

SUMMARY

INTRODUCTION TO THE PROJECT

Caithness Big Sandy, L.L.C. (Caithness) has proposed to construct, operate, and maintain the Big Sandy Energy Project, a baseload 720-megawatt (MW) power plant and ancillary facilities (Figure S-1). This Proposed Action includes the following components:

- power plant and associated facilities and operations, including the plant cooling system, waste management operations, lighting, and fire protection and other safety systems
- 500-kilovolt (kV) substation, with associated transmission line modifications and communications facilities
- water supply system consisting of deep groundwater wells and associated pipelines
- natural gas supply pipeline and interconnection facilities
- development of land for agricultural purposes
- actions to reduce or prevent environmental impacts

The United States electric utility industry currently is in transition from a highly regulated industry to one where market forces develop and shape decisions in the generation, transmission, and purchase of energy. Making wholesale and retail power markets more competitive is consistent with congressional policy reflected in the Energy Policy Act of 1992.

As an independent power producer, Caithness proposes to construct a merchant power plant, meaning the plant would not be owned by a utility or by a utility affiliate, nor would it be supported by a long-term power purchase agreement with a utility. Caithness would instead sell power to customers and the spot

market, and all economic costs would be borne by Caithness. The Mohave County Economic Development Authority (MCEDA), working with Caithness, proposes limited agricultural development (about 107 acres) in conjunction with the development of the power plant.

To market the generated electrical energy, Caithness has applied to the Western Area Power Administration (Western) for an interconnection with the existing Mead-Phoenix Project 500-kilovolt (kV) transmission line, which provides access to the regional transmission grid. Caithness also has applied for authorization to build portions of the natural gas pipeline, water supply pipeline system, and electric and control lines across public lands administered by the Bureau of Land Management (BLM).

PURPOSE AND NEED

For Caithness, the purpose and need for the proposed Project includes the following:

- Generate and consistently deliver competitively priced electrical energy, to short- and mid-term electric energy markets in the western United States in response to market demands, using available capacity of the Mead-Phoenix Project 500--kV transmission line.
- Construct and operate a power plant on private land, in compliance with:
 - (1) applicable laws and regulations;
 - (2) industry standards for reliability; and
 - (3) Caithness' corporate environmental objectives to generate power with minimal impact on the environment.
- Support MCEDA's objective for economic development in the Big Sandy Valley by providing land adjacent to the proposed facility, and water for agricultural purposes.

MCEDA's purpose and need for the proposed Project is as follows:

- Generate economic benefits, encourage economic development, and support the agricultural sector in the Big Sandy Valley of Mohave County.

For Western, the purpose and need for the Project is as follows:

- Respond to Caithness’ request to interconnect the proposed power plant to the existing Mead-Phoenix Project 500-kV transmission line to meet the intent of Federal policy to provide open access for unused available transmission capacity to wholesale electrical generators, such as Caithness, while maintaining reliability of service to existing customers.

For BLM the purpose and need for the Project is as follows:

- Respond to Caithness’ request for rights-of-way across public lands, ensure that natural gas pipelines constructed on public lands are safe and reliable, and ensure reclamation of public lands that would be disturbed.

THE NATIONAL ENVIRONMENTAL POLICY ACT PROCESS

The National Environmental Policy Act (NEPA) of 1969 requires that an environmental impact statement (EIS) be prepared for any Federal actions significantly affecting the human environment. Since the proposed power plant would interconnect with the transmission system managed by Western and the proposed water and gas pipelines would cross public lands managed by BLM, the proposed Project constitutes a Federal action for NEPA purposes. This EIS has been prepared in accordance with Federal regulations implementing NEPA, which are codified at Title 40, Code of Federal Regulations (CFR), Parts 1500-1508 and 10 CFR 1021.

The major steps in the EIS process are described below.

Notice of Intent (NOI) – The EIS process began with publication of a NOI in the *Federal*

Register on April 18, 2000 (*Federal Register* Vol. 65, No. 75). The NOI announced Western’s and BLM’s intention to prepare an EIS and hold a public scoping meeting concerning the Project.

