, the vegetative root system and subsurface soils will be left intact to the greatest extent practicable. This will help stabilize the soils within the ROW during construction. ROW boundaries will be clearly staked or flagged and no disturbance will be allowed beyond the limits.
2. Design access roads to fit the terrain by avoiding unstable slopes and highly erodible conditions, to the extent practicable, to protect soils and prevent excessive erosion and sedimentation. These protective measures include, but are not limited to, mulch, tracking, matting, or slope length shortening. When soils are wet, construction, operation, and

maintenance activities will be restricted so as to properly support construction or maintenance equipment (i.e., when heavy equipment creates ruts in excess of four inches deep over a distance of 100 feet or more in wet or saturated soils). Where the soil is deemed too wet, one or more of the following measures will apply:

- Re-route all construction or maintenance activities around the wet areas so long as the route does not cross into sensitive resource areas.
- If wet areas cannot be avoided, implement BMPs for use in these areas during construction and improvement of access roads, and their subsequent reclamation. This includes use of wide-track or balloon-tire vehicles and equipment, or other weight dispersing systems approved by the appropriate resource agencies. It also may include use of geotextile cushions, pre-fabricated equipment pads, and other materials to minimize damage to the substrate where determined necessary by resource specialists. In addition and if feasible, APS could move construction activities into other portions of the Project until saturated areas dry out.

Transportation and Traffic

To minimize potential effects of the proximity of the transmission line to the Thunder Ridge Airpark, the transmission lines and structures adjacent to the single airstrip will be marked on a strictly voluntary basis, as the FAA does not have jurisdiction or regulatory authority over this facility.

Vegetation Resources, including Noxious and Invasive Weeds and Special Status Plants

Vegetation Communities

Areas of temporary disturbance, identified in **Table 2.4-4** in the final EIS, will be reclaimed according to BLM stipulations in the ROW grant and the final reclamation plan to meet the RMP reclamation goal to, “Maintain, restore or enhance the diversity, distribution, and viability of populations of native plants, and maintain, restore, or enhance overall ecosystem health.” (BLM 2010a).

The following additional measures provide general guidelines as to what measures may be used to decrease vegetation resource impacts:

- In construction areas where recontouring is not required, vegetation will be left in place wherever possible, to avoid excessive root damage and allow for resprouting.
- In construction areas (e.g., structure sites, spur roads from existing access roads) where recontouring is required, surface restoration will occur in accordance with the land management agency permitting requirements. The method of restoration will typically consist of returning disturbed areas to their natural contour (to the extent practical), reseeded or revegetated with native plants (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches. Seed must be tested and certified to contain no noxious weeds in the mix by the State of Arizona Department of Agricultural (ADA). Seed viability also must be tested at a certified laboratory approved by the authorized officer.

- All construction and maintenance activities will be conducted in a manner that will minimize disturbance to vegetation. In addition, all existing roads will be left in a condition equal to or better than their condition prior to the construction of the transmission line, as defined by the land management agency.
- Species protected by the Arizona Native Plant Law will be relocated and transplanted in accordance with the Law. A Vegetation Management Plan, approved by the BLM, is included in the POD. As dictated by the Arizona Native Plant Law, actions will include: 1) removal and stockpiling for replanting on site or 2) removal and transplanting out of surface disturbance areas. All personnel working on site will complete a mandatory Environmental Awareness Program, which includes pertinent information on the identification of Arizona Native Plant Law-protected plants.
- In designated areas, structures will be placed or rerouted so as to avoid sensitive features such as, but not limited to, riparian areas, or to allow conductors to clearly span the features, within limits of standard tower design.

Special Status BLM, USFWS Listed Species, and Arizona Native Plant Law

Pre-construction surveys will be performed in the ROW corridor and within all areas of potential new surface disturbance (i.e. access roads, laydown areas, etc.). Special status plants will be identified and marked. Designated surveys for Hohokam agave (*Agave murpheyi*) will be conducted in the layout/project planning phase and then again immediately prior (within a few days) to construction.

