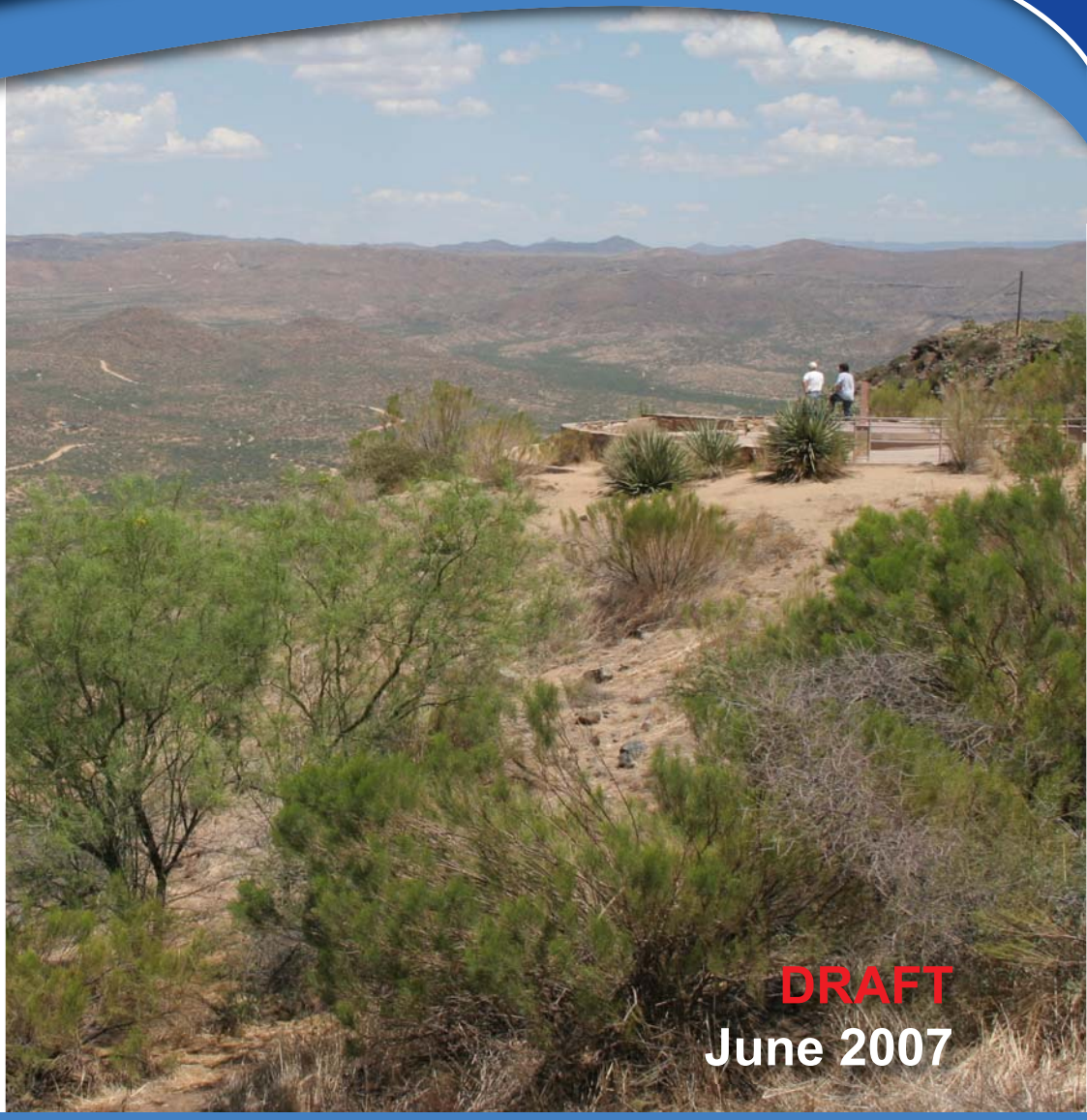
APPENDIX T

VISUAL RESOURCE STUDY TECHNICAL REPORT

Transwestern Phoenix Expansion Project

Visual Resource Study Technical Report



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ENERGY TRANSFER PARTNERS

Transwestern Pipeline Company

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SECTION 1 - INTRODUCTION

This technical report focuses on the inventory of visual resources and the characterization of potential visual impacts associated with the Transwestern Phoenix Expansion Project. The results of this study were used to derive appropriate mitigation measures, which are addressed in the Draft Transwestern Restoration Plan and Plan of Development for the project. Included in the report are an overview of the project, inventory methods and results, and the characterization of potential visual impacts. Inventory data were obtained from aerial photography, previous studies, federal agency management plans, and field reconnaissance. The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) are the primary federal agencies with established visual management systems that are affected by the proposed project. Using methods derived from the BLM's Visual Resource Management System and the USFS's Scenery Management System and Visual Management System, this study addresses the potential visual impacts of the proposed project on landscape scenery (scenic quality), sensitive viewers, and compliance with agency management objectives. The following sections are organized to discuss project methodology and results, as they pertain to the study areas in Arizona and New Mexico. The project overview will discuss the landscape character, vegetation communities, cultural modifications, and major issues of the proposed project. The inventory section provides a description of the affected visual environment and results as they pertain to scenic quality and sensitive viewers, while the impact assessment section describes the potential visual impacts to scenic quality, sensitive viewers, and agency compliance. Figure 1 provides an overview of the visual resource study methodology.

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The contents of this report include the following:

Section 1 – Introduction
Section 2 – Inventory
Section 3 –Assessment and Results

1.1 OVERVIEW

Project Setting

The proposed project is located within the Basin and Range Province (Arizona) and the Colorado Plateau Province (New Mexico), which comprises a majority of the project study area (Fennemen 1931). The Basin and Range Province is distinguished by isolated, roughly parallel mountain ranges separated by closed desert basins. Mountain ranges trend north-south with distinctive alluvial areas at their bases, known locally as bajadas. The Basin and Range Province is subdivided into two distinct subtypes: the Sonoran Desert and Mexican Highlands. The Sonoran Desert is characterized by desert mountains with intervening desert plains. The Mexican Highlands is comprised of half mountains and half plains. The New Mexico study area lies within the Colorado Plateau Province and is characterized by high-elevation plains and numerous canyons. The Navajo Section is the dominant subtype of this study area. This landscape type is generally horizontal in form and shows substantial erosion on distinctive features, such as mesas, escarpments, canyons, and dry washes.

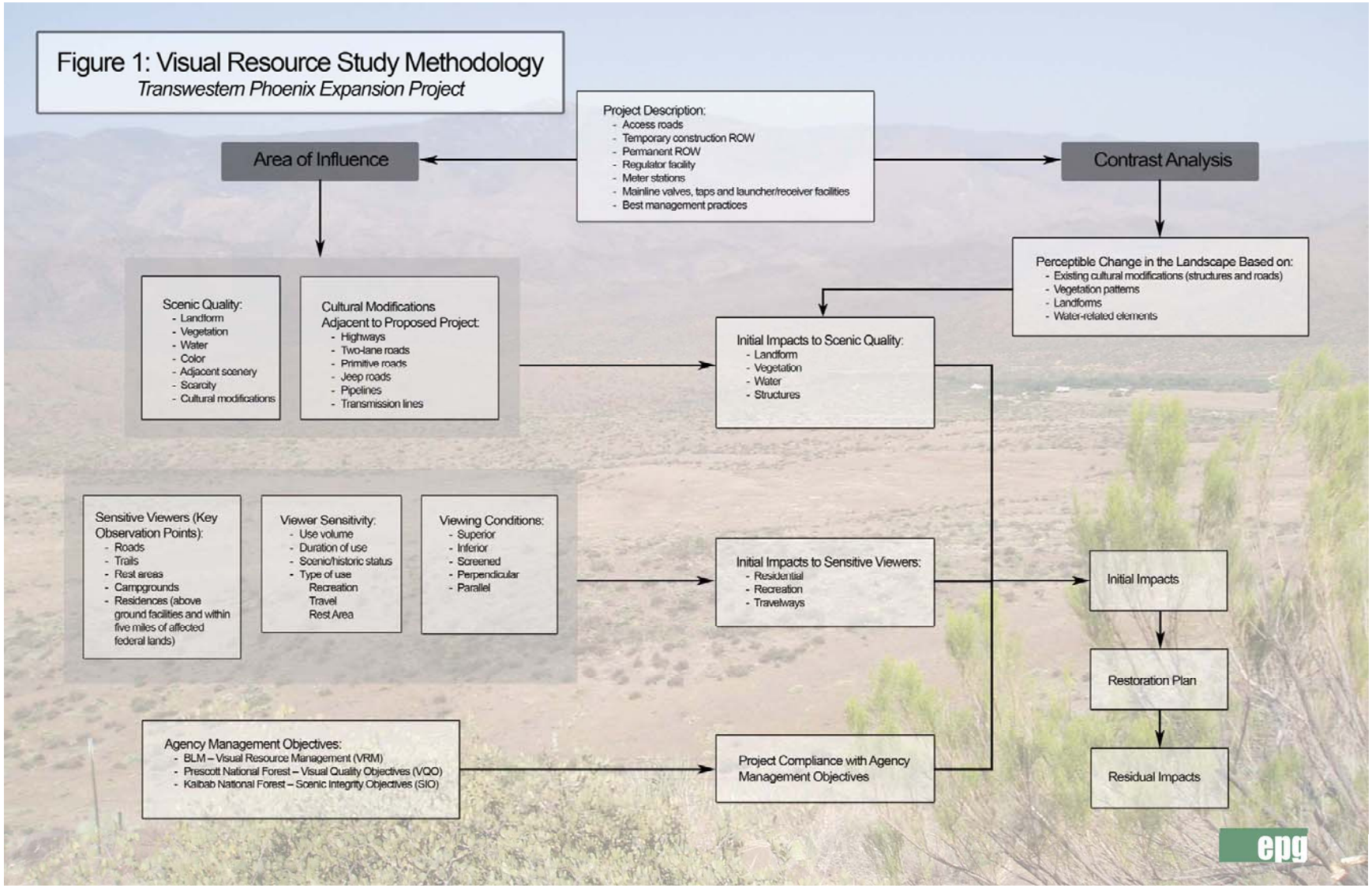
Figure 1: Visual Resource Study Methodology
Transwestern Phoenix Expansion Project
Project Description:
- Access roads
- Temporary construction ROW
- Permanent ROW
- Regulator facility
- Meter stations
- Mainline valves, taps and launcher/receiver facilities
- Best management practices
Area of Influence
Contrast Analysis
Scenic Quality:
- Landform
- Vegetation
- Water
- Color
- Adjacent scenery
- Scarcity
- Cultural modifications
Cultural Modifications Adjacent to Proposed Project:
- Highways
- Two-lane roads
- Primitive roads
- Jeep roads
- Pipelines
- Transmission lines
Perceptible Change in the Landscape Based on:
- Existing cultural modifications (structures and roads)
- Vegetation patterns
- Landforms
- Water-related elements
Initial Impacts to Scenic Quality:
- Landform
- Vegetation
- Water
- Structures
Sensitive Viewers (Key Observation Points):
- Roads
- Trails
- Rest areas
- Campgrounds
- Residences (above ground facilities and within five miles of affected federal lands)
Viewer Sensitivity:
- Use volume
- Duration of use
- Scenic/historic status
- Type of use
Recreation
Travel
Rest Area
Viewing Conditions:
- Superior
- Inferior
- Screened
- Perpendicular
- Parallel
Initial Impacts to Sensitive Viewers:
- Residential
- Recreation
- Travelways
Initial Impacts
Restoration Plan
Residual Impacts
Agency Management Objectives:
- BLM – Visual Resource Management (VRM)
- Prescott National Forest – Visual Quality Objectives (VQO)
- Kaibab National Forest – Scenic Integrity Objectives (SIO)
Project Compliance with Agency Management Objectives
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Vegetative Communities