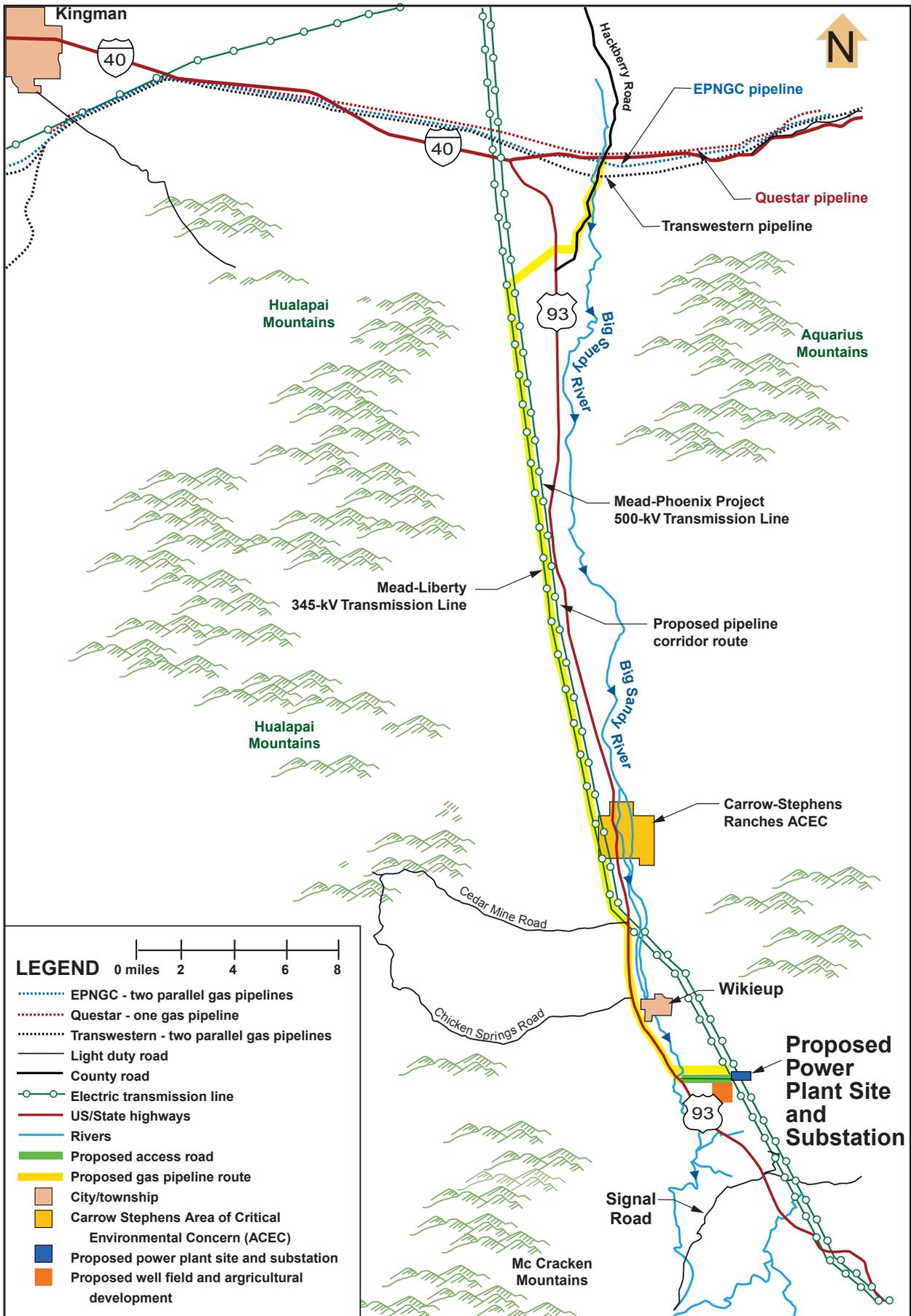
Scoping Period – The purpose of scoping was to identify public and agency issues, and alternatives to be considered in the EIS. The scoping process included notifying the general public, and Federal, state, local, and tribal agencies of the Proposed Action. BLM and Western held a public information and scoping meeting on May 3, 2000 in Wikieup, Arizona.

Draft EIS – This document is the Draft EIS. A Notice of Availability (NOA) was published in the *Federal Register*.

EIS PROCESS
Notice of Intent
Scoping Period
Draft EIS
Comment Period and Public Hearings
Final EIS
Record of Decision
Mitigation Action Plan

Comment Period and Public Hearings – The public and agencies may review and comment on the Draft EIS during a comment period. BLM and Western will hold a public workshop to provide interested parties an opportunity to ask questions about the Draft EIS analysis and hold a public hearing to receive comments.

Final EIS – The purpose of the Final EIS is for BLM and Western to assess, consider, and respond to public and agency comments received on the Draft EIS. BLM and Western will encourage public review of the Final EIS after it is published.



Power Plant Location with Major Project Components
 Big Sandy Energy Project EIS

Figure S-1

Records of Decision (RODs) – BLM and Western each will publish independent RODs after a NOA of the FEIS is published in the *Federal Register*. BLM and Western will explain the factors taken into consideration in making their decisions and the RODs will identify the environmentally preferred alternative. BLM and Western will encourage public review of the RODs.

Mitigation Action Plan (MAP) – After the RODs are published, Western will prepare a MAP that will address mitigation commitments expressed in its ROD.

The BLM Kingman Field Office and Western are serving as co-lead agencies for the EIS. Construction and operation of the proposed Project would require compliance with a number of other Federal, state, and local regulations and would require specific permits and approvals.

