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Region**

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Plains All American Pipeline L.P. Line 63 Reroute Project Environmental Assessment

Angeles National Forest

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**ENVIRONMENTAL ASSESSMENT
PAALP LINE 63 RE-ROUTE PROJECT
EXECUTIVE SUMMARY**

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EXECUTIVE SUMMARY

Plains All American Pipeline, L.P. (PAALP) owns and operates numerous common carrier pipelines, including a 14-inch-diameter intrastate crude oil pipeline identified as Line 63 that runs north and south between Los Angeles and Bakersfield. Portions of Line 63 are located in the Angeles National Forest (ANF), Los Angeles County, California. During rain storms in the winter of 2004-2005, several landslides occurred in the area, damaging, affecting or otherwise threatening the integrity of segments of Line 63. Several repairs were performed immediately following or soon after the slides.

As a result of and following a crude oil release that flowed into nearby Pyramid Lake in 2005, a legal complaint was filed against PAALP's predecessor (Pacific Pipeline Systems). A Consent Decree was subsequently filed that established requirements to be met and repairs/relocations to be made to Line 63 prior to returning the flow of crude oil through the pipeline.

In response to and in order to meet several of the Consent Decree technical requirements, Stantec Consulting Services Inc. (Stantec) was retained by PAALP to conduct geologic, geohazard, and geotechnical investigations along the Line 63 right-of-way (ROW).

Stantec performed aerial photograph geomorphic and geohazard interpretation mapping, followed by geologic and geohazard mapping on foot. Geohazards were identified as active gullies where active erosion may threaten Line 63 or land movement-related features (such as landslides, slumps, debris flows, debris slides, rockfalls, and fault zones). Based on these data, Stantec created a geohazard inventory and a geohazard numerical ranking system (with 0 being no or minimal threat to Line 63 and 4 being the highest threat).

This Environmental Assessment (EA) addresses the potential impacts associated with a proposed 2.27-mile-long (approximately 12,000 linear feet) re-route of a segment of Line 63 as well as an additional approximate 2,000 linear foot (LF) Horizontal Directional Drill (HDD). Both the re-route and the HDD are proposed in order to address and avoid a large number and concentration of geohazards located along Line 63 between MP 37.6 to 40.3. A significant section of the proposed re-route is west and upslope from where Line 63 is currently located, and will be located within the existing Line 2000 ROW. The proposed re-route was selected by PAALP on a combination of factors: the absence of geohazards; avoidance of higher-ranked geohazards; avoidance of narrow ridges with steep downslopes; near a limited number of lower-ranked geohazards when avoidance was not possible; minimizing river and stream crossings; accessibility and constructability of the route; and re-routing the segment into an ANF designated utility corridor.

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The location of the Line 63 segment proposed for re-route is approximately one mile east of Interstate 5 (I-5) and approximately 1.5 miles northwest of Lake Castaic between existing pipeline Mile Posts (MP) 37.6 to 40.3 (Figure 2.1-1, Regional and Project Location Map). As detailed herein, the EA evaluates a Preferred Re-Route (Proposed Action) and No Action Alternative.

Construction activities for the proposed preferred re-route are expected to occur within a three-month timeframe in 2014.

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Acronyms

A-2-5	Heavy Agricultural
AADT	Annual Average Daily Traffic
AB 32	Assembly Bill 32
ADT	Average Daily Traffic
AGR	Agricultural
ANF	Angeles National Forest
AP	Alquist-Priolo
APE	Area of Potential Effects
API	American Petroleum Institute
APNs	Assessor Parcel Numbers
AQ	Air Quality
AQMP	Air Quality Management Plan
ARB	ARB, Inc.
BA/BE	Biological Assessment/Biological Evaluation
BAU	Business as Usual
bbf	Barrels
BIO	Biological Resources
BMPs	Best Management Practices
bpd	Barrels Per Day
CAAQS	California Ambient Air Quality Standards
CAAQS	Clean Air Act
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHP	California Highway Patrol
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database

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CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CP	Cathodic Protection
CSUF	California State University Fullerton
CULT	Cultural and Paleontological Resources
CWA	Clean Water Act
cy	Cubic yards
DAI	Developed Area Interface Land Use Zone
dB	Decibel
dba	A-weighted Decibel
DBH	Diameter at breast height
DHS	Department of Health Services
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EA	Environmental Assessment
EC	Environmental Commitment
ERC	Energy Release Components
ESA	Endangered Species Act
FC	Federal Candidate
FE	Federally Listed Endangered
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FLPMA	Federal Land Policy and Management Act
FPE	Federally Proposed (Endangered)
FPT	Federally Proposed (Threatened)
FRSH	Freshwater Replenishment
FS	Forest Service
FSC	Federal Species of Concern
FSH	Forest Service Handbook
FSM	Forest Service Manual
FSS	Forest Service Sensitive Species
FT	Federally Listed Threatened
GACC	Southern California Geographic Coordination Center

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GEO	Geology /Soil Resources
GHG	Greenhouse Gas Emissions
GWP	Global Warming Potential
GWR	Groundwater Recharge
H&H	Hydrologic and Hydraulic Analyses
HA	Hydrologic Area
HAS	Hydrologic Subarea
HAZ	Environmental Contamination and Hazards
HB	Hydrologic Basin
HCP	Habitat Conservation Plan
HDD	Horizontal Directional Drill
HFCs	Hydrofluorocarbons
hp	Horsepower
HRRP	Habitat Restoration and Revegetation Plan
HU	Hydrologic Unit
HYD	Hydrology and Water Quality
Hz	Hertz
I-5	Interstate 5
IC	Ignition Components
ICU	Intersection Capacity Utilization
IND	Industrial Service Supply
IRF	Intermediate Regional Flood
KV	Kilovolts
LACFD	Los Angeles County Fire Department
LARWQCB	Los Angeles Regional Water Quality Control Board
lb	Pounds
Ldn	Day/Night Noise Level
Leq	Equivalent Continuous Noise Level
LF	Linear Foot
Lmax	Maximum weighted noise level during the measurement period
Lmin	Minimum weighted noise level during the measurement period
LMP	Land Management Plan
LOS	Level of Service
LRA	Local Responsibility Areas
LST	Localized Significance Thresholds
LU	Land Use

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MBTA	Migratory Bird Treaty Act
MIS	Management Indicator Species
MMTCO ₂ e	Million Metric Tons of CO ₂ e
MP	Mile Post
MPH	Miles per hour
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MTA	Los Angeles Metropolitan Transportation Authority
MUN	Municipal
N	Noise
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NFI	National Forest Inn
NFIP	National Flood Insurance Program
NFMA	National Forest Management Act
NFS	National Forest System
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NR	National Register
NRHP	National Register of Historic Places
O&M	Operations and Maintenance
O ₃	Ozone
OES	Office of Emergency Services
OHWM	Ordinary High Water Mark
OPLMA	Omnibus Public Land Management Act
ORR	Old Ridge Route
OSHA	Occupational Safety and Health Administration
OS-NF	Open Space/National Forest (National Forest/Santa Clarita Valley)
PAALP	Plains All American Pipeline, L.P.
PAL	Project Activity Level

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PFCs	Perfluorocarbons
pH	A measure of the acidity or basicity of an aqueous solution
PM ₁₀	Particulate matter with a diameter of 10 microns or less
PM _{2.5}	particulate matter with a diameter of 2.5 microns or less
POD	Plan of Development
POW	Hydropower Generation
PROC	Industrial Process Supply
PRPA	Paleontological Resources Preservation Act
PSD	Prevention of Significant Deterioration
PSI	Pounds per square inch
RARE	Rare-Threatened-Endangered Species
RCA	Riparian Conservation Area
RCRA	Resource Conservation and Recovery Act
REC	Wilderness and Recreation
ROW	Right of Way
RWQCB	Regional Water Quality Control Board
SA	San Andreas
SBBM	San Bernardino Baseline and Meridian
SCAB	South Coast Air Basin
SCADA	Supervisory Control and Data Acquisition System
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	State Candidate for listing as Endangered
SCT	State Candidate for listing as Threatened
SE	State listed as Endangered
SEA	Significant Ecological Areas
SF ₆	Sulfur hexafluoride
SGA	San Gabriel Fault Zone
SIP	State Implementation Plan
SMS	Forest Service's Scenery Management System
SO ₂	Sulfur Dioxide
SOPA	Forest Service Schedule of Proposed Actions
SO _x	Sulfur oxides
SPWN	Spawning-Reproduction and/or Early Development
SR	State Listed as Rare

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SRA	State Responsibility Areas
ST	State listed as Threatened
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T	Traffic and Transportation
TEPCS	Threatened, Endangered, Proposed Candidates and Sensitive Species
Tpv	Peace Valley Formation
Trr	Ridge Route Formation
UCMP	University of California Museum of Paleontology
UNV	Universal
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
VR	Visual Resources
Vv/Cc	Volume-to-Capacity
W	Watershed
WARM	Warm Water Habitat
WDR	Waste Discharge Requirement
WEAP	Workers Environmental Awareness Program
WF	Wildfire Suppression and Prevention
WILD	Wildlife Habitat

**ENVIRONMENTAL ASSESSMENT
PAALP LINE 63 RE-ROUTE PROJECT
INTRODUCTION**

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1.0 INTRODUCTION

Stantec has conducted relevant environmental studies and has prepared this EA for the PAALP Line 63 Re-Route Project in compliance with the National Environmental Policy Act (NEPA). The Proposed Action examines the effects of a 2.27-mile-long (approximately 12,000 LF) re-route of a segment of Line 63 as well as an additional approximate 2,000 LF HDD). Both the re-route and the HDD are proposed in order to address and avoid a large number and concentration of geohazards located along Line 63 between MP 37.6 to 40.3. This document discloses the direct, indirect and cumulative environmental effects that would result from implementation of the Proposed Action.

1.1 DOCUMENT STRUCTURE

This EA includes the following sections:

1.0 INTRODUCTION – Presents the document structure and project purpose and need.

2.0 ALTERNATIVES (INCLUDING THE PROPOSED ACTION) – Provides a description of the Preferred Re-Route (Proposed Action and No Action Alternative). A comprehensive list of Environmental Commitments (ECs) proposed to reduce the effects of potentially significant project actions are provided.