There are eight major vegetation communities that the proposed Phoenix Expansion Project would traverse. The affected vegetation communities include, from north to south, conifer woodland, Great Basin grasslands, interior chaparral, semidesert grassland, Arizona upland, lower Colorado, Great Basin desertscrub (Brown and Lowe 1994), and mesoriparian. These vegetative communities, in conjunction with topographic character, were used to delineate scenic quality rating units, which are discussed in Section 2.2.

Cultural Modifications

The primary cultural modification that affects the project setting is the existing El Paso Natural Gas pipeline, which traverses BLM and Kaibab and Prescott National Forest land. Other modifications that affect the project setting include transmission lines, utility, and transportation corridors. The proposed project would parallel these modifications for the majority of its length.

Areas of Concern

Visual issues associated with the Phoenix Expansion Project were identified by federal agencies, including the BLM and USFS. The BLM is mandated by law to manage its scenic resources so that visual quality is protected for present and future generations (Federal Land Policy and Management Act 1976). Proposed activities that require modification of the landscape must make a reasonable attempt to minimize visual impacts. Visual issues were identified through both agency input and public comments on the proposed project. Areas of concern identified include recreation destinations, scenic vistas, and special management areas that are well known to the public or agency managers. The Phoenix Expansion Project has five major visual areas of concern that were identified by the BLM and Prescott and Kaibab National Forests. These areas include Little Hell Canyon in the Kaibab National Forest, which is a popular local recreation destination. The Verde River in the Prescott National Forest has the potential for Wild and Scenic River listing. Hell Canyon is another unique visual resource in the Prescott National Forest. Emery Henderson Trailhead, off of New River Road, provides access to the Black Canyon Trail and facilities for visitors. Sunset Point, off of Interstate 17 (I-17), has direct views of where the proposed pipeline would cross BLM land. The high visitation and visibility of this site make it an area of primary concern that would require special mitigation measures to reduce impacts.

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SECTION 2 - INVENTORY

2.1 METHODS

The methodology used to inventory visual resources and analyze visual impacts is consistent with the BLM Visual Resource Management Manual (VRM 8400 Series 1986), as well as the USFS Scenery Management System and (VMS) Visual Management System. The BLM's visual resource inventory process was selected as the primary framework to identify the visual resources affected by the project. This process provided the foundation for analysis and subsequent recommendations to all land equally, regardless of jurisdiction. Based on direction from the BLM, visual resources were inventoried on all federal lands with visual management objectives, sensitive viewers up to 5 miles from affected federal land, and sensitive viewers adjacent to the proposed aboveground facilities. Resources inventoried are discussed in Section 2.7 and listed in Table 1. Agency management objectives were collected from participating agencies (BLM and USFS) and mapped for a 5-mile-wide corridor along the length of the pipeline. The data collection also included reviews of aerial photographs, maps, and planning documents, as well as field investigations. The visual resource inventory includes the consideration of scenic quality, sensitive viewers, and agency management objectives as discussed below.

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2.2 SCENIC QUALITY

Scenic quality (BLM criteria) or variety class/scenic attractiveness (USFS criteria) is a measure of the aesthetic value of a specific area of land defined by characteristics including landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications (1986 BLM VRM 8400 Series, 1974 Forest Service Handbook 462, 1995 Forest Service Handbook 701). Generally, landscapes with a greater diversity of these features receive a higher scenic quality rating. Below is a brief summary of the scenic quality ratings: (detailed descriptions of scenic quality per agency can be found in Appendix A.)

- Class A – landscapes with distinctive or outstanding diversity or interest
- Class B – landscapes with common or average diversity or interest
- Class C – landscapes with minimal diversity or interest

The evaluation of scenic quality for the Phoenix Expansion Project visual study employs an approach that is consistent with BLM and USFS visual resource inventory procedures. The BLM in Arizona has defined scenic quality ratings and requested that those ratings be used in this study. Scenic Quality was updated for Forest Service lands per consultation with Forest Service personnel. Section 2.7 of this report (Inventory Results) discusses the findings of the scenic quality evaluation.

Existing conditions, which consists mostly of cultural modifications, were assessed adjacent to the centerline of the proposed project. The presence of facilities including pipelines, transmission lines, transportation routes, and other structural features modify the scenic quality of natural and

residential settings. Existing conditions were evaluated by means of aerial photography and field reconnaissance to determine the location where modifications would affect natural and residential settings. The modifications assessed are defined below:

- Pipelines – existing pipeline corridors of any size
- Transmission lines – large lattice structures (i.e., 500 kilovolt)
- Pipelines and transmission lines – combination of existing pipelines and transmission lines
- Highways – paved with four or more traffic lanes and a median
- Primitive roads – regularly maintained dirt or unimproved road.

2.3 SENSITIVE VIEWERS

The term "sensitive viewers" has been adopted to refer to the BLM VRM key observation points, Kaibab National Forest SMS constituent information, and the Prescott National Forest visual quality objective (VQO) sensitivity levels. Potential sensitive viewers that may have views of the proposed project have been identified and inventoried up to 5 miles (middleground) from the project centerline on federal land in addition to major public travel routes. Sensitive viewers have been identified in coordination with federal agencies, review of aerial photography, and verified through field reconnaissance. In addition, travelers with potential views of the proposed project also were inventoried. The sensitive viewers were organized into three categories:

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- Travel routes – highways and roads used by origin/destination travelers, designated scenic or historic byways, and recreation destination roads

- Recreation areas – existing recreation sites used for picnicking, camping, hiking, scenic overlooks, rest areas, or other recreational activities

- Residences – Single family detached structures and permanent mobile homes or mobile home parks

2.4 VIEWER SENSITIVITY

Visual sensitivity pertains to the degree of concern for changes to the landscape setting, which may be natural, rural, suburban, or urban. The sensitivity rating (high, moderate, or low) depends on five criteria: volume of use, duration of use, concern for aesthetics, scenic or historic status, and type of use (travel routes, recreation areas, and residences). An area that has a high-use volume may have a higher sensitivity or concern for the preservation of scenic quality. Concern for scenic quality would increase as duration of use increases. Scenic or historic status may increase the amount of use and duration of use for viewers. Special management areas or designations may have a higher concern for aesthetics. Visual sensitivity also would vary with each type of user.

Recreational users may be highly sensitive to changes, whereas commuters may not be as sensitive to changes in the landscape. Residences may have the highest sensitivity due to high use and duration. These criteria determine the composite level of viewer sensitivity as it pertains to specific sensitive viewers.

2.5 DISTANCE ZONES AND VIEWING CONDITIONS

The BLM VRM system provides the foundation for defining distance zones, as described in the Inventory Manual (8410-1). The BLM typically defines distance zones as foreground (0 to 3 miles), middleground (3 to 5 miles), and background (5+ miles). These definitions were used as a framework for the subsequent analysis; Section 3.5 will discuss the variation of these BLM definitions. Distance zones were established based on visibility thresholds. Visibility is the perception of form, color, texture, and other visual elements in the landscape that changes with distance. These elements become less detailed and obvious as distance from a viewpoint increases. Specific distance zones were established for this project through field reconnaissance and are discussed in the results section. Distance zones and viewing conditions pertain to the viewer's orientation, screening, and backdropping of the proposed project (pipeline ancillary facilities). Screening ranges between minimally, partially, and completely screened and pertains to elements such as vegetation and topography that inhibit the visibility of the project. Views also can be skylined or backdropped by adjacent terrain, vegetation, or structures. When a project is backdropped, the color, texture, and form of the project components are subdued, reducing the visibility of the project.

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2.6 AGENCY MANAGEMENT OBJECTIVES

The BLM's VRM system establishes guidelines for the level of acceptable visual change allowed in the landscape. The BLM VRM system requires inventorying scenic values and establishing management objectives for those values through the resource management planning process. Contrast evaluation of the proposed activities would determine the compliance with management objectives. The VRM methodology consists of an inventory of the existing visual resources, which are individually classified as one of four management objectives. The management objectives pertaining to the BLM are Class I, II, III, and IV, and are discussed in more detail in Appendix A. The USFS has a similar approach, although management objective terminology differs. There are no formal guidelines for managing visual resources on state or private land, or Bureau of Indian Affairs land.

The Prescott National Forest has developed VQOs based on the VMS manual (1974, Forest Service Handbook 462). These VQOs are designed to measure public concern (sensitivity levels) as well as the diversity of natural features (variety classes) that currently exist on forest land. There are five VQO classifications: Preservation, Retention, Partial Retention, Modification, and Maximum Modification, that are discussed in more detail in Appendix A. Each objective describes acceptable degrees of alteration that can be made to the natural landscape, based on

aesthetics. These VQOs are critical guidelines that the USFS uses to make land use decisions concerning its resources.

The Kaibab National Forest has adopted the newer Scenery Management System, which is based on research and experience from the VMS described by the Prescott National Forest (1995, Forest Service Handbook 701). Each objective describes acceptable degrees of alteration that can be made to the natural landscape through the integration of aesthetics with other biological, physical, and cultural resources. There are five SMS classifications: Very High (Level 1), High (Level 2), Moderate (Level 3), Low (Level 4), and Very Low (Level 5), all of which are similar to the VQO classifications for Prescott National Forest. For a detailed explanation of the aforementioned visual systems refer to Appendix A.