The following agencies have jurisdiction, special expertise, or interests in some of these regulatory requirements and are participating in the EIS process as cooperating agencies:

- Arizona Department of Water Resources
- Arizona Game and Fish Department
- Arizona Department of Transportation
- Mohave County (through the Planning and Zoning Department)
- Hualapai Tribe
- U.S. Fish and Wildlife Service

THE PROPOSED ACTION AND ALTERNATIVES

Power Plant

The proposed power plant, substation, and associated facilities would be built on private property in Section 5, Township 15 North, Range 12 West (T15N, R12W) (Figure S-2). The proposed power plant site is about 4 miles southeast of Wikieup, and about 2 miles east of

where U.S. Highway 93 (US 93) crosses the Big Sandy River. A new road to provide access to the proposed power plant site and for other landowners east of US 93 is proposed by Mohave County. This road, along with a small section of private road, would provide access to the proposed power plant and well field.

The proposed power plant and associated facilities would occupy about 33 acres of a 120-acre site. The power plant would be built in two phases. Phase 1 would be a 500-MW natural gas-fired, combined-cycle power plant, composed of two combustion turbine generators, one steam turbine generator, and two heat recovery steam generators (HRSG) and exhaust stacks. Phase 2 would be constructed within 18 months of the startup of Phase 1, and would include one single-shaft combustion turbine/steam turbine generator, and one HRSG and exhaust stack.

The proposed power plant would be equipped with a selective catalytic reduction system as necessary to meet U.S. Environmental Protection Agency (EPA) and Arizona Department of Environmental Quality (ADEQ) air standards. Ancillary equipment for the balance of the power plant systems would include cooling towers, administration (control room) and support buildings, a communication system, water systems, fire systems, transformers, switching gear, and other facilities. Wet cooling towers would provide cooling for the steam generation cycle and turbine inlet air. Cooling water would be supplied from Project groundwater wells, and wastewater from the cooling system would be directed to one of two evaporation ponds.

Most of the solid waste generated during both construction and operation of the proposed power plant and associated facilities would be non-hazardous wastes typical of those generated by other human activities.

Several special or potentially hazardous wastes would be generated from routine operations. These would include waste lubricating oils (12 tons per year [tpy]) and associated used oil filters, spent solvents (12 tpy), empty drums

(100 per year), and spent selective catalytic reduction catalyst (24 tpy). These would be recycled or disposed of in an approved and permitted commercial disposal facility in accordance with applicable requirements.

Sanitary wastes would be directed to a septic system and drain field constructed for the proposed power plant. Process water would be used in boilers and for cooling and cleaning purposes. Process wastewater would be recycled to the maximum extent feasible. Wastewater that could no longer be recycled would be evaporated. No discharge of process wastewater is proposed. The proposed power plant would be designed and operated as a zero discharge facility.

Wastewater storage/evaporation ponds would receive discharged process wastewater, cooling tower blowdown water, and stormwater runoff from the proposed power plant site and substation. The ponds would be designed to meet permitting requirements of ADEQ and the Arizona Department of Water Resources (ADWR).

Lighting at the power plant would be limited to areas required for safety. Lighting would be directed downward and shielded in accordance with the Mohave County Night-Sky Ordinance. Highly directional, high-pressure sodium vapor fixtures would be used.

A microwave communication tower about 20 feet tall would be built with a microwave antenna aimed toward the existing communication link on Aubrey Peak or Wikieup. This system would be used to deliver signals from control centers and other remote locations, report operating status, and provide voice communication from dispatchers to power plant operators and maintenance personnel.

Numerous safety features would be included in the power plant design. Fire protection would be supplied by the use of diesel-driven emergency fire pumps, in accordance with National Fire Protection Association (NFPA) guidelines. Fire detection and extinguishing devices would be