3.0 DIRECT AND INDIRECT EFFECTS ANALYSIS – Describes the environmental effects of implementing the Proposed Action and No Action Alternative. This analysis is organized by pertinent issue areas. Within each section, the existing environmental setting is described first, followed by the regulatory framework and effects of the Proposed Action and the No Action Alternative. Environmental Commitments (ECs) proposed to reduce the effects of potentially significant project actions are provided by section, where appropriate.

For purposes of this analysis, the study area is defined as the location at which Line 63 will be replaced and rerouted; existing equipment and facilities; proposed staging and laydown areas; and existing roads used to access the Proposed Action.

4.0 CUMULATIVE EFFECTS ANALYSIS – Cumulative effects analysis evaluates present effects of past actions that are, in the judgment of the agency, relevant and useful because they have a significant cause-and-effect relationship with the direct and indirect effects of the proposal for agency action and its alternatives.

5.0 COMPARISON OF ALTERNATIVES – Provides a comparative summary of the potential environmental effects of implementing the Proposed Action and No Action Alternative.

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6.0 CONSULTATION AND COORDINATION – Provides a summary of regulatory agency consultation during development of the EA and a list of preparers of this document.

7.0 REFERENCES – Provides list of references used in completing the analysis.

APPENDICES – The Appendices provide more detailed information to support the analyses presented in this EA.

1.2 PURPOSE AND NEED FOR ACTION

During rain storms in the winter of 2004-2005, several landslides occurred in the ANF that damaged, affected or otherwise threatened the integrity of segments of Line 63. Several repairs were performed immediately following or soon after the slides.

As a result of and following a crude oil release that flowed into nearby Pyramid Lake in 2005, a legal complaint was filed by the United States Environmental Protection Agency (USEPA) against PAALP's predecessor Pacific Pipeline Systems (Pacific) in 2008. A 2010 Consent Decree Order was issued by the USEPA that outlined tasks to be completed by PAALP prior to oil being placed in this section of Line 63 and returned back to service. The Consent Decree specifically identified five locations along Line 63 that are required to be repaired.

The Purpose and Need of the Proposed Action is to re-route Line 63 from MPs 37.6 and 39.8 and increase burial depth of Line 63 between 39.9 and 40.3 through HDD techniques to fulfill the above referenced 2010 USEPA Consent Decree required repairs, return the flow of oil through Line 63, and allow for the continued safe operation of PAALP facilities on ANF lands.

2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

The study area is located in the Sierra Pelona Ridge Mountain Range, located northwest of the San Gabriel Mountain Range, approximately one mile east of Interstate 5 (I-5) and 1.5 miles north of Castaic, California. The study area is within ANF land designated as the I-5 Corridor by the National Forest Service. The I-5 Corridor functions as a scenic gateway and transitional landscape for visitors to southern California. The flow of people and materials through this gateway landscape links the greater Los Angeles area, and southern California, to the rest of California and the nation. Additional detail can be found in the Plan of Development (POD), included as Appendix A.

This EA evaluates two options to comply with NEPA and the provisions of the 2010 Consent Decree:

- Preferred Re-route (Proposed Action)
- No Action Alternative

A description of the Proposed and No Action Alternative, which includes both conventional overland trenching and subsurface HDD, is provided below. A comparative summary of the Proposed and No Action Alternative is presented in Section 5.0.

2.1 PREFERRED RE-ROUTE (PROPOSED ACTION)

The Proposed Action re-route (not including the HDD) would have a length of approximately 12,000 LF, or 2.27 miles, and would replace the segment of Line 63 between MPs 37.6 to 40.3. The first approximate 0.5-mile of the Proposed Action alignment would be located parallel to and within the existing previously-disturbed Line 2000 ROW beginning at the south end of the Osito Canyon slide. The remaining 1.77 miles would be comprised of approximately 1.50 miles of previously-disturbed terrain along current Line 2000 ROW and 0.27 miles of previously-undisturbed terrain. Table 2.1-1 below, shows the total estimated area of disturbance for the Proposed Action.

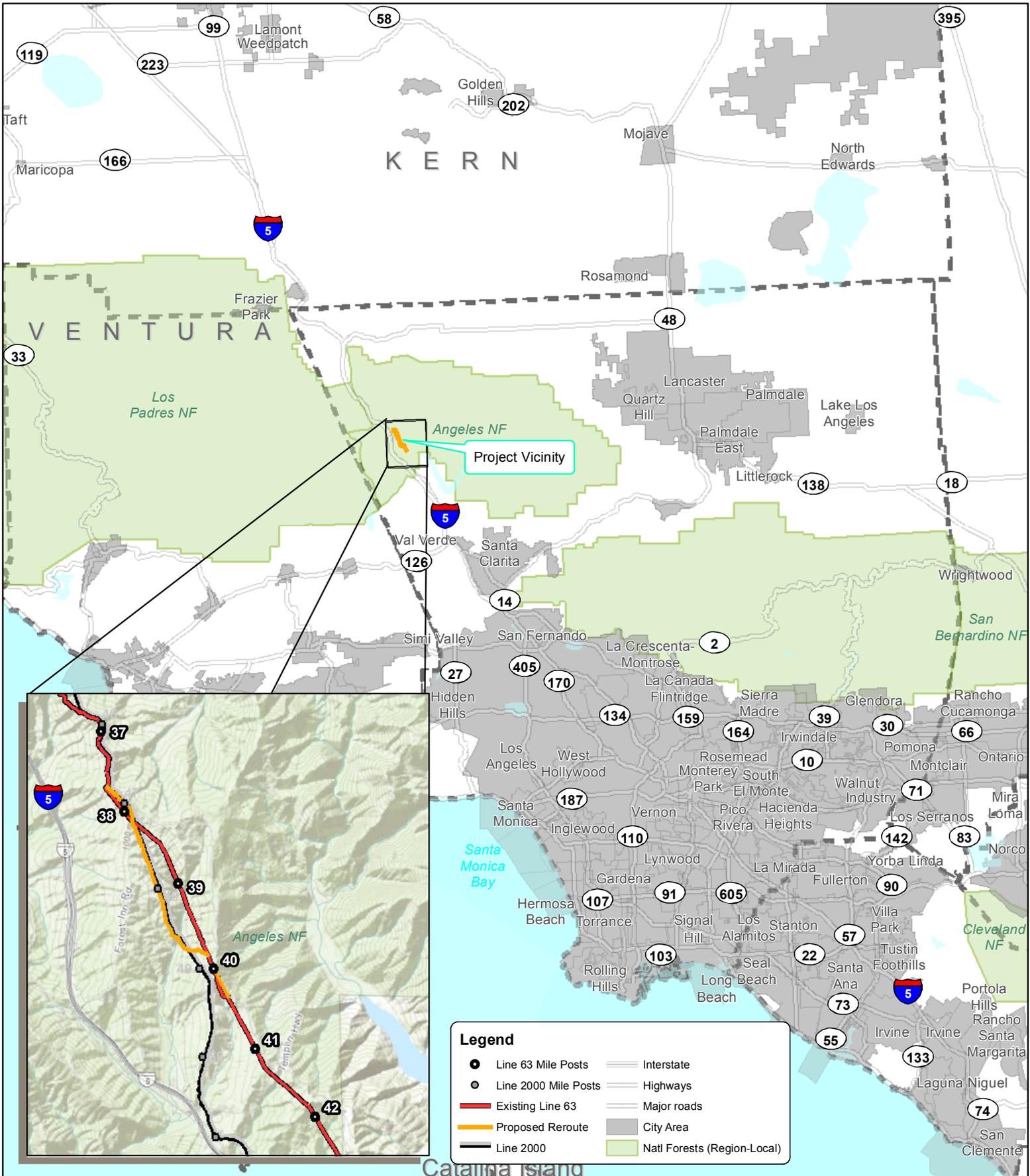
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ALTERNATIVES, INCLUDING THE PROPOSED ACTION
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Table 2.1-1: Proposed Action Area of Construction Disturbance

Component	Length (ft.)	Width (ft.)	Square Footage	Acreage
Proposed Re-Route Alignment (Existing Line 2000 ROW) (not including HDD)	12,000	60	720,000	16.53
HDD Entry/Exit North	100	150	15,000	0.34
HDD Entry/Exit South	100	150	15,000	0.34
HDD Laydown Area Graded Area*	1,400	40	56,000	1.29
		Total:	806,000	18.50
Notes: Total HDD laydown area is approximately 6.4 acres (200-ft wide by 1,400 –ft long). Only a 40-ft wide corridor within that area is proposed to be graded.				
Additional materials and equipment staging areas are not included in this table as all are located on previously disturbed areas and will not be subject to grading.				

The first 0.5 mile segment of the proposed re-route crosses the Old Ridge Route (ORR) at Osito Canyon then runs southeasterly within the existing Line 2000 ROW along a low ridge located upslope and east of the ORR, descends down the low ridge approaching the intersection of ORR and Fisher Springs Road, and crosses beneath the intersection. The next 1.50-mile segment (north to south) of the re-route continues along the Line 2000 ROW on a bench upslope and west of the existing Line 63 alignment (thereby avoiding the mapped geohazards within an unnamed canyon) to Line 2000 MP 48.5. At this juncture, the proposed re-route diverges from the Line 2000 ROW and continues along an approximate 1,426-foot (0.27-mile) new segment on previously undisturbed lands, travelling southeasterly up and over a ridge and back down to the Line 63 ROW, ultimately re-connecting at MP 39.8 near where Line 63 intersects with the ORR. In addition to the approximate 12,000-foot re-route, the final segment of the Proposed Action would be an HDD approximately 2,000 feet (0.37 mile) in length to replace the existing segment of Line 63 between approximate MPs 39.9 to 40.3. This section would be replaced using HDD and would avoid seven Rank 4 (High) geohazards by drilling and installing the pipeline underneath the geohazards. The exact length and path of the HDD will be determined based on a proposed geotechnical investigation along the ROW to evaluate the location and depth of several landslides as well as take into consideration field constraints such as steep topography and groundwater, if present. A description of the HDD process is provided in Section 2.1.2, below.