2.7 INVENTORY RESULTS

Scenic Quality - New Mexico

Bureau of Land Management

The majority of the BLM lands crossed by the project in New Mexico have been evaluated as Class C and B for scenic quality. Class C landscape types include Great Basin foothills and are generally low in vegetative diversity. Class B landscapes are generally associated with Great Basin rolling hills and badlands, with several mesas and canyons providing an above-average visual variety.

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Scenic Quality - Arizona

Kaibab National Forest

The Kaibab National Forest scenic attractiveness (scenic quality) rating for the majority of the land affected by the project is Class C. The primary landscape type of this class is conifer plains. Areas rated as Class B primarily include juniper rolling hills and foothills. The presence of woody vegetation in Class B landscape types adds greatly to visual interest, because changes in terrain are often subtle. Areas designated as Class A scenery include canyon or riparian areas such as the Little Hell Canyon, which is a reservoir unique to the region.

Prescott National Forest

The Prescott National Forest variety class (scenic quality) rating for the majority of the land affected by the project is Class C. These landscape types include chaparral foothills and conifer plains. Areas rated as Class B primarily include juniper rolling hills and foothills. The presence of woody vegetation in Class B landscape types greatly adds to the visual interest, because changes in terrain are often subtle. Areas designated as Class A scenery include canyon or

riparian areas such as the Verde River and Hell Canyon and are rich in plant diversity and rock outcrops.

Bureau of Land Management

Scenic quality ratings for the project were obtained from the draft Agua Fria National Monument & Bradshaw-Harquahala Resource Management Plan/Environmental Impact Statement (RMP/EIS) and draft Phoenix South and Sonoran Desert National Monument RMP/EIS (per direction of the BLM). The majority of the BLM land crossed in Arizona by the proposed pipeline has been designated as Class C. These areas are generally associated with flat to low desert hills and plains, with low vegetative diversity. Landscape types include creosote plains, isolated rolling hills, foothills, and xeroriparian washes. Class B areas crossed by the project are more extensive near the Bradshaw Mountains and are adjacent to the proposed pipeline near the Sonoran National Monument. The landscape types in these areas have more visual interest, with increased vegetative diversity and unique plant specimens, such as saguaros. Upland escarpments, canyons, and valleys found within these regions offer more visual variety based on changes in topography.

Sensitive Viewers and Viewer Sensitivity - New Mexico

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Travel Routes

Scenic Routes (includes all road designations)

- Highway 550 – high rate of speed, high-quality scenic views, and shorter travel time. This road is a recreational route for travelers.

Highway Routes – Travelers on these routes typically have moderate sensitivity and a high concern for utility over aesthetics. These travelers expect shorter travel times and are not as concerned with aesthetics.

- U.S. Highway 64 – High rate of speed, low aesthetics, and shorter travel time

Local Access Routes - Travelers on these routes typically have moderate sensitivity with low concern for aesthetics. These routes provide direct access to local destinations such as commercial areas and residences that are frequented daily.

- County Road 4990 – moderate rate of speed, low aesthetics, and moderate travel time
- Reservation Road 9 – high rate of speed, low aesthetics, and shorter travel time
- Highway 566 – high rate of speed, moderate aesthetics, and shorter travel time

Recreation Access Routes – Travelers on these routes typically have moderate to high sensitivity and concern for aesthetics. These travelers may anticipate longer scenic trips that would provide access to recreational areas.

- Horn Canyon Trail – slow rate of speed, moderate aesthetics, and longer travel time. This road is a recreational route for travelers.

Residences

Federal lands within 5 miles of proposed project - Each of these communities listed would have a high-sensitivity rating with high-use duration and concern for aesthetics.

- Bloomfield

Sensitive Viewers and Viewer Sensitivity - Arizona

This section of the inventory focuses on viewer sensitivity and viewing conditions as they relate to sensitive viewers. Travelers and recreational and residential viewers are the main types of viewers affected by the proposed project. For a detailed inventory of viewer sensitivity, please refer to the sensitive viewers and viewer sensitivity analysis (Table 1).

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TABLE 1
SENSITIVE VIEWERS AND VIEWER SENSITIVITY ANALYSIS

Sensitive Viewers		Sensitivity					Land Ownership			
Travel Routes – New Mexico		**Use Duration**	**Use Volume**	**Aesthetic Concern**	**Scenic/ Historic**	**Overall Sensitivity**	**Kaibab**	**Prescott**	**BLM**	**Other (Private, State, BIA)**
Highway	U.S. Highway 64	L	H	M		M				x
Scenic State Route	State Route 550	M	M	H	x	H			x	x
Local Access	County Road 4990	L	M	M		M			x	x
	Reservation Road 9	L	M	M		M				x
	Highway 566	L	M	M		M				x
Recreation Access	Horn Canyon Trail	M	L	M		M			x	
Residences – New Mexico										
Loop A	Bloomfield	H	H	H		H				x
Travel Routes - Arizona										
Scenic Routes	State Route 89A	H	M	H	x	H	x	x		x
	Interstate 17 (Maricopa County)	L	H	H	x	H			x	x
	New River Road	H	M	H	x	H			x	x
	Carefree Highway 74	M	M	H	x	H			x	x
	Castle Hot Springs Road	M	M	H	x	H			x	x
	Sun Valley Parkway	M	M	H	x	H				x
	Old Highway 80	M	M	H	x	H				x
	Agua Caliente Road	M	L	H	x	H			x	
Interstate	Interstate 40	L	H	M		M	x			
	Interstate 17	L	H	M		M			x	x
	Interstate 10	H	H	M		M				x
State Highway Routes	State Route 89	M	M	M		M	x	x		
	State Route 69	M	M	M		M			x	x
	State Route 60	M	M	L		M				x
	State Route 85	H	M	M		M				x
	State Route 238 (Maricopa Rd.)	M	M	L		M				x
Recreation Routes	Forest Road #73	M	L	M		M		x		x
	Perkinsville Road	M	L	M		M		x		x
	Antelope Creek Road	M	L	M		M			x	

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TABLE 1
SENSITIVE VIEWERS AND VIEWER SENSITIVITY ANALYSIS

Sensitive Viewers		Sensitivity					Land Ownership			
Travel Routes – New Mexico		**Use Duration**	**Use Volume**	**Aesthetic Concern**	**Scenic/ Historic**	**Overall Sensitivity**	**Kaibab**	**Prescott**	**BLM**	**Other (Private, State, BIA)**
Recreation Routes	Bumble Bee Road	M	L	M		M			x	
	Crown King Road	M	M	M		M		x	x	
	Bloody Basin Road	M	L	M		M			x	
	Table Mesa Road	M	M	M		M			x	
	Pipeline Road	M	M	H		H			x	
Local Access Routes	Old Black Canyon Highway	M	M	L		M				x
	New Fain Road	L	M	L		M				x
	Salome Highway	L	M	L		M				x
	Maricopa-Casa Grande Hwy	L	M	L		M			x	x
Recreation – Arizona										
Local Trails	Black Canyon Trail	H	M	H		H			x	
Regional Trails	Anza National Historic Trail	H	M	M	x	H			x	
Recreation or Rest Areas	Verde River Trailhead (proposed)	M	M	H		H		x		
	Emery Henderson Trailhead	M	M	H		H			x	
	Sunset Point	M	H	H	x	H			x	
	Little Hell Canyon	M	M	H		H	x			
Residences – Arizona										
Adjacent to Federal Lands (within 5 miles of centerline)	Ash Fork	H	H	H		H				x
	Dewey	H	H	H		H				x
	Poland Junction	H	H	H		H				x
	Mayer	H	H	H		H				x
	Cordes Junction	H	H	H		H				x
	Bensch Ranch	H	H	H		H				x
	Bumble Bee	H	H	H		H				x
	Black Canyon City	H	H	H		H				x
	New River	H	H	H		H				x
	Anthem	H	H	H		H				x
	Lake Pleasant	H	H	H		H				x
	Buckeye	H	H	H		H				x

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TABLE 1
SENSITIVE VIEWERS AND VIEWER SENSITIVITY ANALYSIS

Sensitive Viewers		Sensitivity					Land Ownership			
Travel Routes – New Mexico		**Use Duration**	**Use Volume**	**Aesthetic Concern**	**Scenic/ Historic**	**Overall Sensitivity**	**Kaibab**	**Prescott**	**BLM**	**Other (Private, State, BIA)**
	Rainbow Valley	H	H	H		H				x
	Mobile	H	H	H		H				x
	Hidden Valley	H	H	H		H				x
L = Low	M = Moderate	H = High								

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Scenic Routes – (includes all road designations)

- State Route 89A – high rate of speed, high-quality scenic views, and shorter travel time. This road is a recreational route for travelers.
- Interstate17 – high rate of speed, moderate scenic views, and shorter travel time.
- New River Road – high rate of speed, moderate scenic views, and moderate travel time.
- State Route 74 (Carefree Highway) – high rate of speed, moderate scenic views, and shorter travel time.
- Castle Hot Springs Road – slow rate of speed, high-quality scenic four-wheel drive (4WD) road, and longer travel time. This road is a recreational route for travelers.
- Sun Valley Parkway – high rate of speed, moderate scenic views, and moderate travel time.
- Old Highway 80 – high rate of speed, moderate scenic views, and shorter travel time.
- Agua Caliente Road – historical significance, moderate scenic 4WD road, and longer travel time.

Interstate Routes – Travelers on these routes typically have moderate sensitivity and a high concern for utility over aesthetics. These travelers expect shorter travel times and are not as concerned with aesthetics.

- Interstate 40 – high rate of speed, low aesthetics, and shorter travel time.
- Interstate17 – high rate of speed, low aesthetics, and shorter travel time.
- Interstate10 – high rate of speed, low aesthetics, and shorter travel time.

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State Highway Routes – These routes typically have travelers with moderate sensitivity with low concern for aesthetics. Travelers on these routes are more frequent (local) travelers that desire shorter trips to their destinations over aesthetics.

- Highway 89 – high rate of speed, moderate aesthetics, and shorter travel time.
- Highway 69 – high rate of speed, moderate aesthetics, and shorter travel time.
- Highway 60 – high rate of speed, low aesthetics, and shorter travel time.
- Highway 85 – high rate of speed, low aesthetics, and shorter travel time.
- Highway 238 (Maricopa Road) – high rate of speed, low aesthetics, and shorter travel time.