Special status plants will be protected to the extent that APS will conduct all activities in compliance with the Arizona Native Plant Law, which will include minimizing the destruction of native plants and in some cases relocating/transplanting individuals on or off-site. A Vegetation Management Plan is included in the POD, and will be approved by the BLM prior to initiating construction. APS will also work within the Arizona Native Plant Law in restoration and reseeded of construction-disturbed areas.

Invasive and Noxious Plants

BLM policy is to prevent the spread of invasive and noxious plants. Mitigation measures will be used at specific locations where resource sensitivity is high, such as where invasive and noxious weed infestations are existing within or near work areas. Several levels of prevention will be implemented such as minimizing disturbance to existing vegetation (leaving plants in place when possible) and reseeded disturbed areas with native plants and weed-free seed as certified by the ADA. All personnel working on site will complete a mandatory Environmental Awareness Program, which includes pertinent information on the identification of invasive and noxious plant species.

APS will treat any invasive species encountered during the course of herbicide vegetation maintenance projects within the ROW where it is reasonable, prudent, and effective. All appropriate regulations required by the landowner or land-management agency will be implemented and adhered to for any herbicide treatment activities.

Visual Resources

Micrositing

The transmission line will be designed to minimize visual impacts from SR 74. Monopole structures will be used as they are less visually disturbing in foreground/middle ground situations (see Section 4.14.4.2 in the final EIS). APS worked with the BLM to microsite a sampling of individual structures to understand how visual impacts from the portion of the Project located on BLM-managed public lands will be minimized. Structures were first proposed to be located within the ACC-certificated route as far north as possible from SR 74. Individual poles will be micrositied, reducing visual contrast by taking greater advantage of the terrain – to provide either screening or backdropping of the transmission structures. Minor shifts will be made in the route alignment and potential structure locations within the proposed ROW. Along the approximately 6-mile segment north of SR 74 and within the proposed ROW, the alignment will be shifted from 2 to 195 feet (when comparing centerline to centerline). The structures will be shifted away from ridgelines and points of higher elevation to minimize the amount of the structures that will be visible from SR 74. In certain locations, the lower elevation will reduce sky-lining and will provide additional back-dropping or screening opportunities depending on the angle of view. At locations where the transmission line will cross SR 74, individual structures either side of the highway will be shifted to maximize the distance between the structures and the highway. Simulations comparing previous pole locations with micrositied locations will be used to determine effectiveness of micrositing efforts and make adjustments where possible. As a result, micrositing will result in a reduction in impacts to views of travelers on SR 74 and may reduce major impacts to some specific viewpoints to less than major levels; however, it will not change the overall impact analysis or reduce the estimated area of visual dominance on BLM-administered public lands.

Structure Type

Simulations of the proposed transmission line were prepared using both monopoles and lattice structures as viewed from selected KOPs from SR 74 within the linear KOP where the transmission line will be located on BLM-managed public lands north of SR 74. Because of the relative proximity of the transmission line to SR 74, particularly where the transmission line will cross SR 74, it was determined that the lattice structures were more visually disruptive than the monopole structures. Therefore, to minimize visual impacts along the linear KOP, the BLM will require the use of monopoles on BLM-managed public lands.

The southern portion of the Castle Hot Springs Special Recreation Management Area (SRMA) and the Hieroglyphic Mountains Recreation Management Zone (RMZ) are most greatly impacted by the number of structures visible to the west of the linear KOP, where the landscape flattens out, distant views are common; and the landscape becomes less scenic and complex, and therefore has less capacity to absorb the transmission line (Figures 4.14-6, 4.14-21, and 4.14-25 in the final EIS). In general, the remainder of the route beginning where the route diverges from SR 74 could be constructed using lattice structures south of the highway on private and State Trust lands. Because the viewers in the southern portion of the SRMA and RMZ will be superior to the transmission line, the transmission line will be against a backdrop of lands rather than skylined, and the views will be distant, the use of lattice structures will minimize visual impacts within the SRMA and RMZ, as well as any other distant views from the south, because the viewer will be looking through the lattice structure. However, monopoles will be used when the

transmission line will be in the foreground/middle ground of sensitive viewers, such as existing residences and communities. Where the transmission line will be in proximity to another existing line, the same type of support structure (monopole, lattice, or H-frame) will be used as is used in the existing transmission line, to the extent possible, in order to maintain architectural consistency.