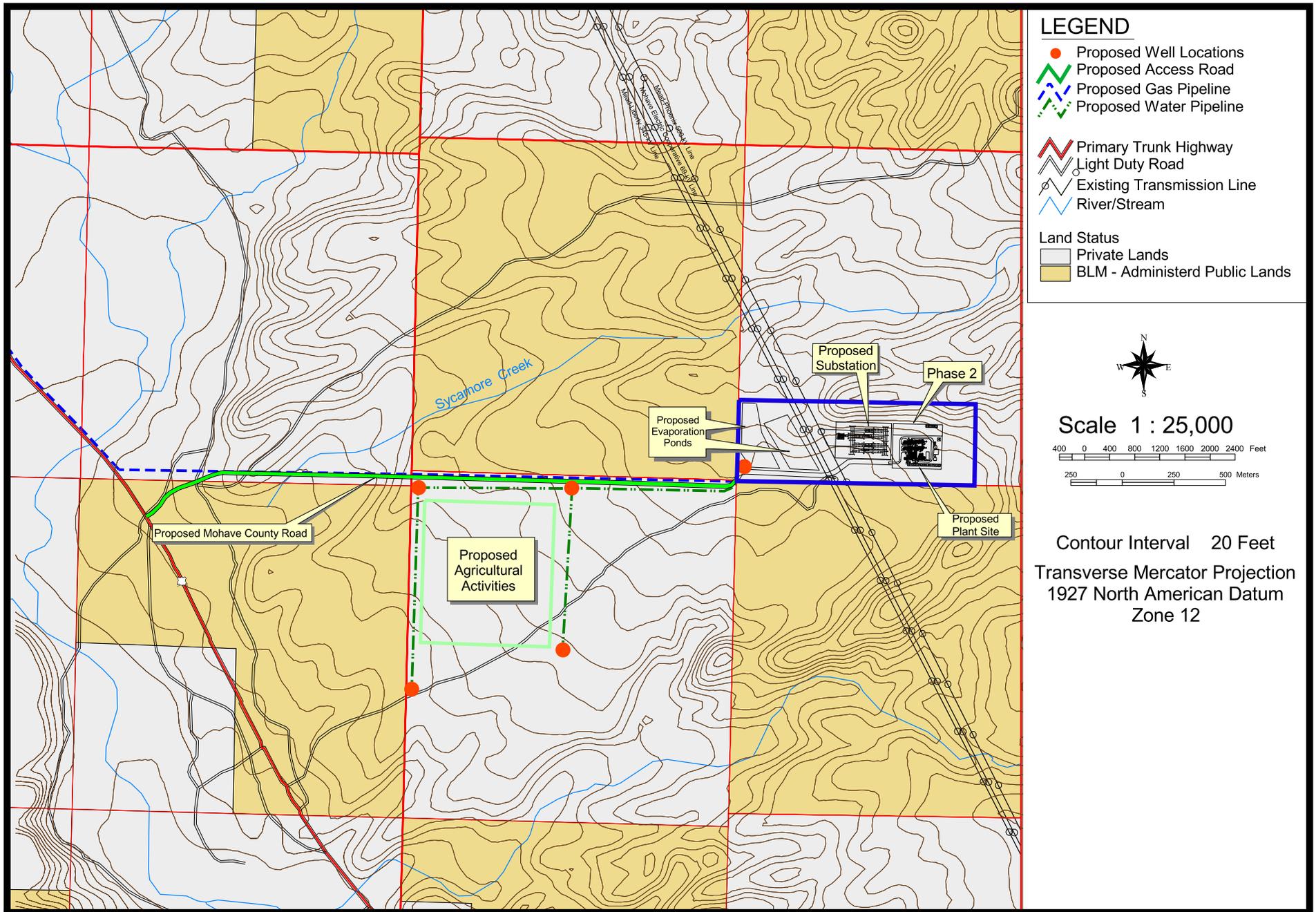
installed at key points throughout the proposed power plant.

Construction materials that would be purchased from commercially available sources include concrete (15,600 cubic yards), sand (4,400 cubic yards), aggregate (8,900 cubic yards), backfill gravel (18,000 cubic yards), and rebar (1,092 tons). A special train would be needed to deliver some major plant components, including three combustion turbines, four generators, and two steam turbines, from the Port of Houston, Texas to Kingman, Arizona. In Kingman, the equipment would be offloaded to oversized transport vehicles, and be delivered to the Project site via Interstate 40 (I-40) and US 93.

Construction of Phase 1 is estimated to require about 20 months, and is scheduled to begin in the third quarter of 2001. An average of about 350 workers would be employed with a maximum of about 650. Phase 2 would require a similar schedule but a smaller average work force of about 240.

Substation and Electrical Equipment

The substation, which would connect the proposed power plant and immediately adjacent Mead-Phoenix Project 500-kV transmission line, would cover about 12 acres just west of the power plant. Western would design, construct, own, and operate the proposed substation. Two new steel lattice structures would be built to provide a tie between the Mead-Phoenix Project 500-kV transmission line and the new substation. The substation would include transformers, circuit breakers, switches, and bus works arranged to perform electrical functions, minimize safety risk, and accommodate operation and maintenance. Electronic controls and monitoring equipment for the power system would be housed in a building within the proposed substation. A chain-link fence would provide security for the substation.



Proposed Power Plant and Well Field
Big Sandy Energy Project EIS

Figure S-2

The transformers each would contain about 12,000 gallons of cooling oil. An oil containment liner would be installed to collect and retain oil within the substation should an oil spill occur. The circuit breakers would be insulated by special nonconducting gas (sulfur hexafluoride [SF₆]). The use, storage, and replacement of SF₆ would be monitored and managed by Western to minimize any releases to the environment. Small amounts of hydraulic fluids would be used to open and close the electrical contacts within the breakers.

Communication Facilities

The substation equipment would be operated remotely from Western's Desert Southwest Region Operations Center in Phoenix. To provide for remote operation, a communications tower about 60 feet high would be built within the substation adjacent to the control house. A microwave dish about 10 feet in diameter would be installed on the tower and pointed toward an existing Western microwave tower at Hayden Peak in the Hualapai Mountains. A microwave dish about 10 feet in diameter would be added to the Hayden Peak tower. The addition of the microwave dishes would provide a link with Western's existing microwave communications system.