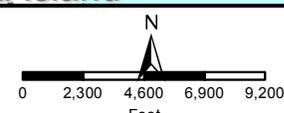
As shown on Figure 2.1-1, the results of geohazard mapping and ranking along the existing Line 63 ROW reveal numerous Rank 4 and 3 geohazards. They include 16 Rank 4 slides/slumps/earth flows, 18 Rank 4 erosional gullies, ten Rank 3 slides/slumps/earth flows, and two Rank 3 erosional gullies. In comparison, zero Rank 4 slides/slumps/earth flows and one Rank 3 erosional gully were identified along the Proposed Action re-route alignment. Figure 2.1-1 depicts the Proposed Action evaluated in this EA. Photographs of the Proposed Action are also included in Appendix L, Visual Assessment Technical Report.



Line 63 - Plains Pipeline, LP

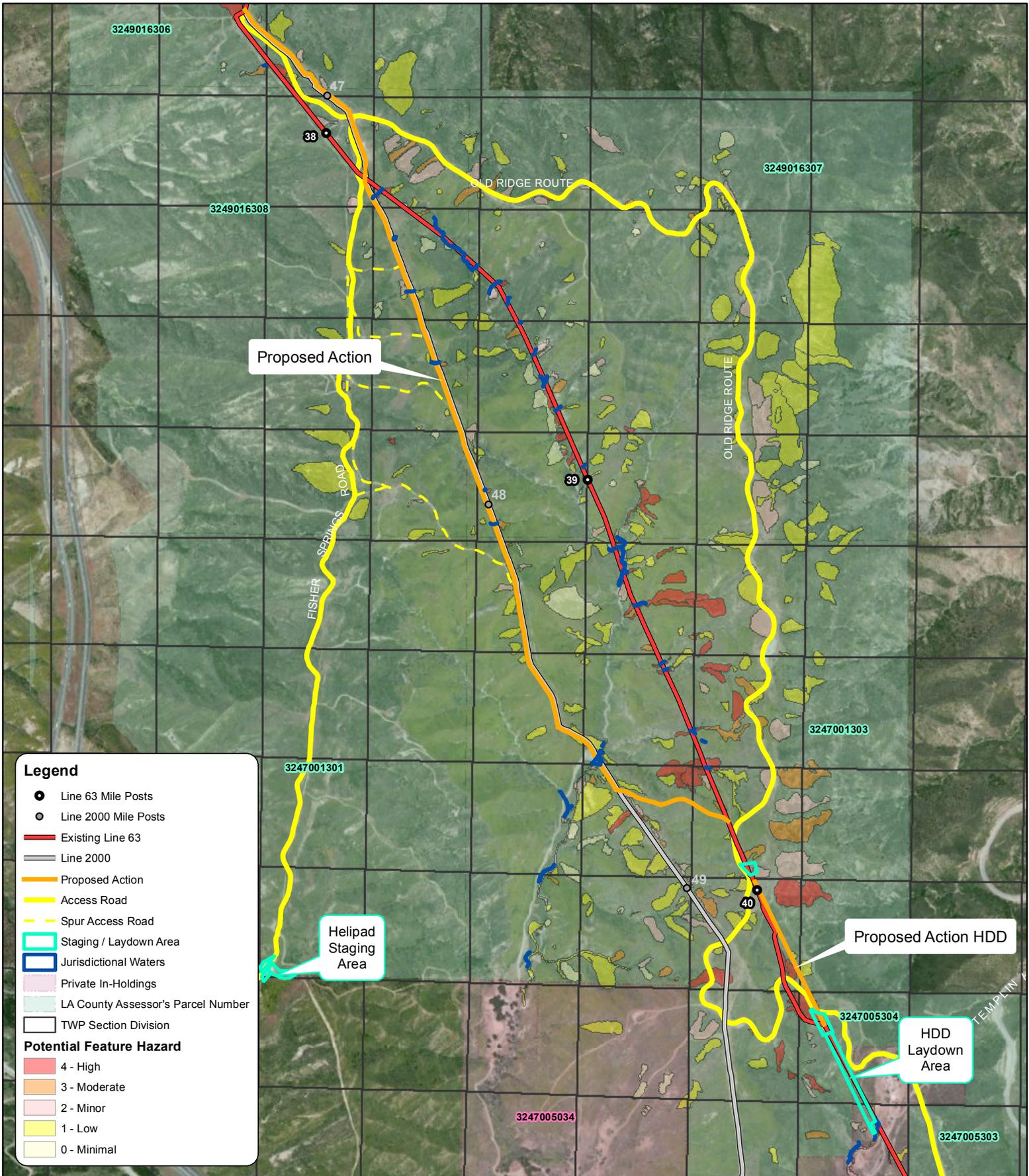
Line 63 Proposed Reroute

(MP 37.4 TO 40.3)



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Copyright: ©2012 Esri, DeLorme, NAVTEQ
Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

PREPARED BY		PREPARED FOR	
DRAFT DATE		SCALE	
Oct 23, 2013			
REVISION DATE		PROJECT	
Jun 04, 2014		185702504	
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VOL		VOL	
KC	EJ	MW	FIGURE NO. 2.1-1a



Legend

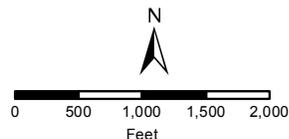
- Line 63 Mile Posts
- Line 2000 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action
- Access Road
- - - Spur Access Road
- Staging / Laydown Area
- Jurisdictional Waters
- Private In-Holdings
- LA County Assessor's Parcel Number
- TWP Section Division

Potential Feature Hazard

- 4 - High
- 3 - Moderate
- 2 - Minor
- 1 - Low
- 0 - Minimal

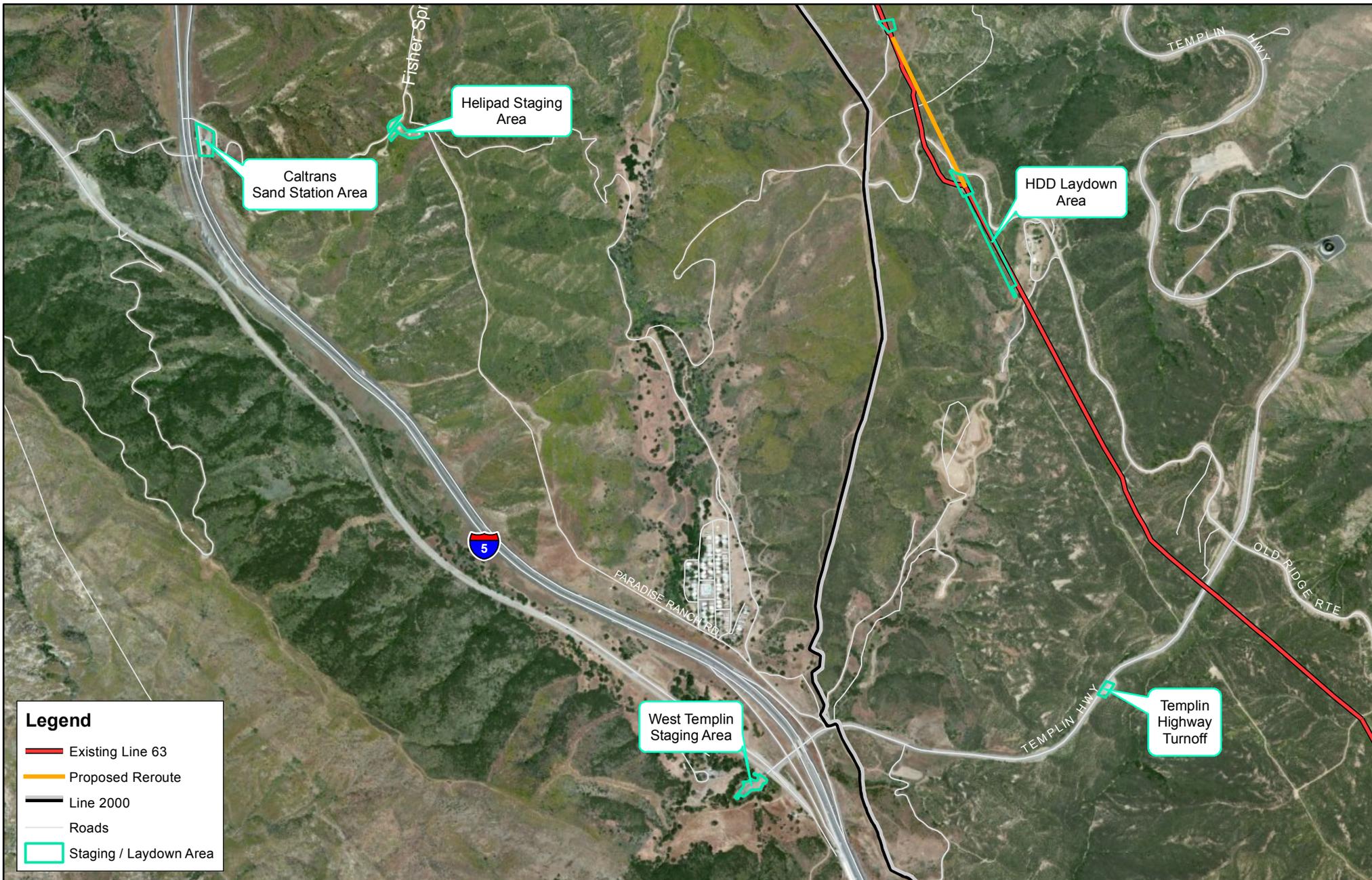
Line 63 - Plains Pipeline, LP

Line 63 Proposed Reroute



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

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KC	SR	DR	2.1-1b



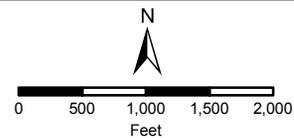
Legend

- Existing Line 63
- Proposed Reroute
- Line 2000
- Roads
- Staging / Laydown Area

Line 63 - Plains Pipeline, LP

Line 63 Proposed Reroute Staging Areas

(MP 37.4 TO 40.3)



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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**ENVIRONMENTAL ASSESSMENT
PAALP LINE 63 RE-ROUTE PROJECT
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2.1.1 Pipeline Installation

2.1.1.1 Access

The existing Line 63 and Line 2000 ROWs in the vicinity of the proposed re-route are in remote, mountainous terrain. The ROWs intersect or are adjacent to roadways at limited locations. Access to project work areas would be through Fisher Springs Road, the ORR, Templin Highway, and spurs branching off these roads. Initial access to these roads would be gained from I-5. The ORR surface would be protected from damage from heavy equipment with a layer of dirt, steel plates, rubber pads, or other approved methods. In addition, it is understood that pre-project asphalt patching will have been completed along the ORR at specifically identified sections of the ORR that were approved by the ANF. In order to prevent adverse effects to the historically significant ORR, vehicle traffic on the ORR would be subject to provisions contained in a Proposed Action-specific ORR Protection Plan approved by the ANF prior to issuance of a Special Use Permit and initiation of construction activities.