Recreation Routes – Travelers on these routes typically have moderate to high sensitivity and concern for aesthetics. These travelers may anticipate longer scenic trips that would provide access to recreational areas. These routes also may be used as recreation for travelers.

- Forest Road #73 – slow rate of speed, moderate aesthetics, and longer travel time.
- Perkinsville Road – slow rate of speed, high aesthetics, and longer travel time. This road is a recreational route for travelers.
- Antelope Creek Road – slow rate of speed, moderate aesthetics, and longer travel time.
- Bumble Bee Road – slow rate of speed, moderate aesthetics, and longer travel time.

- Crown King Road – slow rate of speed, high-quality scenic recreation destination, and longer travel time. This road is a recreational route for travelers.
- Bloody Basin Road – slow rate of speed, moderate aesthetics, and longer travel time.
- Table Mesa Road – slow rate of speed, moderate aesthetics, and longer travel time.
- Pipeline Road – slow rate of speed, high-quality scenic recreation destination, and longer travel time.

Local Access Routes – Travelers on these routes typically have moderate sensitivity with low concern for aesthetics. These routes provide direct access to local destinations such as commercial areas and residences that are frequented daily.

- Old Black Canyon Highway – moderate rate of speed, low aesthetics, and moderate travel time.
- New Fain Road – moderate rate of speed, low aesthetics, and moderate travel time.
- Salome Highway – moderate rate of speed, low aesthetics, and moderate travel time.
- Maricopa - Casa Grande Highway – moderate rate of speed, low aesthetics, and moderate travel time.

Recreation

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Trails – Generally these trails are multi-use and are easily accessible to the public. Local trails without public designation were not inventoried for this study.

- Anza National Historic Trail – high sensitivity with high concern for aesthetics. Regional multi-use trail with historic status.
- Black Canyon Trail – high sensitivity with high concern for aesthetics. Local multi-use trail provides recreation for residents of the area. The BLM is still in the planning stages for future alignments of the trail, and therefore these alignments have not been addressed in this report.

Recreation Areas – These recreation areas provide services to viewers, as listed below.

- Little Hell Canyon – high sensitivity and concern for aesthetics. This area is the only water-based recreational resource for local residents in this region.
- Verde River Trailhead (Proposed) – high sensitivity and concern for aesthetics. This trailhead would provide parking and access to the Verde River for recreational users.
- Sunset Point – high sensitivity and concern for aesthetics. This rest area provides amenities for travelers including restrooms, picnic areas, and vending machines.
- Emery Henderson Trailhead – high sensitivity and concern for aesthetics. This trailhead provides amenities for users of the Black Canyon Trail including restrooms, picnic areas, and equestrian facilities.
- Dispersed areas on USFS and BLM land.

Residences

Federal land within 5 miles of proposed project – Each of these communities listed would have a high-sensitivity rating with high-use duration and concern for aesthetics.

- Ash Fork
- Chino Valley
- Prescott Town and Country Club
- Dewey
- Poland Junction
- Mayer
- Cordes Junction
- Bensch Ranch
- Bumble Bee
- Black Canyon City
- New River
- Anthem
- Lake Pleasant
- Buckeye
- Rainbow Valley
- Mobile
- Hidden Valley

Aboveground Facilities

Each of the facilities listed below are described by their facility type, location by milepost, adjacency to existing facilities, and affected federal lands.

TABLE 2
ABOVEGROUND FACILITY INVENTORY

Aboveground Facility	Milepost	Adjacent to Existing Facilities	Affected Federal Lands
Ash Fork Facility	0.0	No	Kaibab National Forest
Meters	137.75	Meter	N/A
	148.6	Meter	N/A
	164.9	Power Plant	N/A
	193.3	Meter	BLM
	239.1	Meter	N/A
	250.6	Power Plant	N/A
2 meters, 1 receiver	255.1	Meter	N/A
	10.5	No	Prescott National Forest
	29.3	No	Prescott National Forest
Receivers and Launchers	95.2	No	N/A
	180.2	Receiver	N/A
Taps	32.5	No	N/A
	40.7	No	N/A
	50.7	Tap	N/A
	52.8	Tap	N/A

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Distance Zones and Viewing Conditions

The following distance zones were established through field reconnaissance and definitions discussed in Section 2.5. The BLM VRM process usually combines the foreground and middleground distance zones into a more general distance zone referred to as foreground/middleground. For this study the following distance zones were used to establish

project visibility for sensitive viewers and were a critical component of the impact analysis. The impacts to the foreground zone are anticipated to be much greater than middle or background zones. Three distance thresholds have been delineated for the foreground zone to discern impact ratings in more detail.

- Foreground Zone – Three foreground zones include: 0 to 0.25, 0.25 to 0.5, 0.5 to 3 miles
- Middleground Zone – 3 to 5 miles
- Background Zone – 5 miles and beyond

Agency Management Objectives – New Mexico

Bureau of Land Management

BLM lands in New Mexico are currently managed using the VRM classifications established within the Farmington RMP/EIS (2003). Per BLM consultation, lands in New Mexico associated with Loop A include Class III and IV designations. The classes were inventoried as follows: Class III (Mileposts 4.9 to 7.4, 8.4 to 8.9) and Class IV (Mileposts 0 to 4.9, 7.4 to 8.4). In general, half of the BLM lands in New Mexico crossed by the project are Class IV. These areas include the San Juan River Valley, community of Bloomfield (isolated parcels of BLM), and the Puerco River. Class III areas include Kutz Canyon and other smaller canyons and landforms. For the majority of Loop A, the proposed project parallels several existing pipelines that have locally modified the landscape.

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Loop B does not have established VRM classes as the lands are managed by the Bureau of Indian Affairs.

Agency Management Objectives - Arizona

Kaibab National Forest

Kaibab National Forest lands are managed under the Kaibab National Forest Land and RMP (1988). Current scenic integrity objective (SIO) designation information has been discussed with agency managers. The Kaibab National Forest SIO designations affected by the project are high (SIO 2) areas.

Prescott National Forest

Prescott National Forest lands are managed within the framework of the Prescott National Forest Land and RMP (1986). Current VQO designation information has been discussed with agency managers. The Prescott National Forest section of the pipeline would traverse 1.5 miles of designated VQO of retention, including Hell Canyon and the Verde River, 11 miles of partial retention, and 8.5 miles of modification designation. Areas of partial retention are generally

associated with views from Highway 89 at the Prescott National Forest's northern border to Hell Canyon (Mileposts 10 to 17.5). Areas of partial retention and modification designations are between Hell Canyon and the Verde River (Mileposts 18 to 23). The remainder of the route in the northern portion of the Prescott National Forest has a VQO designation of modification from Mileposts 24 to 30. The project would traverse southern Prescott National Forest on areas of modification and partial retention from Mileposts 60 to 61, respectively.

Bureau of Land Management

BLM lands in Maricopa and Pinal counties are currently managed within the framework of the Lower Gila South RMP/EIS. The Phoenix RMP/EIS covers the portions of Yavapai and Coconino counties that are affected by the proposed project. These plans do not have established VRM objectives. As per BLM direction, in the absence of adopted VRM classes, all lands without visual resource objectives default to Class III. This statement designates all Arizona BLM land as Class III.

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SECTION 3 - ASSESSMENT

The purpose of the impact assessment was to evaluate and characterize the level of visual modification to the landscape that could result from the construction, operation, and maintenance of the proposed Phoenix Expansion Project. Impacts associated with the project could occur if scenic quality is degraded or views from sensitive viewpoints are adversely modified. This section of the report describes the impact assessment methods and results of the visual resources study. Identified visual impacts are discussed in terms of initial and residual impacts. Initial impacts would occur immediately after project construction, whereas residual impacts would occur after restoration treatments have been implemented and vegetation eventually reoccupies the right-of-way. Initial and residual impacts are discussed as they affect scenic quality and sensitive viewers pertaining to study areas in Arizona and New Mexico. Compliance with agency management objectives is based on the anticipated project contrast as it affects scenic quality and sensitive viewers.

3.1 METHODS

The impact assessment employed in this visual study is based on the BLM's VRM System 8400 series, USFS SMS and VMS systems, and previous linear projects' visual impact assessments. The measure of visual impacts is based on a combination of visual contrast, viewer sensitivity, and the distance between the viewers and the project (distance zones). Computer modeling (GIS), in conjunction with field reconnaissance, has been used to generate results for the initial and residual impacts, as described below.

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Visual Contrast

The first step in identifying potential impacts was to perform contrast analyses for the proposed project. Contrast is defined as the degree of perceived change that occurs in the landscape due to the construction and operation of the proposed pipeline. Visual contrast typically results from (1) landform modifications that are necessary to prepare the right-of-way for construction, (2) the removal of vegetation to construct and maintain the proposed pipeline, and (3) the introduction of new aboveground facilities into the landscape.

The visual contrast assessment is performed by comparing visual elements (form, line, color, and texture) of the existing landscape (see Section 2 for inventoried existing conditions along the project right-of-way) with the visual elements associated with the proposed project, including new aboveground facilities and clearing of the right-of-way. In this regard, landform, vegetation, and structural elements of the landscape were evaluated in conjunction with the proposed pipeline right-of-way and assigned degrees of change/contrast, ranging from strong to strong/moderate, moderate, moderate/weak, weak, or none, as defined below.

- Strong – contrast demands attention and strongly dominates the landscape

- Strong/Moderate – contrast begins to demand attention and is still moderately dominant in the landscape

- Moderate – contrast attracts attention but is co-dominant in the landscape

- Moderate/Weak – contrast begins to attract attention and is moderately subordinate in the landscape

- Weak – contrast can be seen but is subordinate in the landscape

Contrast would be strongest on steep topography occupied by vegetation and weakest on flat, sparsely vegetated topography, based on a review of existing pipelines in the field. Therefore, discreet slope categories were incorporated into the contrast analysis and include flat (0 to 4 percent), moderate (4 to 10 percent), and steep (10+ percent) categories. Using GIS, a slope analysis was conducted and incorporated into the contrast study. Additionally, the density and type of vegetation along the proposed pipeline was collected in the field and incorporated into the analysis. Visual contrast was mapped along the proposed project using GIS.