Where the transmission line will cross lands other than BLM-administered public lands, the above are recommendations to minimize visual impacts from the transmission line; the final decision regarding design and infrastructure type will be between the underlying land manager and APS.

Color

The color of the structures or lattice towers affects how well the structure blends in the environment. Photographs of boards treated with the BLM's standard environmental colors were taken from KOPs representing typical topography and vegetation within the Project Area. The photographs were then analyzed to identify which standard environmental color will minimize visual impacts. While no one color works best in all situations and lighting conditions, the shadow gray and shale green colors blended best under front lit conditions and had low levels of contrast in back lit situations. A complete analysis of the color selection process is available in the Project Record. Surface treatment options for monopole structures are very limited and do not achieve much color variation. The colors available will be shades of gray ranging to almost black; no surface treatments available will resemble shale green. Among the surface treatments available for the monopole structures, the BLM will require a treatment that will be non-reflective and most closely resemble shadow gray.

Water Resources

No additional mitigation required.

Wildlife Resources, including Special Status Wildlife and Migratory Birds

Pre-construction surveys will be implemented during the migratory bird nesting season to locate raptor and other migratory bird nests. Surveys will be conducted in the layout/Project planning phase so that sensitive areas (such areas with a high density of tortoises) can be identified and avoided if possible; and then again immediately prior (within a few days) to construction. The survey area will be determined by the timing of the survey (inside or outside the migratory season) and the buffer requirements. Survey areas for raptors will be determined by buffer requirements in Guidelines for Raptor Conservation in the Western United States (USFWS 2008a). If an active nest is found, a timing or spatial buffer will be implemented following BLM and USFWS guidelines. Each buffer will be implemented on a case-by-case basis, considering, for example, the duration of construction activities in the area and topographical barriers (if any) between the nest and construction activities. The decision maker regarding buffers will be the BLM Field Manager, with counsel from the BLM Wildlife Biologist.

All ground-clearing/disturbance activities that could affect special status species or habitat will be monitored. A qualified biologist will be retained to conduct pre-construction activities to minimize or prevent impacts to Sonoran desert tortoises and active migratory bird nests. Monitors will be present where active migratory bird nests were located during pre-construction surveys to assure buffer distances are maintained.

All personnel working on site will complete a mandatory Environmental Awareness Program, which includes pertinent information on biological resource identification of special status species or species of concern. APS's environmental contractor, approved by the BLM, will provide this training. All training will be conducted by experienced and qualified biologists approved by the BLM. The training, at a minimum, will cover identification of tortoises, how to move them according to AGFD guidelines, the protocols for waiting for clearances prior to construction, and when a monitor needs to be present. All personnel working on site will be briefed on the criminal penalties of take under the Migratory Bird Treaty Act, as well as the protocols for waiting for clearances prior to construction and the need to comply with timing stipulations and/or buffers around active migratory bird nests.

Holes or pits created by construction will be covered when not in use and will be checked for animals prior to use, in order to minimize trapping or burying of wildlife.

Raptor electrocutions will be minimized by constructing the transmission line according to raptor-safe design standards, which meet or exceed recommendations from the Avian Power Line Interaction Committee (APLIC 2006). Avian collisions with the power line will be minimized by following recommendations for bird diverters in APLIC (2012), at specific locations such as the Aqua Fria River crossing, and in coordination/consultation with appropriate agency specialists.