The Line 2000 ROW, located west and upslope from the existing Line 63 alignment would be accessed primarily from the north-south oriented Fisher Springs Road, which has access-spurs along ridgelines with turnaround points directly over the existing ROW, as shown on Figure 2.1-1. The section of proposed re-route that diverges from the Line 2000 ROW would likely be accessed from the ORR.

2.1.1.2 Equipment Mobilization and Material Staging

The following project scope is based on the Project Execution Plan prepared by ARB, Inc. (ARB) dated May 22, 2013 and updated following a July 11, 2013 site visit. Project operations would be managed from the West Templin Staging Area, with multiple satellite equipment and material staging and laydown areas strategically placed to maximize operational efficiencies and reduce vehicle trips. With the exception of a portion of the HDD Laydown Area, all laydown and staging areas have been previously disturbed and would not require grading or surface disturbance. Proposed grading activities required for the HDD Laydown Area are discussed in Section 2.1.2. The field office/staging and laydown areas are as described below, and are as shown in Figure 2.1-2. The lands that would be used during Proposed Action construction are summarized in Table 2.1-2 and proposed construction equipment for conventional pipeline installation is provided in Table 2.1-3.

- **West Templin Staging Area:** Project personnel would be based in field trailers located on two adjacent areas that have been used for previous projects at the west end of Templin Highway, directly west of I-5. All management, supervision, support, and crews would be based at this approximate 14.5-acre area. This area would also provide primary equipment, vehicle, and materials storage. Uses of these areas are contingent upon an access agreement with the owner of this private property.

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- **Caltrans Sand Station Area:** Located on the approximate 0.33-acre paved Caltrans Sand Station facility parking lot at the base of Fisher Springs Road. This staging area would be used for operations near the northern portion of the project, and is contingent upon approval for use by Caltrans.
- **Templin Highway Turnoff:** An approximate 0.34-acre turnout on Templin Highway approximately 0.75-mile east of I-5, contingent upon ANF approval.
- **HDD Laydown Area:** A pipe laydown area comprising approximately 6.43 acres would be located in the area and would support the HDD operations proposed at Line 63 MP 39.9, and as discussed in Section 2.1.2. Approximately 1.29 acres of this area (40-foot wide corridor within the 1,400 foot long laydown area) would require grading. Use of this area contingent upon private in-holding access agreement.
- **Helipad Staging Area:** This approximate 0.75-acre area is located on a ridge approximately one mile east of I-5 on Fisher Springs Road, at the junction with Paradise Ranch Road and the connector to Gun Club Creek Road. Based on available information, it is believed the helipad is active and using this area as a staging area will be contingent upon obtaining an access agreement.

An equipment wash station would be utilized at the West Templin Staging Area to minimize the potential spread of noxious weeds during construction.

Table 2.1-2: Lands Used During Proposed Action Construction

Component	Land Ownership	Length (ft.)	Width (ft.)	Square Footage	Acreage
Proposed Re-Route Alignment (not including HDD)	Public	12,000	60	720,000	16.53
HDD Entry/Exit North	Public	100	150	15,000	0.34
HDD Entry/Exit South	Public	100	150	15,000	0.34
HDD Laydown Area	Public/Private	1,400	200	280,000	6.43
West Templin Staging Area	Public/Private	--	--	631,620	14.50
Templin Highway Staging Area	Public	--	--	14,810	0.34
Caltrans Sand Station Staging Area	Public	--	--	14,375	0.33
Helipad Staging Area	Public	--	--	32,670	0.75
Old Ridge Route Access Road	Public	28,465	15	426,975	9.80
Fisher Springs Access Road	Public	19,548	12	234,576	5.39
Line 2000 ROW Access Spurs	Public	6,610	8	52,880	1.21
Total:				2,437,906	55.97

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Table 2.1-3: Anticipated Re-Route Construction Equipment

Equipment Type	Horsepower	Quantity	Weight (lbs)	Number of Axles
¾ Ton Pick-up Truck (4WD)	360-410	15	6,000	2
F-550 with Fire Equipment	400	1	12,000	2
1 Ton Flatbed Truck (4WD)	305-325	3	10,000	2
1 Ton Weld Truck 200 AMP	450	8	15,000	2
1 Ton Service/Utility	300	1	15,000	2
2 Ton Flatbed Truck (4WD)	240	4	12,500	2
2 Ton Fuel & Lube Truck	300	1	15,000	2
2 Ton Sandblast	300	2	14,000	2
Low-bed with Trailer	250-350	3	36,000**	5
3 AX Water Trucks 6x6	300	3	46,000*	3
Van-8 Passenger	260-320	4	6,000	2
Van-12 Passenger	240-280	4	7,000	2
Pipe Haul – Truck and Trailer	295-335	2	87,000	5
120 Bbl Vacuum Truck	250	2	70,500*	5
70 Bbl Vacuum Truck	150	2	45,740*	3
Trailer-Float	0	1	12,000	2
Trailer-Office	0	1	8,400	2
Forklift - 10,000# & Over	90	1	70,700**	2
Crawler Dozer w/Ripper D-8	310	1	126,850**	5
Crawler Dozer w/Winch D-7	240	2	96,400**	5
Pipelayer- 561 Size	115	2	68,100**	5
Pipelayer- 572 Size	230	2	106,206**	5
Excavator- CAT 330 Size	268	4	114,983**	5
Bending Machine 6-20"	47	1	22,000**	5
Backhoe- 420/430/C580	95	1	42,500**	5
Backfill/Padding Machine Outlaw	230	1	121,000**	5
Motor Grader- CAT 12 Size	135-175	1	61,040**	5
Air Compressor- 175CFM	75	2	2,400	1
Air Compressor- 1500CFM	600	1	49,600**	5
Pump- Fill and Test	100	1	19,500**	5
Light Tower	25	1	1,700	1
Water Tower	0	1	46,000**	5
Power Generator	125	3	13,440	2
Welder	50	4	20,000	2
	Total:	84		
Notes:				
* Loaded weight				
** Add equipment weight to hauling truck weight				

2.1.1.3 Utility and Services Requirements

Construction equipment maintenance such as lubrication and hydraulic line inspection and repair would be performed at the equipment staging areas. Equipment re-fueling would be conducted from portable storage tanks with secondary containment or crew trucks with auxiliary off-road diesel tanks and would not occur within 100 feet of drainages or riparian areas. Dust suppression and compaction operations during construction would require approximately three 3,500-gallon water trucks per day. Please refer to the Dust Control Plan (Appendix D) for specific measures that would be taken to minimize project-generated fugitive dust.

Diesel-powered generators would be used for on-site power requirements.

2.1.1.4 Pipeline Construction Activities within ROW

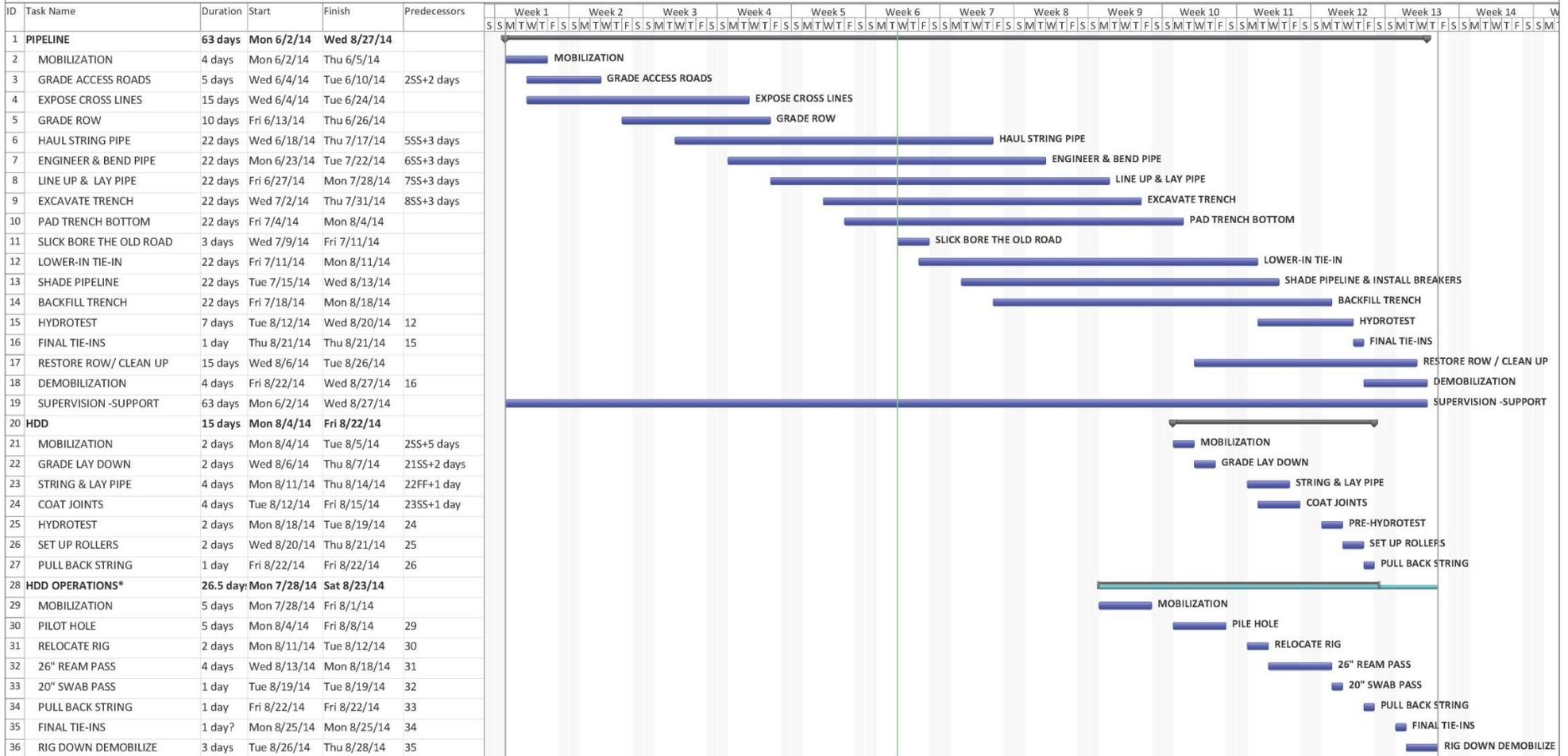
Construction activities within the ROW are expected to include the following tasks, using the equipment specified in Table 2.1-3:

- Right of Way Clearing and Grading
- Excavation
- Haul and String
- Bending/Set-Up
- Lay and Weld
- Field Joint Coating
- Lower-In
- Tie-In
- Padding and Backfill
- Hydrostatic Testing
- Cathodic Protection
- Abandon Existing Unexposed Pipeline Segments in Place¹
- Clean-Up and Restoration
- Demobilization

Construction tasks would be undertaken on a staggered schedule, with tasks staggered for maximum efficiencies. The Proposed Action activities are anticipated to be completed in approximately 60 working days, including a total number of 16 days of mobilization/demobilization at the start and conclusion of the construction period. The HDD operations would consist of a 28 work day operation within the Proposed Action schedule period, executed by an independent crew from the conventional pipe installation operations. A Proposed Action construction schedule is included as Figure 2.1-3. A diagram of typical conventional pipeline construction is provided as Figure 2.1-4.