Distance Zones

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Using GIS, distance zones were generated and mapped from identified moderate and high sensitivity viewers with potential views of the project on federal lands, including residences, travel routes, recreation areas, and public travel routes (i.e., highways, state routes, and scenic roads), as identified in Section 2 - Visual Inventory. Five discreet distance zones were generated and mapped based on the perceived dominance of the project, as identified in Section 3.2, within the context of established BLM distance zones:

- 0 to 0.25 mile - BLM Foreground Zone
- 0.25 to 0.5 mile - BLM Foreground Zone
- 0.5 to 3 miles – BLM Foreground Zone
- 3 to 5 miles - BLM Middleground Zone
- 5 miles and beyond - BLM Background Zone

Impact Matrices

Matrices, or impact models, were prepared to assist in the determination and characterization of impacts to visual resources. Sensitive viewer impacts incorporate contrast and distance zones, whereas scenic quality impacts incorporate contrast and scenic quality ratings (Class A, B, and C). These matrices were used in the GIS system to ascertain the location of potential impacts resulting from the proposed project. The matrices are incorporated into the discussion of potential impacts, as discussed below.

3.2 ASSESSMENT RESULTS

Assessment results for scenic quality and sensitive viewers are discussed according to their initial and residual impacts. Initial impact descriptions are based primarily on the visual elements driving the impacts (e.g., contrast and distance to the viewers). The impact description for each affected resource concludes with residual impacts, reflecting the ultimate long-term impacts of the proposed project. Within the context of this project, residual impacts are based on the assumption that the restoration plan developed for this project will be implemented and eventually successful. A landscape architect will be present during the clearing and restoration phases of the project where sensitive visual resources occur (see Transwestern Pipeline Phoenix Expansion Restoration Plan). The discussion of impacts to sensitive viewers is followed by a description of initial and residual compliance with agency management objectives.

Generally, constructing the pipeline in natural landscapes with dense vegetation on steep slopes would result in the strongest contrast ratings, thus the highest impacts. Conversely, constructing the pipeline in a modified landscape with sparse vegetation on flat terrain would result in the weakest contrast, thus the lowest impacts. In the context of this project, the majority of contrasts are anticipated to range from low to moderate because the proposed pipeline would:

1. parallel similar features in the landscape (i.e., pipelines, transmission lines, and primitive roads)
2. occur primarily on lands with minimal slope/topographic variation
3. occur within BLM-designated utility corridors

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The results below are organized by location, from north to south, starting with Bloomfield, New Mexico and concluding in Coolidge, Arizona.

Impacts To Scenic Quality

Impacts to scenic quality were assessed using scenic quality inventory data and landscape contrast ratings. Scenic quality impacts are based on project contrast and its effect on the inherent aesthetic value of the landscape (class A, B, and C) as indicated in Table 3, Impacts to Scenic Quality.

TABLE 3
IMPACTS TO SCENIC QUALITY

Contrast Rating	Scenic Quality Rating		
	Class A	**Class B**	**Class C**
Strong	High	High/Moderate	Moderate
Strong/Moderate	High	High/Moderate	Low/Moderate
Moderate	High/Moderate	Moderate	Low/Moderate
Weak/Moderate	Moderate	Low/Moderate	Low
Weak	Low/Moderate	Low	Low

New Mexico

Visual impacts to scenic quality for BLM lands in the New Mexico study area are discussed below.

Bureau of Land Management

The proposed route traverses a Class B landscape (Great Basin badlands) that has been highly modified by OHV trails and an existing pipeline. Based on these modifications, impacts to scenic quality are anticipated to range from low to moderate (for the steepest slopes). In Class C landscapes (Great Basin foothills), where the topography is subtle and vegetation clearing would be minimal, initial impacts are anticipated to be low. As with most of the project area in New Mexico, the landscape has been modified by roads and one or more pipelines possessing similar visual characteristics. The implementation of the restoration plan along the proposed route would facilitate the recovery of the vegetation, which primarily consists of grasses and low shrubs. Residual impacts are, therefore, expected to diminish over time in both B and C landscapes, resulting in low impacts.

Arizona

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Visual impacts to scenic quality occurring on federal lands, including those of the Kaibab National Forest, Prescott National Forest, and BLM (in the Arizona study area), are discussed below.

Kaibab National Forest

Lands managed under the Kaibab Forest Plan (Forest Service, 1988) have Class A, B, and C landscapes, which all consist of an existing pipeline route that the proposed route would parallel. Little Hell Canyon is designated as a Class A landscape, and initial impacts are anticipated to be high/moderate to moderate where mature dense vegetation and steep slopes occur. The proposed route primarily would traverse through a class B landscape consisting of rolling juniper hills. Impacts to this landscape are anticipated to be low/moderate, because mature, dense vegetation would be cleared, and changes to soil color would increase the contrast. Additionally, a few isolated areas of moderate impacts are anticipated where vegetated steep slopes occur. In Class C landscapes, where conifer grassland plains are common, initial impacts are anticipated to be low, because vegetation is sparse, and changes in soil color are anticipated to be weak. Residual impacts are expected to diminish over time as the restored vegetation has a chance to mature, reducing contrast in both Class B and C landscapes to low. Moderate residual impacts are expected for Little Hell Canyon (Class A landscape), after restoration and reoccupation of vegetation in portions of the right-of-way. Residual impacts to a Class B and C landscapes are anticipated to be low/moderate to low, because the restored vegetation would mature and reduce the contrast associated with the edge of the project right-of-way.

Prescott National Forest

Lands managed under the Prescott Forest Plan (Forest Service, 1986) were assessed as Class A, B, and C landscapes, all of which are crossed by an existing pipeline. Hell Canyon and the Verde River are both designated as Class A scenery where initial impacts are expected to be moderate to high/moderate, depending on the slope and the amount of vegetation clearing. Moderate to low/moderate initial impacts are anticipated in Class B landscapes (rolling conifer woodlands), with a few isolated areas of high/moderate impacts, based on the clearing of vegetation in areas of dense junipers. Initial impacts on Class C landscapes, where the topography is subtle, would be low. Residual impacts for both Class B and C landscapes are anticipated to be low in most cases, except on some of the steepest wooded slopes of the Class B landscapes. Moderate residual impacts are anticipated for Hell Canyon and the Verde River (Class A landscapes), following the implementation of the restoration plan and vegetation re-occupies the right-of-way.

Bureau of Land Management

Inventories of lands managed under the Phoenix RMP/EIS recorded only Class B and C landscapes. Initial impacts on Class B landscapes (primarily in the Black Canyon Corridor), are anticipated to range from low to moderate where vegetation clearing and soil disturbance would result in an increase in both line and color contrasts, respectively. Some areas of moderate to high/moderate impacts would occur where the proposed project deviates from the existing pipeline and other similar modifications (primitive roads). Initial impacts to the Class C landscapes are expected to be low, when the proposed pipeline would parallel the existing pipeline. Limited areas of low/moderate impacts would occur in Class C landscapes where the proposed pipeline deviates from the existing pipeline and other modifications. Other areas of Class C landscapes are located in BLM lands managed by the Lower Gila South RMP/EIS, where initial impacts are anticipated to be low. Project contrast is anticipated to be minimal because the proposed route follows a BLM-designated utility corridor consisting of an existing pipeline and for some segments of the project, a transmission line with similar visual features. Vegetation is expected to reasonably re-occupy the project right-of-way in Class B and Class C lands after the restoration plan has been implemented. The re-establishment of vegetation would reduce line contrast along the edge of the right-of-way, reducing impacts. Additionally, materials from adjacent lands and the implementation of the restoration treatments would reduce soil contrast, resulting in low (where the proposed pipeline would parallel an existing pipeline) to moderate residual impacts (where the proposed pipeline deviates from an existing pipeline).

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<u>Impacts To Sensitive Viewers</u>

Impacts to sensitive viewers were assessed for both high and moderate sensitive viewers. Using GIS, sensitive viewers inventoried as those associated with travel routes, recreation areas, and residences were reclassed as either high or moderate sensitivity for the impact analysis. Impacts are anticipated to be high where strong contrast is visible from high sensitivity viewpoints that

are within a mile of the proposed project. Visual impacts would decrease for sensitive viewers as distance from the proposed project increases, reducing dominance of the project. Initial visual impact levels for sensitive viewers have been assessed for high and moderate viewers in Tables 4 and 5. Impact levels derived from these tables were then modified, based on the specific viewing conditions of the sensitive viewer. For example, a moderate impact to viewers may have been identified, but upon field reconnaissance a determination was made that the project would not be visible. Therefore, based on visibility, the impact would be reduced.

TABLE 4
IMPACTS TO HIGH SENSITIVITY VIEWERS

Contrast Rating	Distance Zones				
	Foreground			Middleground	Background
	0- ¼ mile	¼ - ½ mile	½ -3 miles	3-5 miles	5+ miles
Strong	High	High	High/Moderate	Moderate	Low/Moderate
Strong/Moderate	High/Moderate	High/Moderate	Moderate	Low/Moderate	Low
Moderate	Moderate	Low/Moderate	Low	Low	Low
Moderate/Weak	Low/Moderate	Low	Low	Low	Low
Weak	Low	Low	Low	Low	Low

TABLE 5
IMPACTS TO MODERATE SENSITIVITY VIEWERS

Contrast Rating	Distance Zones				
	Foreground			Middleground	Background
	0- ¼ mile	¼ - ½ mile	½ -3 miles	3-5 miles	5+ miles
Strong	High/Moderate	Moderate	Low/Moderate	Low	Low
Strong/Moderate	Moderate	Low/Moderate	Low	Low	Low
Moderate	Low/Moderate	Low	Low	Low	Low
Moderate/Weak	Low	Low	Low	Low	Low
Weak	Low	Low	Low	Low	Low

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New Mexico

In general, initial impacts to sensitive viewers in New Mexico are anticipated to range from low/moderate to low, because the proposed project would parallel an existing pipeline for the majority of the project route. Specific impacts to travel routes, recreation areas, and residences that occur within the New Mexico study area are discussed below.

Travel Routes

Scenic Routes

- Highway 550 – Initial impacts to travelers using Highway 550 are anticipated to be low because the proposed pipeline would parallel an existing pipeline with similar visual elements. Additionally, topography would screen the project from northbound viewers, as well as southbound viewers, except when the project crosses the road. With the

implementation of the restoration plan, impacts are anticipated to be reduced, therefore, impacts would be minimal.

Highway Routes

- U.S. Highway 64 – Initial impacts to viewers are anticipated to be minimal because the proposed project would parallel an existing pipeline with similar visual features, and vegetation clearing would be minimal. Topographical screening would restrict views of the proposed project until the viewer is nearly perpendicular to the project. At that time, the proposed project may be visible albeit for a very short duration, resulting in low impacts. Implementation of the restoration plan would facilitate revegetation, thus impacts would be further minimized.