Dual or redundant communication facilities would be installed to provide backup communication system, in the event that the primary communication system is interrupted. Two options are being considered. One option would involve replacing an existing overhead static wire with a fiber optic line, referred to as an optical ground wire (OPGW), on the existing Mead-Liberty 345-kV transmission line between the proposed substation and Western's existing Peacock Substation, about 46 miles north of the proposed power plant site. From Peacock Substation, there is a fiber optic path to Western's Phoenix Substation in Phoenix. A microwave link also would need to be developed between Phoenix Substation and Perkins Substation at the southern end of the Mead-Phoenix Project 500-kV transmission line via an existing Western microwave facility at Towers Mountain (in the Bradshaw Mountains). New

microwave dishes would be required at Phoenix, Towers Mountain, and Perkins substations.

The second option would involve linking the proposed substation with the existing Salt River Project (SRP) microwave system, which currently is being used as a backup for the Mead-Phoenix Project 500-kV transmission line. This option would entail installing microwave dishes at the proposed substation and an existing SRP microwave facility. An intermediate tower may be required if a microwave path cannot be found between the proposed substation and an SRP microwave tower. Western would select the redundant communication system upon completion of further technical, operational, and environmental study.

Water Supply System

Up to five groundwater supply wells would be completed on private property about 0.5 mile southwest of the proposed power plant site and on the plant site itself. These wells would provide a maximum of about 4,850 acre-feet (equivalent to 3,000 gallons per minute [gpm]) of potable and cooling water annually to the power plant from a deep aquifer about 1,000 to 1,500 feet below the ground surface.

A water pipeline would convey the water to a 250,000-gallon water storage or "head" tank in the northeast corner of Section 7, and from there to a 600,000-gallon raw water supply tank on the proposed power plant site. Under normal operating conditions, two of the wells would be pumped at any one time, each at a rate of about 1,200 gpm. The wells would be cycled at about two-week intervals. The maximum rate of pumping would be about 5,000 gpm.

Well construction would involve the clearing of about 4 acres for each well pad. Drilling would occur 24 hours per day, and completion of each well would be expected within a 45- to 60-day period.

Natural Gas Supply Pipeline

A buried, high-pressure natural gas pipeline would be constructed to supply natural gas to the

proposed power plant. The line would connect to one or more existing natural gas transmission lines located about 39 miles north of the proposed power plant site near I-40.

The pipeline would be 16 to 20 inches in diameter, and be buried at least 3 feet. At full capacity, the pipeline would deliver about 106.4 million cubic feet (MMCF) of gas per day, which is equivalent to 3,246 MMCF per month, or 38,960 MMCF per year.

Construction of the line typically would require a 50-foot right-of-way in a 90-foot-wide disturbance corridor, but a specific proposed alignment or alternative alignments have not been identified at this stage of planning. Instead, broader corridors that allow adjustments to be made in the final engineered alignment of the pipeline have been identified. This would allow constraints discovered during pre-construction surveys and right-of-way negotiations to be accommodated.

Thirteen corridor segments have been identified. The proposed route uses six corridor segments (R1-C1-T3-C3-T4-R5), which follow a combination of existing road and transmission line corridors (Figure S-3). The proposed pipeline would begin at the points of connection with one or more of the three potential gas supply pipelines near I-40, and proceed along corridor segment R1, heading south in the 100- to 150-foot-wide right-of-way of Hackberry Road, a Mohave County road. There is an existing underpass where Hackberry Road connects with I-40 that the pipeline would follow. This corridor segment is about 3.9 miles long and passes through relatively undeveloped private and state-owned lands.

The proposed pipeline would then follow corridor segment C1 to the west and then southwest until intersecting the existing transmission line corridor. This corridor segment crosses both private and state-owned lands and is about 2.8 miles long.

The proposed route then follows corridor segment T3, which parallels the existing transmission lines south for about 8.5 miles to

the beginning of corridor segment C3. This corridor crosses both private and state-owned lands.