¹ The removal of exposed pipeline will be deferred pending NEPA review and will be implemented under separate authorization.

PLAINS ALL AMERICAN PIPELINE
Line 63 Mariana Trench Reroute
Option 1 Route
 12,000' Pipeline - 1,900' HDD



Project: LINE 63 REROUTE Date: Wed 7/9/14	Task	Rolled Up Task	External Tasks	Inactive Task	Duration-only	Finish-only
	Progress	Rolled Up Milestone	Project Summary	Inactive Milestone	Manual Summary Rollup	Manual Progress
	Milestone	Rolled Up Progress	Group By Summary	Inactive Summary	Manual Summary	Start-only
	Summary	Split	Deadline	Manual Task	Manual Task	Manual Task

Pipeline Work 5-10's Work Week Page 1 *HDD Work 7-10's Work Week

Line 63 - Plains Pipeline, LP

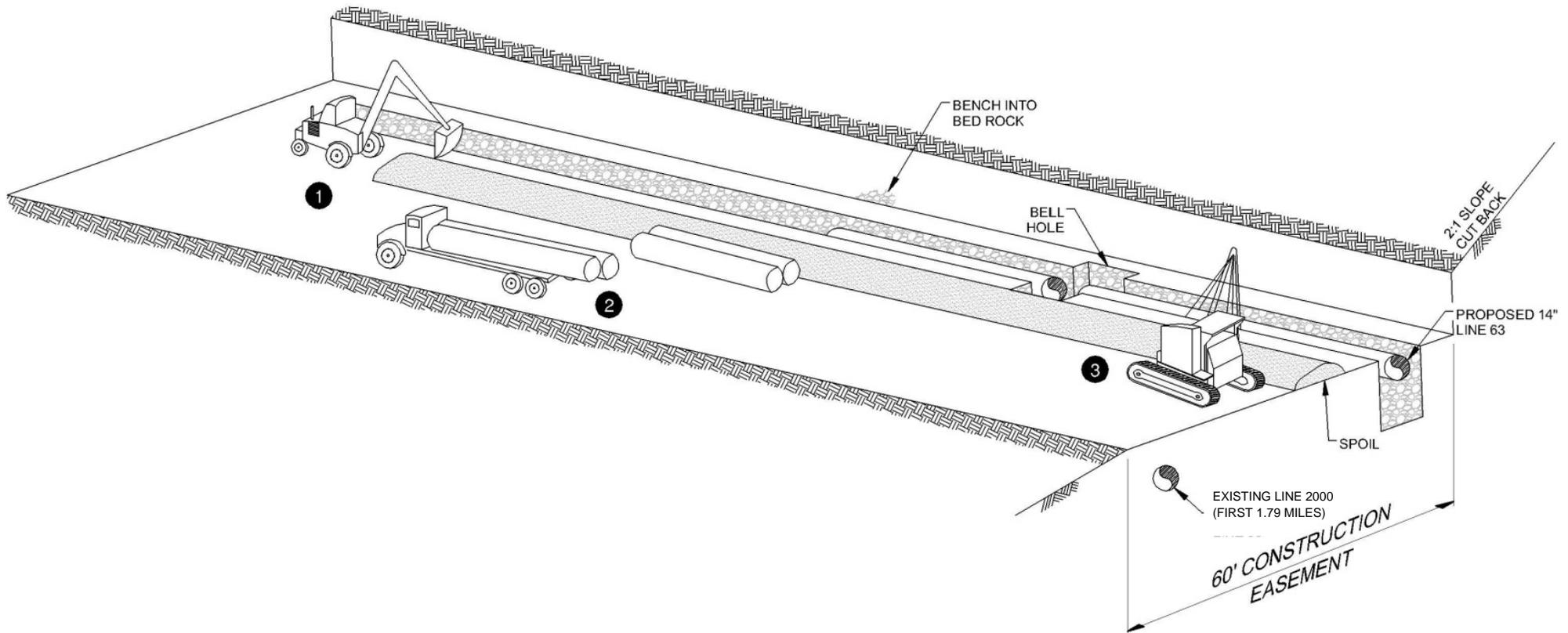
Line 63 Proposed Reroute Schedule

(MP 37.4 TO 40.3)



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits:

PREPARED BY 		PREPARED FOR 	
DRAFT DATE Aug 2, 2013	SCALE		FIGURE NO.
REVISION DATE Aug 28, 2013	PROJECT 185702504	2.1-3	
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Legend

- ① Ditching
- ② Stringing
- ③ Lowering-in

Line 63 - Plains Pipeline, LP
Line 63
Proposed Reroute
Typical Pipeline Spread
 (MP 37.4 TO 40.3)



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits:

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REVISION DATE Aug 28, 2013		PROJECT 185702504	FIGURE NO.
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**ENVIRONMENTAL ASSESSMENT
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2.1.1.4.1 Pre-construction Activities

The major field operation prior to construction would be acquisition and surveying of portions of the proposed re-route. Ground survey crews would plot in detail all topographic features that could affect pipeline construction throughout the proposed re-route.

2.1.1.4.2 Clearing and Grading

Work crews would clear vegetation and perform rough and finish grading along the pipeline alignment, on up to four existing road spurs connecting Fisher Springs Road with the Line 2000 alignment, temporary workspaces, and the proposed pipe storage yards. The proposed re-route project would take place largely within the existing Line 2000 pipeline corridor where all clearing and grading will be confined to the existing previously disturbed right-of-way corridor. Where clearing would be required; it would include removal of above-ground obstacles to construction such as vegetation, trees, and large rocks. Topsoil shall be salvaged where required and any rocky soil from the excavated pipeline trench not suitable for backfill would be spread along the ROW in compliance with Environmental Commitment VR-10. All oak and native trees will be avoided to the extent possible. Impacts to all oaks and native trees will be recorded regardless of size. On non-Federal lands all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. Removal of such trees would require restoration in compliance with Environmental Commitments BIO-1 and BIO-11 (Section 2.3.1 and 3.2).

Grading would include leveling the ground surfaces as required to permit transit and operation of vehicles and equipment and to permit placement of the pipeline at the desired elevations. Cuts and fills to maintain grade would be minimized to the extent feasible. During construction in steep terrain, erosion-control structures and Best Management Practices (BMPs), including water bars, diversion channels, and terraces would be employed to reduce erosion and runoff from the ROW and adjacent areas. Temporary stream diversion soil stabilization measures to support heavy equipment, and culvert installations at stream crossings, may be employed as necessary within the ROW. The Proposed Action crosses ten streams. Additional information on stream crossings is included in Appendix H (Preliminary Delineation of Waters of the United States, including Wetlands and Waters of the State) and Appendix E (Biological Assessment/Biological Evaluation).

2.1.1.4.3 ROW Excavation

Once the ROW has been prepared, trenching operations would begin. In areas where loose or consolidated soil is encountered, the trench would be excavated using backhoes, excavators, or clam shell buckets. An exception to the mechanical excavation would be hand digging to locate buried utilities, such as other pipelines and cables. Trenches would be excavated in accordance with construction specifications and drawings. Water mains and sewers are not anticipated to be encountered in this section of line. Although the re-route will cross the California Aqueduct in one location, the aqueduct is buried at substantial depths and will not be encountered as a result of shallow trenching necessary to install the re-route. The pipeline re-route would cross the ORR in three locations; at Osito Canyon, at the Fisher Springs Road/ORR intersection; and along the HDD pipeline replacement component discussed in Section 2.1.2.

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The crossing at Osito Canyon would be accomplished by conventional trenching as the crossing is in a location without historic ORR paving remnants. The crossing of the ORR at the Fisher Springs Road and ORR intersection would be accomplished by boring under the ORR. The portion of the ORR affected by the Proposed Action will be re-paved after construction per agreement with the Forest Service.

Where bedrock is encountered during trenching, the area would be trenched using excavation equipment. Typical trench depth would be approximately 56 to 62-inches but could be up to 10-feet or more below grade at stream crossings or other irregular land features. Spoils from excavations would typically be used as backfill materials at the site of origin or spread uniformly along the disturbance corridor in compliance with Environmental Commitment VR-10.

2.1.1.4.4 Haul and String

Pipe would be hauled in 40-foot lengths from the storage site to the ROW for installation. Where sufficient room exists along the ROW, trucks would carry the line pipe along the ROW, and side-boom tractors would unload the joints of pipe from the stringing trucks and lay them end to end, or, "string", beside the trench line for subsequent line-up and welding.

2.1.1.4.5 Bending/Set Up

A pipe-bending crew would work with the stringing operation. The pipe would be bent by a portable bending machine to conform to the terrain and fit the contour of the trench both vertically and horizontally.

2.1.1.4.6 Lay and Weld

Each piece of pipe would then manually stick-rod welded. Every field weld would be manually inspected and x-rayed to ensure conformance with welding code. Any weld found to be out of code would be repaired and re-x-rayed.