Local Access Routes

- County Road 4990 – Initial impacts to viewers are anticipated to be low because the proposed project would parallel existing pipelines. Views would be restricted because of topographical screening until the viewer is perpendicular to the proposed project. Once the restoration plan has been implemented, residual impacts are anticipated to be low, because revegetation would minimize anticipated impacts.

- Navajo Reservation Road 9 – Initial impacts to viewers are anticipated to be low primarily because the proposed project would parallel an existing pipeline with similar visual characteristics. The proposed project would have a short viewing duration because it would not traverse Reservation Road 9, minimizing visibility. With the implementation of the restoration plan, residual impacts are anticipated to be low, because the restored vegetation would mature and reduce visibility.

- Highway 566 – Initial impacts to viewers are anticipated to be moderate in isolated areas on Highway 566 where it would parallel the proposed project in rolling terrain, increasing project visibility. The proposed project does not cross Highway 566, thereby, reducing visibility to potential viewers. With the implementation of the restoration plan, residual impacts are anticipated to be low, because the restored vegetation would eventually mature and screen project contrast.

Recreation Access Routes

- Horn Canyon Trail – Initial impacts to viewers are anticipated to be low because the trail is a designated as a BLM OHV area that is modified by roads, and the proposed pipeline would parallel an existing pipeline. Implementation of the restoration plan would minimize residual impacts to a low rating, because project visibility would be reduced through the revegetation of the right-of-way.

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Residences

- Bloomfield – Initial impacts to high sensitive viewers are anticipated to be low/moderate for some residences with open views of the proposed project where vegetation has been cleared, increasing visibility. Impacts are not anticipated for residences that are completely screened by the topography or vegetation of affected federal lands. Implementation of the restoration plan would reduce residual impacts to low, because the restored vegetation would eventually mature and screen project contrast.

Arizona

The majority of impacts to sensitive viewers in Arizona are anticipated to range from low to low/moderate, primarily because the proposed project would parallel an existing pipeline or similar facilities for the majority of the route. Moderate to moderate/high impacts would occur in limited areas where steep slopes occur, and where the proposed pipeline deviates from similar existing modifications. Impacts to viewers in Arizona are detailed below.

Travel Routes

Scenic Routes

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Impacts to viewers along scenic routes are anticipated to be greatest at crossings where the project is visible to viewers and when travel routes are immediately adjacent to the proposed pipeline. Initial and residual impacts are discussed below:

- State Route 89A – Initial impacts to travelers using 89A are anticipated to be low/moderate because of the short viewing duration of the proposed project. Additionally, the proposed project would occur at an angle approximately perpendicular to Route 89A, and the topography in the vicinity is relatively flat, which would result in a reduction of visibility. Residual impacts are anticipated to be low because the proposed right-of-way would be located in grasslands, where restoration efforts would result in vegetation reoccupying the right-of-way in a short amount of time.

- Interstate 17 (Maricopa County) – Initial impacts associated with I-17 (high sensitivity) from Black Canyon City to Phoenix, would range from primarily moderate to limited areas of high/moderate where steep slopes occur. Moderate impacts would occur where the proposed pipeline would parallel an existing pipeline in a partially modified setting (Black Canyon City). Additionally, the topography and some vegetation screening would further reduce impacts. Limited areas of high/moderate initial impacts would occur where the proposed pipeline would be constructed on steep slopes that are visible and where the proposed pipeline would cross I-17 (Milepost 92-93). Impacts are not anticipated along I-17, south of New River Road, because the proposed project would be over ½ mile away and would be screened by the vegetation and topography. With the implementation of the

restoration plan, residual impacts would be reduced, based on vegetation reoccupying the right-of-way. The line created by removing vegetation along the edge of the right-of-way would be less defined, and soil color contrast created by the construction of the pipeline would diminish over time. Therefore, residual impacts would be reduced to low to low/moderate.

- New River Road – Views of the proposed pipeline from New River Road would be partially to fully screened along the entire length of the road and in the context of an existing pipeline with similar visual features in flat terrain. Initial impacts are, therefore, anticipated to be low/moderate where visible for approximately 1 mile. The pipeline would then deviate from paralleling New River Road and not be visible due to vegetation screening, resulting in low impacts. Restoring the right-of-way would reduce contrast at the edge of the right-of-way, which would result in low residual impacts.

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- State Route 74 (Carefree Highway) – Views of the proposed pipeline from State Route 74 would range from fully screened to open and direct based on the distance to the proposed route and vegetation screening. Although some vegetation clearing is expected, resulting in weak/moderate contrast, the proposed pipeline would be seen in the context of an existing transmission line and pipeline. Therefore, initial impacts are expected to be low to low/moderate. Residual impacts are anticipated to be low, because the restored vegetation would reduce contrast along the edge of the right-of-way and eventually screen the proposed pipeline.

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- Castle Hot Springs Road – Impacts would not occur because topographical features would completely screen views of the proposed project, which would be located over 4 miles east of Castle Hot Springs Road.

- Sun Valley Parkway – Initial impacts to viewers from Sun Valley primarily are anticipated to be low, with some limited areas of low/moderate where the proposed line would cross or parallel the parkway. The proposed pipeline would be seen within the context of large 500kV transmission lines and, for some portions, an existing pipeline. Restoration of the right-of-way would reduce the contrast of the pipeline, resulting in low impacts.

- Old Highway 80 – The proposed pipeline would be located within a BLM-designated utility corridor, which consists of an existing transmission line and a pipeline. Travelers southbound on Old Highway 80 would have superior views of the proposed pipeline, which would be located approximately ½ mile to the south. Views of the project would be within the context of the utility corridor, therefore impacts would be low. With the implementation of the restoration plan, residual impacts would be minimized, because the restored vegetation would reduce contrast.

- Agua Caliente Road – Initial impacts are anticipated to be low for travelers using Agua Caliente Road. The proposed project would parallel an existing pipeline within a BLM-designated utility corridor, which would result in minimal contrast. With the

implementation of the restoration plan, residual impacts are anticipated to be minimal, because the restored vegetation would mature and screen project contrast.

Interstate Routes

Based on the sensitivity analysis addressed in Section 2.7, interstate routes, unless deemed scenic by administrative means, have been designated moderate sensitivity.

- Interstate 40 – Impacts to travelers using I-40 would not occur because topographical features would completely screen views of the proposed project.

- Interstate 17 – Generally, impacts to travelers using I-17 would not occur because the proposed pipeline would be screened by vegetation and topographical features. Isolated areas of moderate to high/moderate initial impacts to southbound travelers would occur 1.5 miles north of Black Canyon City, where the proposed pipeline would be constructed on steep slopes, resulting in strong/moderate to strong project contrast. With the implementation of the restoration plan, residual impacts are anticipated to diminish over time as vegetation reoccupies the right-of-way. The contrast associated with the edge of the project right-of-way and disturbed soil color would be reduced, thus impacts would be minimized. Residual impacts, therefore, are anticipated to range from moderate (on steeper slopes) to low (on subtle topography), depending on the slope.

- Interstate 10 – Low initial impacts are anticipated for travelers along I-10, because the proposed project would parallel an existing transmission line. Additionally, viewing duration and orientation (short, perpendicular) would further reduce views of the proposed pipeline. Residual impacts are anticipated to be low as vegetation reoccupies the project right-of-way and contrasts are reduced.

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State Routes

Based on the sensitivity analysis addressed in Section 2.7, state routes, unless deemed scenic by administrative means, have been designated moderate sensitivity.

- State Route 89 – Initial impacts to viewers traveling on SR 89 are anticipated to be low, because the proposed project primarily would be screened by established juniper trees and located approximately 1 to 3 miles away. In areas where the proposed pipeline would be located on terrain higher than the highway, low/moderate impacts could occur, albeit for very short intervals of time. At approximately milepost 9.4, moderate initial impacts are possible where the proposed pipeline would be visible as seen through Little Hell Canyon Reservoir, after vegetation is removed. However, view duration and orientation (short, perpendicular) would effectively reduce the initial impacts. With the implementation of the restoration plan, residual impacts are anticipated to be

low/moderate to low, because the restored riparian vegetation would mature and screen the project from travelers using SR 89.

- State Route 69 – Initial impacts to moderate sensitive viewers could range from low/moderate to moderate, depending on viewer proximity and orientation to the project. Viewers heading southeast on SR 69 would see the proposed pipeline run down a rocky face, resulting in moderate impacts. Low initial impacts are anticipated for viewers over ½ mile from the proposed project, where vegetation and topographical variation would effectively screen the views. Implementing the restoration plan would result in low residual impacts as the right-of-way would be reoccupied by vegetation.

- State Route 60 – Initial impacts are anticipated to be low for travelers using SR 60, because of the high rate of speed associated with the road and the proposed project would occur at an angle approximately perpendicular to State Route 60, effectively reducing project visibility. With the implementation of the restoration plan, residual impacts are anticipated to be low, because the restored vegetation would mature, reducing contrast and creating a visual barrier between the viewer and project.

- State Route 85 – Initial impacts are anticipated to be low for travelers using SR 85, because the proposed project would parallel an existing pipeline and transmission line within a BLM-designated utility corridor. Because the viewing duration of the project is anticipated to be short and the proposed project would occur at an angle perpendicular to State Route 85, visibility of the project would be minimized. Implementation of the restoration plan is anticipated to minimize impacts as vegetation reoccupies the right-of-way.

- State Route 238 (Maricopa Road) – The construction of the proposed project would result in low initial impacts to viewers using Maricopa Road. At this location, the proposed pipeline would be within a designated BLM-utility corridor, consisting of an existing pipeline and electric transmission line. Residual impacts would be further minimized as vegetation reoccupies the project right-of-way.

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Recreation Routes

Based on the sensitivity analysis addressed in Section 2.7, recreation routes, unless deemed scenic by administrative means, have been designated moderate sensitivity.

- Forest Road #73 – Initial impacts for users of FR #73 primarily would be low, because the proposed project would be screened by dense juniper. Implementing the restoration plan would reduce the aforementioned contrast and result in minimal residual impacts.

- Perkinsville Road – Initial impacts are anticipated to be low, because the proposed project would have an orientation perpendicular to the viewer and vegetative screening, reducing project visibility. With the implementation of the restoration plan, residual

impacts are anticipated to be minimal, because the restored vegetation would mature and screen project contrast.