Gates will be installed on permanent ROW access roads, as required by the land owner or land managing agency, or if APS finds it to be warranted, to restrict unauthorized vehicular access to the ROW. This will prevent unnecessary traffic along access roads that will disrupt wildlife behavior or cause direct impacts (collisions) to wildlife.

Mitigation specific to Sonoran Desert Tortoise

BLM objectives regarding mitigation for desert tortoises on construction projects are to 1) avoid, minimize, or eliminate loss or degradation of habitat and 2) avoid or minimize take of tortoises. On BLM-managed public lands, the following mitigation measures will be implemented along with compensation, following the Final Report on Compensation for the Desert Tortoise (DTCT 1991), for any desert tortoises or desert tortoise habitat that is disturbed on BLM-managed public lands, as clarified in BLM Instructional Memorandum No. AZ-2012-031.

The first focus of the desert tortoise mitigation policy is on avoiding and minimizing impacts to tortoises and their habitat. If an action with on-site mitigation measures will result in residual impacts, then compensation will be required. Category II habitats will be compensated for at a rate ranging from 2:1 to 5:1. Category III habitats will be compensated for at a rate of 1:1. Acquiring habitat is the primary means of compensation for impacts to tortoise habitat; however, compensation funds can also be used for other tortoise conservation efforts. Purchasing private lands with tortoise habitat will bring these lands into federal protection, making the habitat more secure. Further, reclamation of temporarily disturbed areas will also be conducted and will assist with restoring impacted habitat.

Compensation for habitat loss or take on BLM-managed public lands will involve either the direct purchase of privately-owned desert tortoise habitat for transfer to conservation management, or the direct payment of funds to an appropriate land management agency/entity for purchase of tortoise habitat or other tortoise management actions (DTCT 1991). However,

acquiring tortoise habitat is the primary means of compensating for residual impacts (BLM IM AZ-2012-031).

To minimize the potential for desert tortoise mortality, prior to and during ground-clearing construction activities in desert tortoise habitat on BLM-managed public lands, a desert tortoise monitor will survey the ROW. The monitor will meet qualifications for GS-0486 series Wildlife Biologist according to the U.S. Office of Personnel Management (opm.gov) and have the necessary experience and expertise required by the BLM. The survey area will include the ROW plus at least a 50-foot buffer either side of the ROW. Construction monitors will be present in areas where tortoises or fresh tortoise sign was observed during the pre-construction surveys. Any potential tortoise shelter sites in harm's way will be cleared for tortoises and then rendered unusable (i.e., filled in or blocked with rocks or other native materials). If tortoises are encountered during the pre-construction phase or during construction, APS will follow BLM's Strategy for *Desert Tortoise Habitat Management on Public Lands in Arizona* and any appropriate guidance issued by AGFD and USFWS. Preconstruction and construction crews will look out for and avoid tortoises. If tortoises must be moved to avoid harming them, they will be moved according to AGFD, "Guidelines for Handling Sonoran Desert Tortoise" (2007).

As part of the Environmental Awareness Program, desert tortoise training will be provided to all construction personnel who will be present before and during the ground-clearing activities and any fencing of work areas within desert tortoise habitat. Training will cover identification of tortoises, how to move them according to AGFD guidelines, the protocols for waiting for clearances prior to construction, and when/if a monitor needs to be present. Desert tortoise training will also include general procedures on how to reduce tortoise mortality, such as checking stationary vehicles for tortoises, and recommendations on how to avoid disturbing tortoises that are detected. BLM will have in place any applicable and relevant enforcement procedures for these guidelines, similar to other construction projects on BLM land.

To minimize the potential for vehicle collisions with desert tortoises, vehicle speeds will not exceed 15 mph on all dirt access roads in desert tortoise habitat. Speed limit signs will be installed on all centerline access roads in desert tortoise habitat, and caution signs indicating the potential presence of Sonoran desert tortoises will be posted at the beginning of any such access road in desert tortoise habitat.