All field welding would be performed to project engineering specifications, in conformance with the approved Fire Plan, and in accordance with all applicable ordinances, rules, and regulations, including American Petroleum Institute (API) 1104 (Standard for Welding Pipe Lines and Related Facilities) and the rules and regulations of the US Department of Transportation (DOT) (Title 49, Part 195 for liquid pipelines).

All welds would be radiographically inspected by a third-party licensed technician and reviewed by a certified inspection company. Any rejected welds would be repaired or replaced as necessary and re-radiographed until compliance is achieved. In addition to standard mill testing of all pipe and fittings, hydrostatic testing would be performed after construction and prior to startup, as discussed in Section 2.1.1.4.11, below.

2.1.1.4.7 Field Joint Coating

Once the mainline welds are approved, construction crews would clean, sandblast, and apply an epoxy coating. The epoxy coating on the welds would be detection tested for discontinuities after the coating is applied. If a discontinuity is detected, the coating would be repaired and

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rechecked. The coating crew would also visually inspect the coating on each section of pipe and make required repairs. Visqueen or similar material would be placed on the ground prior to commencing sandblasting activities to prevent the sandblast material from contacting the ground surface. Used sandblasting materials would be collected, containerized, and disposed of off-site.

2.1.1.4.8 Lower-In

Pipe would be lowered into the trench using roller-cradles and/or lowering belts. All pipe sections would be inspected and tested for coating discontinuities during the lowering operations, and repairs would be made before the pipe is laid on the bottom of the trench.

2.1.1.4.9 Tie-In

The lowering-in crew would install and tie-in the mainline sections and any special construction areas. The crew would prepare the tie-in sections, weld the tie-in joints together, and x-ray the completed welds. Welds would be cleaned and coated after inspection.

The proposed ROW crosses the ORR at three locations; at Osito Canyon, at the Fisher Springs Road/ORR intersection; and along the HDD pipeline replacement component discussed in Section 2.1.2. The crossing at Osito Canyon would be accomplished by conventional trenching as the crossing is in a location without historic ORR paving remnants. The crossing of the ORR at the Fisher Springs Road and ORR intersection would be accomplished by boring under the ORR using the “slick-bore” technique. During the slick-bore process, the new segment of Line 63 is welded to the back end of a bore pipe previously installed with a pneumatic pipe rammer. A winch is connected to the lead end of the bore pipe and is used to pull and remove the carrier pipe. As the bore pipe is removed, the product pipe (new pipeline) is pulled into place. This installation method limits the amount of stress placed on the product pipe and thus the ORR in an area with historic pavement. All work performed for the slick-bore operations is anticipated to occur along the installation alignment and within areas also disturbed as a result of trenching operations. The portion of the ORR affected by the Proposed Action will be re-paved after construction per agreement with the Forest Service.

2.1.1.4.10 Padding and Backfill

Padding and backfill operations immediately follow lowering-in operations. Backfill material would be obtained from trench spoils. Backfill would be placed in the trench with padding machines, which sift out hard, potentially damaging materials such as rock and clay, leaving fine soil to act as a barrier or “padding” between the pipeline and harsher native materials. Sack trench breakers (i.e. sacks filled with dirt or sand and used to prevent erosion or to form a barrier between pipelines and prevent coating or pipe damage when lowering in trenches that still may contain occasional angular rocks or clasts) would be installed with this operation. The sacks will be composed of specific colored material(s) that best blend in with the surrounding natural environment. Some sand may be imported and used as backfill. If needed, imported sand would be clean and free of weed material in accordance with Environmental Commitment BIO-5(f). The sides and top of the pipe would be covered with a minimum of six inches of fill along the sides and a minimum of 24 inches on the top. Backfilled material will be compacted

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by wheel/track rolling and slightly crowned to allow for settlement and provide positive drainage, however areas disturbed by the project will not be compacted beyond 85 percent to allow for revegetation. Regrading operations would restore the approximate original contour to the ROW, except in areas where slope stabilization practices would call for contour modification. In general, subsoil rock fill and other excess spoils would be spread within the ROW in compliance with Environmental Commitment VR-10. Salvaged topsoil shall also be replaced once recontouring and decompaction occur and shall be done in consultation with an ANF botanist. Materials determined to be unsuitable for backfill and/or spreading along the ROW in accordance with Environmental Commitment VR-10 would be transported off-site to an appropriate receiving facility.

2.1.1.4.11 Hydrostatic Testing

The section of line would be filled with water and pressure tested to ensure there is no loss in pressure. The hydrostatic test crews would clean, fill, test, de-water, and dry the pipeline sections. The sections are cleaned using cleaning pigs run with compressed air. When the sections are clean, the crew would weld on the hydrostatic test manifold pre-loaded with the fill and dewater pigs. The pipeline would be filled with water and pressurized using a pump, and tested per the test plan, 49 CFR Part 195.300 to 195.310 (Subpart E) – General Requirements, California Government Code Sections 51013.5 through 51014.5, and other applicable pipeline regulations. Test water would be pumped in and disposed of at the end of testing through existing facilities along the pipeline route.

2.1.1.4.12 Cathodic Protection

The existing cathodic protection (CP) system used to inhibit pipeline corrosion would be expanded to include the new line section. The CP system involves the application of direct current electricity from an external source to oppose the discharge of corrosion current from soil (anodic areas). Corrosion protection test stations are located approximately every mile along the existing pipeline. CP rectifiers, each approximately the size of a parking meter, would be installed in the proposed re-route alignment ROW at the same intervals.

2.1.1.4.13 Cleanup and Restoration

The approach to cleanup and restoration would be per ANF requirements, as well as agreements with private property owners as applicable. In general, restoration would involve several steps: ROW cleanup; fence and road repair, erosion control, and revegetation/monitoring.

2.1.1.4.14 Abandon Existing Unexposed Pipeline Segment in Place

The existing unexposed pipeline segment located between approximately MP 37.6 and MP 39.8 would be abandoned in place. The existing pipeline segment would be cut, capped, purged of residual crude oil, filled with inert nitrogen gas, and isolated from the remaining Line 63 alignment. The removal of exposed pipeline will be deferred pending supplemental NEPA analysis and will be implemented under separate authorization.

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2.1.2 Horizontal Directional Drilling

A heavily geohazard-impacted, approximate 2,000-foot-long section of Line 63 between MPs 39.9 and 40.3 would be bypassed using HDD. HDD is a steerable, trenchless method of installing underground pipes in a shallow subsurface arc along a prescribed bore path by using a surface-based drilling rig, with minimal impact on the surrounding area. The exact length and depth of the HDD will be based on a pre-HDD geotechnical drilling investigation (currently planned as consisting of seven vertical borings located along the proposed HDD alignment) that is designed to evaluate the location and depth of several landslides, and the location and depth of groundwater. The geotechnical data will be used to determine the optimal depth and arc of the new segment of subsurface pipe. Subsurface water encountered during the geotechnical investigation would be monitored with piezometers before the HDD is performed. Monitoring would provide information as to whether the encountered groundwater is perched, confined or unconfined, and the approximate thickness of any saturated zones. These data would be used to locate approximate subsurface water so that contingency measures to accommodate groundwater zones can be incorporated in the drill plan, as described in the “Mud Control” section below.

A new section of line would be installed between an entry/exit point located approximately 0.3-mile north of the residences at the area near the entrance gate on the ORR (HDD Entry/Exit South), and an entry/exit point located along the east side of the ORR, approximately 1.3 miles north of the residences located on the ORR (HDD Entry/Exit North). The process would involve drilling a pilot hole and then reaming progressively larger diameter holes from the two entry/exit points until the final hole diameter is reached. The hole is drilled at an angle so the pipe is as much as 250 feet below ground surface. The new pipeline would then be pulled from the southern exit point to the northern entry point, with the pipeline/carrier pipe continuously fed into the hole from an approximate 0.25-mile long staging area adjacent the southern entry/exit point. Approximately 1.97 acres of soil disturbance would be required for the HDD, consisting of an estimated 0.68 acres at the entry and exit points and approximately 1.29 acres for the pipe laydown area. The HDD would cross underneath the ORR in one location.

An Inadvertent Drilling Fluids Return Contingency and Response Plan for the Line 63 Re-Route Project HDD will be prepared and provided to the ANF prior to construction. The objectives of the Plan will be to provide the timely detection and management of, an inadvertent drilling fluids return. The Plan will also outline the proper response equipment and personnel to be maintained on-site or at readily accessible locations; and provide notification contacts to regulatory agencies.

The following project scope is based on the HDD Plan prepared by ARB, dated May 7, 2013 and updated following a July 11, 2013 site visit. The equipment utilized for mobilization and drilling equipment is provided in Table 2.1-4. The HDD installation process is described in the following sections.

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Table 2.1-4: HDD Equipment List

Equipment Type	Horsepower	Quantity	Weight (LBS)	No. of Axles
Pickup ½ Ton (4WD)	300-360	6	5,500	2
DDR 420 Drill Rig	186	1	240,000**	6
TRI MCS 1000 Mud System	225	1	66,880	3
TRI MCS 750 Mud System	225	1	66,880	3
OMEGA D-750 Triplex Pump	500	1	30,000	2
Control CAB on DropDeck	0	1	35,000	2
Tool Van on DropDeck	0	1	48,000	2
Parts Van on DropDeck	0	1	48,000	2
Pipe Trailers 60 Joints	0	4	48,000	2
Trailer Float Bentonite	0	4	48,000	2
3 AX Water Truck 6x6	300	1	46,000*	3
Van 12 Passenger	240-280	1	7,000	2
Excavator CAT 330 Size	270	1	114,983**	5
R.T. 30 Ton Crane	152	1	94,585**	5
Backhoe CAT 420	93	1	42,500**	5
Forklift 10,000# & Over	90	1	70,700**	2
Power Generator 275 kW	400	1	13,440	2
120 BBL Vacuum Truck	250	2	79,000*	5
70 Bbl Vacuum Truck	150	1	45,740*	3
Rocket Launcher Truck	250	1	79,000*	5
End Dump Truck	295-335	2	79,000*	5
21,000 Gallon Frac Tanks	0	7	29,500	1
Total:		46		
Notes:				
* Loaded weight				
** Add equipment weight to hauling truck weight				

2.1.2.1 Rig Up - Placement of Entry Point Drilling Rig and Ancillary Equipment

The drilling rig spread would be mobilized to the initial pilot entry point on several tractor-trailers. The equipment would be unloaded and positioned on location by crane, track hoe, and forklift. The rig would then be placed on centerline the proposed HDD drill direction and lifted to a 14-degree angle. The control cab, mixing tank, cleaning unit, triplex pump(s), centrifugal pumps, and generator would be positioned and rigged up. Water required for mixing drilling mud would be collected by water trucks from the Castaic area and hauled to a 500-bbl (barrel) portable tank. Trailers of drill pipe and pallets of bentonite would also be stored at the southern entry/exit point location. The adjacent laydown area would be approximately 1,400 feet long and 200 feet

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wide (approximately 6.43 acres). The entry/exit points and approximately 1.29 acres (40-foot wide swath) of the pipe laydown area would be graded in order to create the proper angles for the pipe joints in the entry/exit holes and pipe joint laydown.