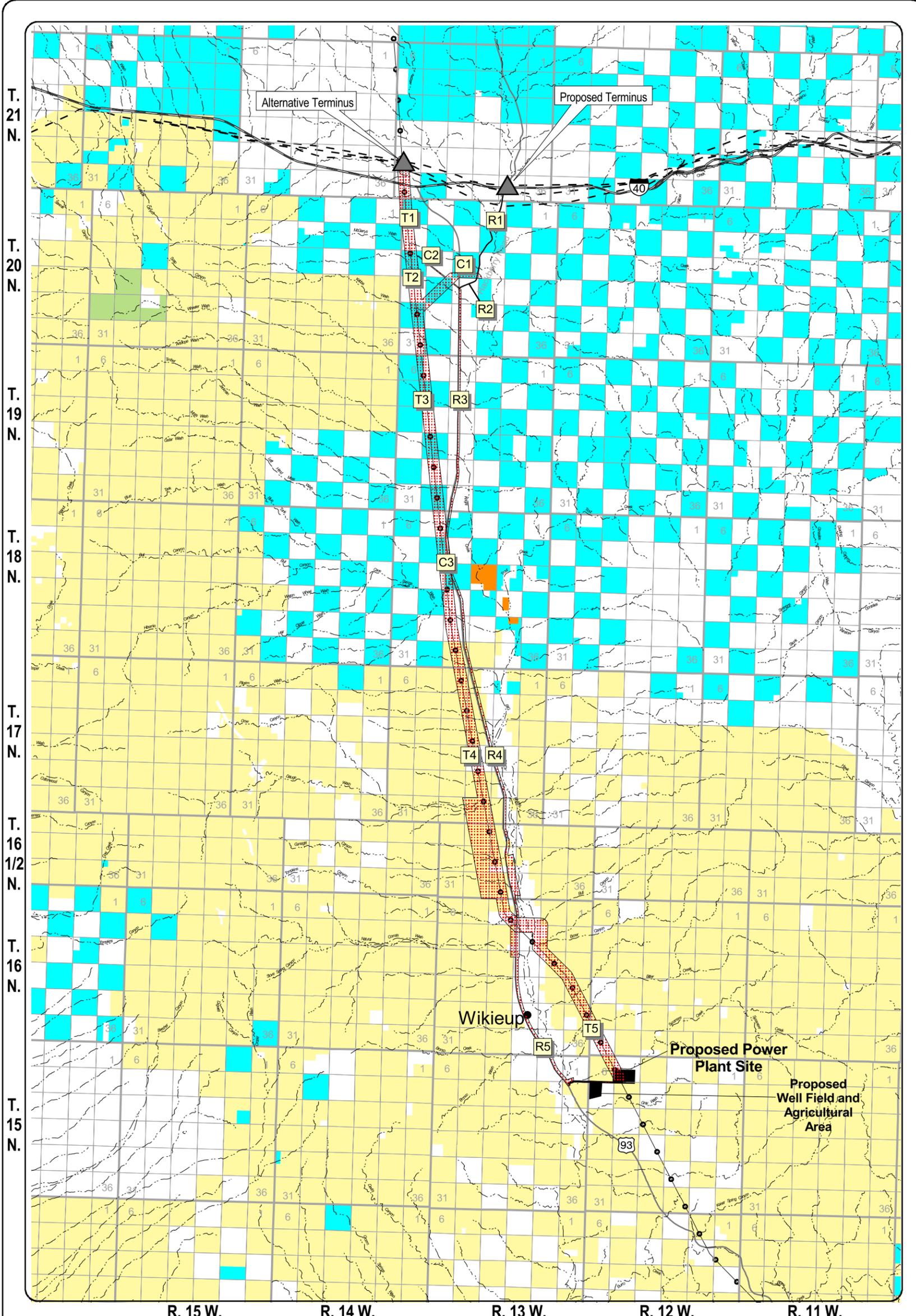
Corridor segment C3 is a crossover segment located where the transmission line and US 93 corridors overlap. The corridor segment is about 1.9 miles long and crosses private and state-owned lands.

The proposed route then continues southeast along the transmission line route (corridor segment T4). This corridor segment is about 13.8 miles long, terminating at the intersection of the transmission line rights-of-way and US 93. This segment extends along the western boundary of the Carrow-Stephens Ranches Area of Critical Environmental Concern (ACEC). This corridor segment crosses private, BLM-managed public, and state-owned lands.

From this point, the proposed route follows corridor segment R5 along US 93 south to the proposed Mohave County access road leading to the proposed power plant site. This corridor segment is about 8.5 miles long and varies in width from 150 feet wide along the proposed access road, to 1,800 feet wide along certain portions of US 93.

An alternative generally following US 93 was evaluated as the Alternative R gas pipeline corridor (corridor segments R1-R2-R3-R4-R5), as was an alternative generally following the Mead-Phoenix Project 500-kV transmission line, referred to as the Alternative T gas pipeline corridor (corridor segments T1-T2-T3-T4-T5).

Pipeline construction would take about 75 days to complete. Trenching, installation of the pipe, and closing of the trench at any one point along the route would take about three to five days. The crossing of the Big Sandy River is the most sensitive construction area, and the pipe may be installed beneath the riverbed either by open trenching or directional boring. Construction within the river and other washes would be performed in accordance with permits issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.