- Antelope Creek Road – Initial impacts associated with OHV are anticipated to be low/moderate where topographical features and vegetation would effectively screen the proposed project. Limited isolated areas of moderate initial impacts are anticipated where the proposed project would traverse steep topography. Restoring the right-of-way in these areas would eventually decrease contrast associated with the edge of the right-of-way and result in reduced residual impacts, ranging from low/moderate to low, depending on the steepness of terrain.

- Bumble Bee Road – Initial impacts for OHV users between the junction of Crown King Road and Bumble Bee are anticipated to be low/moderate when the proposed project would be located immediately adjacent to the road and fully visible. Limited isolated areas of moderate initial impacts are expected where steep topography occurs. Between the junction of Bumble Bee Road and I-17 high/moderate initial impacts are anticipated, because moderate to steep slopes would make strong/moderate project contrast more visible. With the implementation of the restoration plan, residual impacts are anticipated to range from moderate to low. In some cases vegetation would mature and screen views of the proposed project from Bumble Bee Road. Additionally, contrast would eventually diminish as vegetation reoccupies the right-of-way and the soil and edge of the right-of-way becomes less visible. Additional restoration techniques, e.g., soil colorization techniques, plant salvage and placement, and reseeding (replacement of the seed bank, based on site specific conditions), would result in residual impacts ranging from low to moderate (see Draft Restoration Plan, 2007).

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- Crown King Road – Low impacts are anticipated for viewers heading westbound on Crown Kind Road. Moderate impacts are expected intermittently (based on vegetation and topographical screening) as viewers head down the Bradshaw Mountains (southeast), where the project is located on steep topography in a generally natural landscape. Impacts would be reduced after the restoration plan is implemented and vegetation reoccupies the right-of-way. Additional restoration techniques, e.g., Permeon™, plant salvage and placement, and reseeding (replacement of the seed bank) would result in residual impacts ranging from low to low/moderate.

- Bloody Basin Road – Initial impacts to travelers using Bloody Basin Road are anticipated to be low, because the proposed project would not be visible, based on vegetation and topography. Restoration of the right-of-way would reduce residual impacts.

- Table Mesa Road – Initial impacts to viewers associated with Table Mesa Road primarily would be low, because the proposed project would be screened by topography and some vegetation. The conditions adjacent to this highly used road are highly modified by several informal shooting galleries. In this regard, when the proposed pipeline would be seen and where located on steep terrain, impacts are anticipated to be moderate.

Restoration the right-of-way is expected to reduce contrasts and, therefore, residual impacts are anticipated to be low.

- Pipeline Road – This high sensitivity road provides access to the Sonoran National Monument and is located within a BLM-designated utility corridor. Because the proposed pipeline would be located in this modified corridor, impacts are expected to be low. Once viewers enter the monument, vegetation and topography would completely screen the view of the proposed pipeline. Residual impacts are anticipated to be minimized with implementation of the restoration plan.

Local Access Routes

Based on the sensitivity analysis addressed in Section 2.7, local access routes have been designated moderate sensitivity.

- Old Black Canyon Highway - Initial impacts are anticipated to be low, because the proposed pipeline would be constructed adjacent to an existing pipeline with similar visual features, resulting in weak-weak/moderate contrast (based on degree of slope). Additionally, topographical variation and vegetation would screen views of the proposed project. With the implementation of the restoration plan, residual impacts are anticipated to be low, because the restored vegetation (mostly grasses in this area) would mature and reduce project contrast along the edge of the right-of-way.

- New Fain Road – Initial impacts for travelers using New Fain Road are anticipated to be low, because viewers would have a very short viewing duration of the proposed project in generally flat terrain. Some moderate terrain does exist adjacent to the road, but the siting of the proposed pipeline would limit visibility until the viewer is immediately adjacent to the right-of-way. The local area is vegetated by various grasses, which tend to naturally re-occupy disturbed areas. Therefore, following implementation of the restoration plan, residual impacts would be low within a short amount of time.

- Salome Highway – Initial impacts are anticipated to be low for travelers on Salome Highway, because the proposed project would parallel an existing pipeline with similar visual characteristics. Viewers would have a short viewing duration, and the proposed project would be at an angle perpendicular to Salome Highway, thus reducing project visibility. With the implementation of the restoration plan, residual impacts would be minimized, because the restored vegetation would reduce visual contrast.

- Maricopa Casa Grande Highway – Initial impacts are anticipated to be low for travelers using the Casa Grande Highway, because the proposed project would parallel an existing pipeline with similar visual characteristics. Additionally, visibility of the proposed right-of-way would be minimized because of the high rate of speed associated with the highway. With the implementation of the restoration plan, residual impacts are

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anticipated to be minimal, because the restored vegetation would mature and screen project contrast.

Recreation

Trails

Based on the sensitivity analysis addressed in Section 2.7, recreation trails have been designated high sensitivity.

- Anza National Historic Trail – Low initial impacts are anticipated for the Anza National Historic Trail. The proposed project would be located in a BLM-designated utility corridor consisting of an existing pipeline, thus impacts would be minimal. Impacts would be reduced further because vegetation would reoccupy the right-of-way following implementation of the restoration plan, resulting in low residual impacts.

- Black Canyon Trail - For the existing southern route, near Emery Henderson Trail head, impacts are anticipated to range from low to moderate based on the location of the proposed pipeline and level of vegetation screening. Where the proposed pipeline would parallel the trail and would be visible, impacts would be moderate. In areas where the pipeline would deviate from the trail and would be separated by vegetation, low impacts would occur. Implementation of the restoration plan, as well as site specific mitigation (see Draft Restoration Plan, 2007), would reduce the contrast associated with the edge of the right-of-way. Residual impacts are, therefore, anticipated to range from low/moderate to low.

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Recreation Areas

Based on the sensitivity analysis addressed in Section 2.7, recreation sites have been designated high sensitivity.

- Verde Trailhead (proposed) – Initial impacts to potential users of the Verde River trailhead are anticipated to range from high/moderate to moderate based on the steepness of the topography and the density of vegetation that would be cleared upon construction of the right-of-way. The upper slopes of the Verde Canyon (south bank), are steep and densely vegetated. Impacts to these areas would be high/moderate. The lower slopes of the banks are more subtle and less vegetated and when cleared would result in a low/ moderate impact. Implementation of the restoration plan would result in moderate to low residual impacts. Restoration in the aforementioned affected areas include feathering the edges where dense vegetation would be cleared, in conjunction with treatments that would facilitate natural revegetation. Contrast would, therefore, be reduced, and impacts would eventually be minimized.

- Little Hell Canyon – Initial moderate impacts would occur to users of Little Hell Canyon Reservoir. Riparian vegetation would be cleared and soils would be disturbed during construction immediately adjacent to where users of the canyon recreate. The restoration plan includes detailed restoration of riparian vegetation, which should reduce project contrast relatively quickly and screen the project right-of-way from the users of the canyon. Therefore, residual impacts associated with Little Hell Canyon Reservoirs are anticipated to be moderate and may be reduced over time.

- Sunset Point – Initial impacts associated with this high sensitivity rest stop are anticipated to range from low/moderate to moderate. Low/moderate impacts are anticipated in the area where the project would be located 3 to 5 miles away, in moderately steep terrain. Contrasts in this zone are associated with the soil color and defined edge of the right-of-way and begin to diminish as seen from Sunset Point. In the foreground zone (0-3 miles), other pre-existing similar visual features occur in the landscape, such as Crown King and Antelope Creek roads. Because the proposed projects would be seen in the context of these pre-existing features, project contrast would be reduced, and impacts are anticipated to be moderate. Restoration of the project right-of-way in this area is expected to reduce impacts over time. Site specific conditions could require specific restoration techniques to reduce contrast, including Permeon™ treatments, reseeding the right-of-way (salvaging and replacing the native seed bank), and spreading mulch (removed vegetation material) over the right-of-way. When implemented, impacts are expected to diminish, resulting in residual impacts of low to low/moderate. A contrast worksheet was prepared for this sensitive viewpoint, per BLM guidance and can be found in Appendix B. Figure 2 consists of two photo simulations depicting what the proposed project is anticipated to look like from this location immediately after construction and after restoration (after a minimum of 75 years).

- Emery Henderson Trailhead – Initial impacts to this high sensitivity recreation area are anticipated to be low, because the proposed project would parallel an existing pipeline. Additionally, vegetation and variations in the topography would screen views of the proposed pipeline. With the implementation of the restoration plan, residual impacts would be minimized, because the restored vegetation would reoccupy the right-of-way, reducing project contrast. A contrast worksheet was prepared for this viewpoint, per BLM guidance, and can be found in B.

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Residences

In general, impacts to residences would be low, because views of the proposed project would be screened by vegetation, topography, or other man-made structures, or they will be seen in context with another linear feature (pipeline, transmission line, primitive road.). Impacts would be greatest where a residence would have a superior view (looking down upon the project right-of-way) of the project or occur immediately adjacent to the project. All residences have been deemed high sensitivity as discussed in Section 2.7. Only those residences with views of affected

federal lands (BLM, USFS) were assessed. Below is a summary of impacts to residences, based on town or community.

- Ash Fork – Impacts would not occur, because the project would be located over 3 miles from residences, and dense vegetation would obscure views of the proposed project.

- Chino Valley – Impacts would not occur, because the project would be located over 3 miles from residences, in flat terrain, and would obscure views of the proposed project.

- Prescott Town and Country Club – Impacts would not occur, because the project would not be visible, based on vegetation and topographical screening.

- Dewey – Impacts would not occur, because the project would not be visible, based on vegetation and topographical screening.

- Poland Junction – Limited areas of moderate to low/moderate initial impacts to residences are anticipated, because the proposed project would be located on the lower side of a hill where side cuts, and, therefore, soil color contrasts, are expected. Recontouring the topography and replacing the seed bank after the construction of the pipeline would effectively reduce project contrast, resulting in low residual impacts.

- Mayer – Impacts to residences in Mayer are not anticipated to occur, because the project would be located over 2 miles from residences and obscured by topographical features and vegetation.

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- Cordes Junction – Impacts are not anticipated to occur, because the project would be located over 5 miles from residences and obscured by topographical features and vegetation.

- Bensch Ranch Community – Moderate initial impacts to several residences in this master planned community are anticipated to occur. The proposed pipeline route would be located within ½ mile of the residences in rolling terrain, where changes to soil color and vegetation patterns would be evident. Restoring the terrain to pre-construction contours and replacing the native seed bank to facilitate revegetation would effectively reduce contrast. Thus, residual impacts are expected to range from low/moderate to low depending on the success of restoration.