Approximately 4,260 feet or 142 joints of drill pipe would be mobilized for the crossing. The proposed drill pipe has a tensile strength of 560,760 pounds.

2.1.2.2 “TruTracker” Surface Guidance

Prior to beginning the pilot hole, surface wire coils would be established on the ground surface over centerline. Usually, the surveyor constructs a series of coils over the centerline from entry to exit. The x, y, and z coordinates of entry point, exit point, and all corners of the coil wire grids would be surveyed and the data would be entered into the survey file in the rig’s control computer. This coil would provide accurate information to assure that pilot hole drilling is on the proper design path.

2.1.2.3 Pilot Hole

The proposed method of directional drilling would be to drill (or jet) using five-inch-diameter drill pipe. A 6-³/₄-inch mud motor with a 9-⁷/₈-inch Mill Tooth roller cone bit would likely be used. Every effort would be made to minimize the possibility of producing inadvertent drilling fluid returns to the surface. The quantity and pressure of the drilling mud pumped would be carefully monitored to ensure the levels are not excessive. HDD operations will be conducted in accordance with an Inadvertent Drilling Fluids Return Contingency Plan approved by the ANF prior to construction.

The pilot hole sequence would consist of drilling along the design plan and profile, to an estimated 250 foot depth below ground surface, maintaining the prescribed radii and design constraints. After completion of the pilot hole, the downhole assembly and drilling rig would be moved to the higher elevation and rigged up in preparation for reaming operations.

2.1.2.4 Reaming

The pull ream technique would be utilized for reaming operations. This reaming method involves connecting a split bit reamer at the exit and pulling it to the entry using the drill rig for pulling and rotation of the drill string and hole opener. Drilling fluid is typically pumped from the mud system on the exit side through the tailstring to the reamer. The fluid then returns up the annulus to an exit pit. The centrifugal transfer pump sends the drilling slurry to the cleaning equipment where the solids are separated from the drilling fluid. Then the drilled fluid is pumped by the triplex back through the drill string to the reamer. The reaming operations would likely consist of one 26-inch diameter pass from south to north. A 20-inch-diameter swab would then be pulled through in order to condition the hole.

2.1.2.5 Pullback

The 14-inch-diameter steel pipeline casing would be pulled back from the south entry/exit point to the north entry/exit point through the reamed hole using the drill rig with a 420,000-lb pull back capacity. Drilling fluid would be pumped from rig side to the reamer in the pullback assembly. The annulus between the 14-inch-diameter pipeline and reamed hole would be filled with drilling mud.

2.1.2.6 Rig Down

After the 14-inch-diameter steel pipeline is installed, the drill rig and support equipment would be demobilized and moved off location.

2.1.2.7 Drilling Mud Management

Drilling mud is an important component to the success of any directionally drilled installation. It has physical characteristics designed to preserve the integrity of the drilled hole, remove cuttings, and lubricate the bit and down-hole components, as described below.

Make-up Water

The drilling contractor would regularly check the viscosity, mud weight, sand content, fluid loss, pH, and chloride content of the drilling fluid. This data would be recorded on a Mud Report Form while testing. The drilling contractor would determine and perform any adjustments to the viscosity. Sand content in the fluid coming out of the hole is ideally maintained near 20 percent. Should the content become higher, the reaming rate would be slowed to ensure proper cleaning of the mud. An estimated 900,000 gallons of water is expected to be required to support the HDD.

Composition

Based on anticipated soil conditions, a high yield bentonite-based drilling fluid would likely be used. An estimated 300,000 lbs. or 6,000 (50 lb.) sacks of bentonite would be required to install the new section. The Extra High Yield Bentonite is composed of sodium montmorillonite (bentonite clay). The viscosity is typically checked and recorded at certain intervals while drilling. The drilling contractor would determine and make any adjustments to the viscosity and the density as necessary. Soda Ash (sodium carbonate) may be added to adjust the pH value of the water. A liquid additive viscosifier and fluid loss control agent that prevents formation clays from swelling, by the trade name Uni-Drill, could potentially be added if necessary.

Mud Control

A closed loop mud system is proposed for drilling and reaming operations. A closed-loop mud system is one in which the drilling mud that is used for drilling operations is cleaned and

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recycled. As the pilot hole is drilled, the volume of drilling mud required also increases. The penetration rate of the drill determines the amount of drilling mud that will need to be added to the system. The volume of drilling fluid pumped down hole is dependent upon the activity being performed. Regardless of the activity, the volume of drilling mud returns should be equal to the amount pumped down hole less the amount required to displace the solids being removed allowing for loss of fluid into the surrounding formation.

If the volume of drilling fluid returns is less than the volume of returns after accounting for the amount needed to displace the cuttings being removed, it is probable that the difference is going into the formation. This loss into the formation can occur as a seep or a fracture. As a seep, the fluid goes into the surrounding formation until a wall cake is created by the bentonite, sealing off future losses. As a fracture, the drilling fluid flows into a weaker formation until the pressure equalizes or until it surfaces. The drilling contractor will use the entry pit, a transfer pump and the mud mixing/cleaning system to contain the surface drilling mud and any excess overflow in the closed loop system as provided in the Inadvertent Drilling Fluids Return Contingency Plan.

Subsurface water encountered in the boring could potentially increase the volume of drilling fluid returns. Small volumes of water would simply dilute the drilling fluid and could be accommodated in the pits located at the entry/exits points. Larger volumes of water encountered would be accommodated in additional portable 500 bbl frac tanks that would be brought to the entry/exit points specifically to contain the fluids.

Disposal

It is estimated that the project HDD component would generate approximately 285 cubic yards (cy) of excess drilling mud and cuttings and 600 bbls of excess drilling slurry, which would be stored in portable frac tanks near the entry/exit points. An approved transportation and disposal contractor would be engaged to collect the excess fluid in vacuum trucks and haul to a licensed disposal facility. Drill cuttings will be hauled in dump trucks or bins on Rocket Launcher trucks for transport to a proper disposal facility as these materials are considered a waste stream.

2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, no construction activities associated with pipeline re-routing and replacement would occur. Line 63 would remain idle and would not be used to convey crude oil. As Line 63 is classified as an active pipeline by the California State Fire Marshal, PAALP would continue routine O&M activities in compliance with applicable pipeline safety standards.

Crude oil would continue to be transported from Kern and Santa Barbara County oil fields to refineries in the Los Angeles areas through Line 2000. The current volume on the combined Line 63/Line 2000 system is approximately 100,000 bpd, which is 95 percent of the system capacity of 105,000 bpd.

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If additional volumes are added to the system, the pipeline would have to be prorated and volumes over 105,000 bpd would be rejected. Limitation of the pipeline would adversely affect the current trend of increasing production from Kern and Santa Barbara Counties.

The No Action Alternative would not meet the Purpose and Need of the project. As stated in Section 1.2, the Purpose and Need of the Proposed Action is to re-route Line 63 from MPs 37.6 and 39.8 and increase burial depth of Line 63 between 39.9 and 40.3 through HDD techniques to fulfill Task 4 of the 2010 USEPA Consent Decree, return the flow of oil through Line 63, and allow for the continued safe operation of PAALP facilities on ANF lands.

2.3 ENVIRONMENTAL COMMITMENTS AND BEST MANAGEMENT PRACTICES

2.3.1 Environmental Commitments

PAALP has incorporated a variety of Environmental Commitments (EC) as part of the Proposed Action to avoid and/or minimize project-related impacts to sensitive resources. These Environmental Commitments are listed below and categorized in such a way as to relate to specific issue areas. Universal (UNV) Environmental Commitments are presented along with more specific commitments, including those related to Air Quality (AQ), Biological Resources (BIO), Cultural and Paleontological Resources (CULT), Environmental Contamination and Hazards (HAZ), Geology/Soil Resources (GEO), Hydrology and Water Quality (HYD), Land Use (LU), Noise (N), Traffic and Transportation (T), Visual Resources (VR), and Wildfire Suppression and Prevention (WF).

AQ-1: Meet Tier 3 California Emissions Standards. During pipeline replacement and reroute activities, PAALP shall require that off-road construction diesel engines which has a rating of 75 hp or more, to meet, at a minimum, the Tier 3 California Emissions Standards.

AQ-2: Minimize Idling Time. During all construction and operation and maintenance activities, PAALP shall minimize on-road and off-road equipment idling timed duration to no more than two minutes for passenger vehicles and five minutes for all other equipment per idling event in accordance with Title 13, California Code of Regulations, Section 2449(d)(2)(A).

AQ-3: Maintain Engines. During all construction and operation and maintenance activities, PAALP shall maintain equipment engines in good condition and ensure they are in maintained in accordance with recommendations.

AQ-4: Fugitive Dust Control Plan. PAALP will adhere to the Dust Control Plan included as Appendix D to this EA during all construction activities to reduce fugitive dust emissions and comply with SCAQMD Rule 403. No chemical soil binders would be used.

AQ-5: Water Unpaved Roads. PAALP will water unpaved roads used during Proposed Action implementation twice daily.

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AQ-6: Limit Vehicle Speeds on Unpaved Roads. PAALP will require that vehicle speeds on unpaved roads be limited to 15 mph or less.

AQ-7: Install Rumble Plates / Gravel Apron. PAALP will temporarily install rumble (steel) plates and or a 25 foot long gravel apron at the interface of utilized unpaved roads and paved roads to reduce mud/dirt trackout from unpaved vehicle exit routes. Gravel used for apron will be pre-approved by the ANF and installed over geo-fabric. All gravel used will be removed from the Forest upon completion of project.