Legend

- | | | | |
|---------------------------|--|---|--|
| Project Components | | Land Ownership and General Reference | |
| | Pipeline Corridor Segments | | Private |
| | Proposed Pipeline Corridor - R1,C1,T3,C3,T4,R5 | | State |
| | Alternative R Corridor - R1,R2,R3,C3,R4,R5 | | BLM |
| | Alternative T Corridor - T1,T2,T3,C3,T4,T5 | | Hualapai Reservation |
| | R1 Road Corridor Segment | | Parks |
| | T1 Transmission Line Corridor Segment | | Existing Pipelines |
| | C1 Crossover Corridor Segment | | Mead-Liberty/Mead-Phoenix Transmission Lines |
| | Proposed Plant Facilities | | Stream/River |
| | | | Interstate |
| | | | U.S. Route |

Proposed and Alternative Natural Gas Pipeline Corridors

Big Sandy Energy Project EIS



Scale in Miles

Universal Transverse Mercator Projection
1927 North American Datum
Zone 12



Figure S-3

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Agricultural Development

The Proposed Action would involve supplying selected lands and water to MCEDA for agricultural use. Agricultural development would occur on about 107 acres located in the vicinity of the well field. Water for agricultural use would be raw groundwater provided from the same water wells that would supply water for the proposed power plant. A maximum of 400 gpm (650 acre-feet per year) of water, subtracted from the Project's maximum use of 4,850 acre-feet per year (3,000 gpm), would be made available for agricultural use in this area.

Agricultural products would be mainly forage crops or fruit or nut orchards. These crops are likely to require 2 to 6 acre-feet of water per acre per year. Agricultural fertilizers, pesticides, and herbicides would be applied as needed for specific agricultural operations. Application rates would follow manufacturers' instructions and all pesticides would be EPA-registered and approved for use on the specific crops grown. Standard agricultural practices to minimize erosion and runoff of applied chemicals and soil would be employed.

Actions to Reduce or Prevent Environmental Impact

The Proposed Action incorporates numerous measures to avoid or reduce environmental impacts, including the following:

- dust control measures
- erosion and sedimentation reduction measures
- groundwater monitoring plan
- shallow groundwater and river water flow augmentation
- stormwater pollution prevention plan and surface water diversion structures

- compensation for predicted impacts on the flow of Cofer Hot Spring
- actions to minimize impacts on grazing
- actions to reduce visual impacts
- reclamation plans
- pre-construction biological surveys, Sonoran desert tortoise impact reduction measures, and construction scheduling to avoid wildlife impacts
- implementation of a programmatic agreement to reduce impacts on cultural resources
- spill prevention control and countermeasure plan
- noise reduction measures

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The proposed Project is situated in the Big Sandy River Valley, a thinly populated desert region of eastern Mohave County. Ranching and limited farming are the major economic activities in the area. The valley is drained by the Big Sandy River, which has perennial flows and rare wetland and riparian habitat in certain locations. The major highway between the Phoenix and Las Vegas, Nevada metropolitan areas, US 93, passes through the valley. The Mead-Liberty 230-kV and Mead-Phoenix Project 500-kV transmission lines also pass through the valley, connecting the Phoenix metropolitan area with electrical substations near the hydroelectric power plant at Hoover Dam. The following aspects of the natural and cultural environment in the area are addressed in this Draft EIS:

- Air Resources
- Geology/Paleontology
- Soils

- Groundwater
- Surface Water
- Floodplains
- Land Use and Access
- Grazing Management
- Recreation, Wilderness, and Visual Resources
- Areas of Critical Environmental Concern
- Vegetation
- Wetlands, Riparian Areas, and Waters of the United States
- Fisheries and Wildlife
- Threatened, Endangered, Proposed, Candidate, and Other Special Status Species
- Cultural Resources
- Socioeconomics and Environmental Justice
- Public Safety and Services
- Noise

Major Environmental Issues

Agency and public scoping defined the following major issues:

- Short-term and long-term effects of groundwater use for power plant operations, including effects on future water supplies in the Wikieup area and stream flows in the Big Sandy River.
- Direct and indirect effects on fish and wildlife resources and habitats, including the endangered southwestern willow flycatcher and wetland and riparian habitats.

- Direct and indirect effects on the community and values of Wikieup from construction activity, air emissions, future land use changes, landscape changes, noise, and taxation changes.
- Direct and indirect effects on water quality and use in the Project area, including any effects from the proposed pipeline construction.
- Effects on cultural resources and traditional cultural values of Native Americans.
- Effects on existing land uses from the pipeline construction.
- Federal agency fulfillment of Indian Trust responsibilities.

Major Conclusions

The assessment of impacts in this Draft EIS is summarized in Table S-1 at the end of this summary. Because numerous measures have been incorporated into the Proposed Action to eliminate or reduce environmental impacts, no significant impacts are projected for most of the resources considered. Additional potential mitigation measures are also identified in this Draft EIS. The major conclusions about significant impacts that potentially could occur are summarized in the following paragraphs.

Water Issues

No significant impacts on surface water are projected, and the only significant groundwater impact would be the reduction in flow to Cofer Hot Spring.

A deep aquifer has been identified as the source of water for the proposed power plant. Exploratory drilling and groundwater modeling indicate that this aquifer is relatively isolated from a middle aquifer, as well as the shallow aquifer that is the source of virtually all groundwater used in the valley today.