- Bumble Bee – Initial impacts to residences in the town of Bumble Bee are anticipated to be moderate with few isolated areas of high/moderate where steep slopes occur. A small amount of residences would have open views within ½ mile of the proposed project, in an area of dense Arizona Upland vegetation. Restoring the right-of-way to near pre-construction conditions should result in low/moderate residual impacts over time.

- Black Canyon City – Initial impacts to residences along the northern fringes of Black Canyon City are anticipated to range from primarily low/moderate to limited areas of

moderate. The proposed pipeline, where visible, would be constructed on moderate terrain and would require the removal of moderately dense Arizona Upland vegetation. In these areas moderate impacts would occur. A limited amount of residences would have views of the proposed pipeline constructed on very steep terrain, where contrast is anticipated to be strong. Impacts, therefore, in these isolated areas would be high/moderate. Implementing the restoration plan would, over time, reduce impacts to the residences of Black Canyon City. The eventual reoccupation of the right-of-way with vegetation, and recontouring terrain to pre-construction conditions, would reduce impacts levels to low to moderate. It may be necessary, in some situations, where the proposed project would be constructed on steep slopes, to implement special visual mitigation techniques, such as Permeon™, boulder placement, and plant salvage, to reduce project impacts to near pre-construction levels.

- New River – High/moderate to moderate initial impacts are anticipated for residences with potential views of the proposed project, based on the terrain in which the project would be constructed. High/moderate impacts would be limited to those residences with superior views of the proposed pipeline (east side of I-17), and where the pipeline would be constructed on steep terrain. Moderate impacts would occur to those same residences where the proposed pipeline would be constructed on moderately steep terrain. Recontouring the land, where applicable, and replacement of the seed bank would effectively reduce impacts over time. Specific restoration treatments, such as Permeon™, plant salvage and replacement, and boulder placement, may be required to reduce impacts to near pre-construction levels.

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- Anthem – Impacts are not anticipated to occur, because the project would be visually obscured by topographical features and vegetation.

- Lake Pleasant – Impacts are not anticipated to occur, because the project would be visually obscured by topographical features, and vegetation would be located adjacent to an existing pipeline and transmission line.

- Buckeye – Initial impacts to residences in the city of Buckeye are anticipated to be low/moderate and confined to where residences are adjacent to, and have open views of, the proposed project. Because the proposed project would be located in generally flat terrain vegetated by mostly creosote bushes, reduction of impacts are expected following implementation of the restoration plan.

- Rainbow Valley – Impacts are not anticipated to occur, because the project would be visually obscured by topographical features and vegetation.

- Mobile – Initial impacts to residences in the town of Mobile are anticipated to be low, because the proposed project would be constructed in a BLM-designated utility corridor.

- Hidden Valley Community – Initial impacts to residences in the town of Mobile are anticipated to be low, because the proposed project would be constructed in a BLM-designated utility corridor.

Aboveground Facilities

Impacts associated with aboveground facilities were assessed based on preliminary information (e.g., general locations). Impacts are anticipated to be low where the proposed facilities would be screened from sensitive viewers by vegetation or constructed adjacent to similar facilities or large industrial features (e.g., power plants). The facilities will be painted to match existing facilities or the landscape in which they would be constructed, minimizing potential impacts. The table below (Table 6) summarizes anticipated impacts associated with aboveground facilities.

TABLE 6
ABOVEGROUND FACILITIY IMPACT RATINGS

Aboveground Facility	Milepost	Initial Impacts to Sensitive Viewers	Residual Impacts to Sensitive Viewers	Impacts to Scenic Quality
Ash Fork Facility	0.0	Low	Low	Moderate
Meters	137.75	Low	Low	N/A
	148.6	Low	Low	N/A
	164.9	Low	Low	N/A
	193.3	Low	Low	Low
	239.1	Low	Low	N/A
	250.6	Low	Low	N/A
2 meters, 1 receiver	255.1	Low	Low	N/A
	10.5	Low	Low	Low/Moderate
	29.3	Low	Low	Low
Receivers and Launchers	95.2	Low	Low	N/A
	180.2	Low	Low	N/A
Taps	32.5	Low	Low	N/A
	40.7	Low	Low	N/A
	50.7	Low	Low	N/A
	52.8	Low	Low	N/A

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Compliance With Agency Management Objectives

Compliance with agency management objectives depends on various factors, including project contrast, scenic quality, and impacts to sensitive viewers. Initial project contrasts may not be compliant with agency management objectives after construction; however, it is anticipated that residual project contrasts would be compliant after restoration treatments have been implemented, and vegetation reoccupies the right-of-way. Areas that may not be compliant with agency management objectives typically have strong project contrast on steep slopes.

New Mexico

Compliance with the agency management objectives of the Bureau of Land Management in the New Mexico study area are discussed below.

Bureau of Land Management

Compliance with VRM objectives for Class III and IV designated lands are anticipated in New Mexico because the majority of the proposed route will parallel several existing pipelines in a modified setting.

Arizona

Compliance with the agency management objectives of the Kaibab National Forest, Prescott National Forest, and the Bureau of Land Management in the Arizona study area are discussed below.

Kaibab National Forest

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The proposed pipeline right-of-way is located in a high (Level 2) SIO designation adjacent to an existing pipeline. The proposed project would be compliant, except for a short segment where Little Hell Canyon would be crossed. The removal of riparian trees and junipers on steep visible slopes would result in moderate/strong visual contrast and thus non-compliance. Direction from the agency pertaining to special visual mitigation techniques, such as feathering, and supplemental planting of riparian trees to reduce project impacts were incorporated into the restoration plan. The eventual reoccupation of the right-of-way with vegetation, and additional visual mitigation techniques, would bring the proposed project into long term compliance.

Prescott National Forest

The majority of the proposed pipeline right-of-way is located in partial retention and modification VQO designations and parallels an existing pipeline right-of-way and therefore would be compliant. Designated retention areas include Hell Canyon and the Verde River where strong to moderate initial project contrast would result in non-compliance. After restoration, these areas are anticipated to be compliant based on specific agency guidance regarding the implementation of visual mitigation, as identified in the draft restoration plan.

Bureau of Land Management

The proposed pipeline right-of-way is located within Class III designations and would parallel an existing modification (pipeline, transmission line, or road) for the majority of the route. Project contrast that is strong to strong/moderate, primarily within Class B landscapes and where the proposed project would deviate from the existing pipeline, would not be compliant with agency management objectives. Through the implementation of the restoration plan project contrast is anticipated to be reduced to acceptable visual contrast levels that would be compliant with Class III agency management objectives.

3.3 SIMULATION

The simulation portrays images of existing, initial, and residual impacts, in order to aid the visualization of the potential project impacts for areas of high concern and viewer sensitivity. Simulations are used to evaluate the accuracy of predicted visual impacts and to determine the effectiveness of mitigation recommendations. One simulation of the proposed project was prepared from Sunset Point, per the BLM's direction. (Figure 2).

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Appendix T, Figure 2 Simulation at Sunset Point

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APPENDIX A

BLM	Prescott National Forest	Kaibab National Forest
Agency Objectives - (VRM) Visual Resource Management	Agency Objectives - (VQO) Visual Quality Objectives	Agency Objectives - (SIO) Scenic Integrity Objectives
Class I - To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.	Preservation (P) This visual quality objective allows for ecological changes only. Management activities, except for very low visual impact recreation facilities, are prohibited.	Very High - (Level 1) Refers to landscapes where the valued landscape character is intact with only minute, if any, deviations.
Class II - To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.	Retention (R) This visual quality objective provides for management activities which are not visually evident. Partial Retention (PR) Management activites remain visually subordinate to the characteristic landscape when managed according to the partial retention visual quality objective.	High - (Level 2) Refers to landscapes where the valued landscape character appears intact. Moderate - (Level 3) Refers to landscapes where the valued landscape character appears slightly altered.
Class III - To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.	Modification (M) Under the modification visual quality objective management activities may visually dominate the original characterisic landscape.	Low - (Level 4) Refers to landscapes where the valued landscape character appears moderately altered.
Class IV - To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.	Maximum Modification (MM) Management activities of vegetative and landform alterations may dominate the characteristic landscape.	Very Low - (Level 5) Refers to landscapes where the valued landscape character appears heavily altered.
Scenic Quality	Variety Classes	Scenic Attractiveness
A - High	Class A - Distinctive Areas of unusual or outstanding visual quality	Class A - Distinctive Areas of unusual, unique, or outstanding scenic quality
B - Moderate	Class B - Common Areas of common character types that are not visually oustanding	Class B - Typical Areas of positive yet common attributes and scenic quality
C - Low	Class C - Minimal Areas with little change in character and are not found in Class A or B	Class C - Indistinctive Areas of weak or missing attributes of variety and scenic quali

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Visual Classification of Agency Management Objective
Transwestern Phoenix Expansion Proje

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APPENDIX B

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Appendix T, Appendix B Location Sketch

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Date: July 11, 2006
District: Bradshaw-Harquahala
Resource Area: Black Canyon
Activity (program): Natural gas pipeline

Northwest View from Sunset Point

Contrast is created by project construction of a modified setting in class III landscape. Initial contrasts are anticipated to occur when project construction is completed, and before the restoration plan has been implemented. Residual contrasts are anticipated to occur after the implementation of the restoration plan, and when vegetation has been re-established in the right-of-way. Landform color and line are the driving elements for the proposed project contrast. The existing tan-red color is anticipated to become tan after project construction (initial contrast) and tan-red after restoration (residual contrast). The construction of the project will remove existing vegetation creating a line similar to the existing road. Restoration will facilitate vegetative re-growth in the right-of-way and will reduce both line and color contrast. If successful, the residual impacts are anticipated to be low as project contrast is reduced over time.

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Public

Date: July 11, 2006
District : Bradshaw-Harquahala
Resource Area: Black Canyon
Activity (program): Natural gas pipeline

North view from Emery Henderson Trailhead

Contrast created by project construction is not visible in a class III landscape. Initial contrasts are anticipated to occur when project construction has been completed, and before the restoration plan has been implemented. Residual contrasts are anticipated to occur after the implementation of the restoration plan, and when vegetation has been re-established in the right-of-way. Residual contrasts are anticipated to be reduced by the implementation of the restoration plan. The proposed project is not anticipated to be visible from this key observation point.