Groundwater modeling conducted for this Draft EIS predicted that without flow augmentation, water levels in the shallow groundwater could drop by less than 1 foot, and surface water could be reduced. However, the Proposed Action contains measures designed to monitor groundwater levels and provide water to augment shallow groundwater and surface water flows in the Big Sandy River sufficient to prevent changes to these hydrologic systems which may otherwise occur as a result of the Project. Therefore, no changes to shallow groundwater levels or surface water flows in the Big Sandy River are predicted as a result of the Project.

Groundwater pumping is likely to affect flows from Cofer Hot Spring. Caithness has agreed in concept to compensate the private owner of this spring; however, the loss of the spring flow would be a significant impact, per the significance criteria established for this Draft EIS.

Construction is projected to impact about 13 acres of Big Sandy River and ephemeral stream channels and washes. Measures to reduce the impacts of this disturbance in those jurisdictional waters would be implemented.

Fisheries and Wildlife, Including Threatened and Endangered Species and Wetland or Riparian Habitats

The Project may adversely impact riparian habitat and the endangered southwestern willow flycatcher, as well as other sensitive wildlife and plant species.

Installation of the pipeline by trenching across the Big Sandy River within corridor segment R5 would remove riparian vegetation, which represents habitat loss for the endangered southwestern willow flycatcher and provides opportunity for increase in brood parasitism by cowbirds. Installation of the pipeline by directional drilling would reduce impacts. Consultation with the U.S. Fish and Wildlife Service in compliance with Section 7 of the Endangered Species Act are ongoing to determine if significant impacts would occur,

and to identify potential measures to avoid or reduce impacts on listed endangered, threatened, or proposed species

There also is the potential for significant impacts on birds if the Migratory Bird Treaty Act is violated due to bird deaths or loss of nests.

Most wetland and riparian habitats would be avoided or, if disturbed, the resulting impacts would be mitigated. However, the loss of the wetland associated with Cofer Hot Spring would be a significant impact.

Cultural Resources

The Hualapai Tribe considers impacts of the Project on their traditional cultural landscape within the Big Sandy Valley and impacts on archaeological sites reflecting their heritage to be a significant impact. Documenting aspects of traditional Hualapai culture for a tribal educational program could reduce those impacts, but even with implementation of mitigation, residual impacts would be considered significant. Although some archaeological and historical sites would be adversely affected by construction activities, data recovery studies would compensate adequately for the impacts on the informational values of those resources.

The Hualapai Tribe considers the Big Sandy Valley to be an integral part of their aboriginal territory and an important traditional cultural landscape. Early ethnographic studies documented that the Hualapais occupied at least four villages in the Big Sandy River Valley during the 1880s. Although the specific locations of these villages have not been identified, the Tribe concludes that the intrusion of the proposed Project into the Big Sandy Valley would adversely affect the traditional cultural landscape that the valley represents for the Tribe.

The Tribe also considers archaeological sites that reflect the occupation of the area by the Hualapai and their ancestors to be traditional cultural places. Construction of the power plant would destroy part of one archaeological site,

and other sites may be disturbed or destroyed by construction of the natural gas pipeline and other features of the Project. The Hualapai Tribe considers any disturbance of archaeological sites reflecting traditional occupation to be a significant adverse effect.

The Tribe has been involved in conducting cultural resource surveys and developing a programmatic agreement that would specify procedures for other pre-construction surveys and implementation of mitigation measures in compliance with Section 106 of the National Historic Preservation Act. No impacts to three parcels of Hualapai Reservation land in the upper Big Sandy River Valley are projected.

The proposed pipeline corridor would avoid direct impacts on the historic Carrow and Stephens ranches, which the BLM manages as an ACEC. Measures to mitigate impacts on other archaeological and historical sites would be developed and implemented in accordance with the Section 106 programmatic agreement and are expected to reduce residual impacts on the informational values of those resources to less than significant levels.

Indian Trust Assets

BLM and Western will continue to have discussions with the Hualapai Tribe about actions needed to protect tribal rights.

Federally recognized Indian tribes are domestic dependent nations, and the Federal government is obligated to protect tribal interests, a duty that is referred to as trust responsibility. This trust doctrine is defined through treaties, laws, executive orders, judicial decisions, and agreements. Indian trust responsibility commonly is thought of as encompassing the following three areas:

1. protection of trust land, assets, and resources
2. protection of tribal sovereignty and self-government
3. provision of services

The technical studies conducted for this Draft EIS concluded that there would be no significant impacts on Hualapai trust lands, assets, and resources. However, the Hualapai Tribal Council remains unconvinced by the technical models and is reluctant to support the Project.

Sovereignty and self-government for the Hualapai Tribe have been promoted by arranging for the Tribe to fully participate, within a government-to-government relationship, as a cooperating agency in the preparation of this EIS. The provision of services to Indian tribes typically is the role of agencies such as Bureau of Indian Affairs and Indian Health Service.