BIO-1: Provide Restoration/Compensation for Impacts to Vegetation Communities. The intent of this mitigation measure is to require PAALP to restore temporarily disturbed sites to pre-construction conditions or the desired future conditions per the Angeles National Forest (ANF), Land Management Plan (LMP). For National Forest System (NFS) lands, the FS shall prepare a Habitat Restoration Plan in discussion with PAALP for the project, which shall include plans for restoration, enhancement/re-vegetation and/or mitigation banking. At a minimum the plan shall include: (a) the location of the mitigation site (off site mitigation may be required); (b) locations and details for top soil storage (c) the plant species to be used; (d) seed and cutting collecting guidelines; (e) time of year that the planting will occur and the methodology of the planting; (f) a description of the irrigation methodology for container, bareroot or other planting needing irrigation; (g) measures to control exotic vegetation on site in a weed control plan section; (h) success criteria; (i) a detailed monitoring program; j) locations and impacts to all oaks and native trees (over three inches DBH); k) locations of temporary or permanent gates, barricades, or other means to control unauthorized vehicle access on access and spur roads as deemed necessary by the FS, l) plan for restoring/compensating for FS Sensitive plant species that will be impacted by the project.

Permanent impacts on ANF lands shall be determined by the FS at the ratios stated in Table BIO-1 below. On the ANF impacts will be considered permanent if they are not likely to recover after ten years post-disturbance. Where on-site or off-site restoration is planned for mitigation of temporary or permanent impacts to vegetation communities PAALP shall implement one or several methods of restoration outlined by the FS in the Habitat Restoration Plan.

Table BIO-1: Mitigation Ratios for Impacts to Vegetation Communities

Vegetation Alliance	Mitigation Ratios –ANF Lands	
	Temporary Impacts	Permanent Impacts
Chamise shrubland	1:1	3:1
Chamise-black sage shrubland	1:1	3:1
California buckwheat shrubland	1:1	3:1
Fremont cottonwood forest	3:1	5:1
Basin wildrye grassland	1:1	3:1
Semi-natural hervaceous stand	1:1	3:1

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Project disturbance areas shall have the general restoration trend qualitatively monitored annually for years one to five and bi-annually for year's six to ten on FS lands, or until the success criteria are met, after mitigation site construction to assess progress and identify potential problems with the restoration site. Remediation activities (e.g. additional planting, removal of non-native invasive species, or erosion control) shall be taken during the ten-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the ten-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the ten-year period until the criteria are met. If a fire occurs in a restoration area before the site has reached 80 percent of the required success criteria stipulations, PAALP shall be responsible for continued restoration activities (most likely weed control) If a second fire occurs, no replanting is required, unless the fire is caused by PAALP activity. Off-site mitigation for NFS lands may be required if mitigation rates exceed what can be achieved on NFS land. This may be in the form of funding for land purchase for inclusion into the Angeles National Forest, mitigation banking, or comparable restoration efforts.

During and after construction, FS-identified entrances to access roads on NFS lands shall be gated or blockaded in some manner and maintained to prevent the unauthorized use of these roads by the general public. Signs prohibiting unauthorized use of the access roads shall be posted on these gates. The siting, design and installation of gates will be implemented in consultation with FS staff.

BIO-2: Compensation for Impacts to Waters/Wetlands. During pre-design, waterways and riparian habitats have been avoided to the maximum extent feasible. Where drainage impacts were unavoidable due to their orientation relative to the proposed alignment (ten features for the proposed Project) a USACE Section 404 Nationwide Permit and CDFW 1602 Streambed Alteration Agreement will be applied for and obtained. Work will not commence until the USACE permit and CDFW agreement are finalized. All proposed impacts are associated with subterranean pipe installation and thus will be temporary. PAALP would work with the USACE and CDFW to ensure that the local and federal "no net loss" of wetlands is properly upheld by restoring drainage and wetland crossings to pre-existing conditions on-site and adhering to all permit conditions of approval in this respect.

As part of permitting with CDFW Code Section 1600 a vegetation restoration and monitoring plan that addresses the direct effects to riparian vegetation would be developed and submitted to the USACE, CDFW, and the ANF prior to construction. It will follow the Corps Mitigation and Monitoring Proposal Guidelines (December 30, 2004) and be in accordance with the conditions of approval of the CDFW Streambed Alteration Agreement.

BIO-3: Sedimentation, Erosion Control, and Restoration Measures (also see Environmental Commitments GEO-1: Implement a SWPPP and Best Management Practices located in Section 3.5 and Section 3.7 of this EA). Rice Straw or WoodStraw bales, coir rolls, hydromulch and other BMPs will be used in areas of bare soil, and in drainages near all areas of disturbance to

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reduce surface runoff velocities and to prevent sediment from entering drainages. All BMP's shall be free of weed seed (if using straw only rice will be acceptable) and composed of fully biodegradable material (no "biodegradable" plastic is authorized). Maintenance of erosion and sediment control measures will be conducted on a weekly basis during construction. Upon completion of construction or when no longer needed and as approved by an ANF botanist, barrier and silt fencing shall be removed as will all other measures designed to be temporary in nature. Gravel bags exposed to sunlight will be replaced every two to three months, as necessary, due to bag degradation. Temporary installations of fiber rolls should be removed when up-gradient areas are stabilized, and before vegetation becomes too mature so that the removal process does not disturb more soil and vegetation than is necessary. BMPs determined to be a part of long term installation will remain onsite as appropriate.

Repairs will be performed to those areas within or affected by the proposed project footprint or activities that are experiencing erosion impacts (e.g. headcuts, gullies, rills). Repairs will include but are not limited to recontouring, utilization of BMP's and vegetation restoration as approved by the FS upon completion of project construction.

BIO-4: Avoid or minimize effects on special-status plant populations by modifying the proposed project, protecting special-status plant populations, and developing a translocation plan (if necessary). Surveys for special-status plant species in all areas subject to ground disturbance shall be conducted prior to project implementation. The botanical surveys will be conducted during the appropriate floristic periods following ANF/CNPS-protocol. If special-status plants are not detected during surveys, no mitigation would be required. If special-status plants are present in the study area, consultation with the appropriate agency (ANF, USFWS or CDFW) would be conducted prior to construction and the following actions would be taken:

- a) If individuals are detected during pre-construction surveys, avoidance of the special-status plants present would occur where feasible. Environmentally-sensitive fencing and appropriate signage will be installed at least 20 feet from the edge of special-status plant populations, and the Contractor will be prohibited from performing any construction-related activities within the fenced area.
- b) If individuals are detected during pre-construction surveys, and avoidance is not feasible, a qualified restoration specialist would, under the direction of the appropriate agency (ANF, USFWS or CDFW) conduct transplantation (if required), conserve top soil, restore impacted areas, and implement other measures required by the appropriate agency. Restoration will occur as stated in BIO-1 in accordance with the Habitat Restoration and Revegetation Plan, to be finalized by the Angeles National Forest.
- c) For FS lands if the ANF determines project activities will result in the loss of a notable portion of the known individuals of FS Sensitive plant species, and reseedling/transplanting are not feasible options, PAALP shall preserve existing off-site occupied habitat that is not already part of the public lands in perpetuity at a 2:1

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mitigation ratio (habitat preserved: habitat impacted). The determination of a notable rare plant population loss will be decided by the ANF botanist on a species and location basis, after available literature, research, and overall species distribution are reviewed. If avoidance, reseeding/transplanting, and, preservation of off-site habitat occupied by the impacted species are not found to be possible, the ANF will consider off-site restoration of degraded ANF lands and/or preservation of non-public lands with suitable habitat for the impacted species. The preserved habitat shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified plant ecologist.

- d) If individuals are observed during construction, work will cease in the area, a buffer area will be established and the appropriate agencies will be notified prior to further action. Further measures will be implemented in accordance with items a) and b) above, as applicable.

BIO-5: Reduce spread and introduction of invasive and noxious weeds. Invasive and noxious weeds have the potential to directly and indirectly affect plant and wildlife communities at or near the proposed study area. To stop further spread of noxious weeds into and out of the study area, Best Management Practices (BMPs) for noxious weed decontamination will be used in accordance with Forest Service Manual 2081.03. To reduce the spread and introduction of weeds, the following measures would be implemented:

- a) All heavy equipment (e.g., backhoes, dozers, excavators, water trucks) and vegetation maintenance tools (e.g., chain saws, hand clippers, pruners) shall be cleaned prior to entering ANF lands. Any transport vehicles (e.g., cars, pickups, vans) that have operated in an off-road area since that vehicle's last washing shall be cleaned prior to entering ANF lands. To prevent the spread of noxious weeds in the ANF, all equipment, tools and vehicles that have been staged, operated or created ground disturbance within areas infested by "high priority" weeds (for this project: yellow star thistle, tamarisk, Spanish broom Russian Knapweed and perennial pepperweed) shall be cleaned prior to leaving the infested area (applies when travel or use is required in areas not infested and typically requires the installation of an onsite washing station). Cleanings shall include: wheels, undercarriages, dozer belly pans, bumpers, and all parts of vehicles and heavy equipment. All washing done on ANF lands must take place where rinse water is appropriately filtered or otherwise collected and disposed of in either a sanitary sewer, landfill or other authorized facility outside the ANF. A wash station shall be placed at the West Templin Staging Area to accomplish the requirements set forth within this measure.
- b) A written daily log must be kept on the decontamination of all equipment and vehicles. The log must be submitted each week to the responsible party at the ANF (i.e., Forest Botanist and Permit Administrator).

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- c) PAALP shall implement a comprehensive, adaptive Weed Control Plan (as a part of the Habitat Restoration Plan) on NFS lands for pre-construction, construction and post-construction invasive weed abatement. The long term Weed Control Plan, including monitoring and eradication, will be defined as part of the 50 year Operations and Maintenance Permit. On the project Line 63 ROW, the Weed Control Plan shall incorporate all appropriate and legal agency-stipulated regulations. The Weed Control Plan shall be approved by the FS prior to construction, and shall include the following:
- A pre-construction non-native plant inventory shall be conducted by surveying all areas subject to ground-disturbing activity. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006); and (2) aid and promote the spread of wildfires (such as cheatgrass, shortpod mustard, and smilo grass); and (3) are considered by the FS as species of priority shall be mapped and described according to density and area covered. The Weed Control Plan shall be updated and utilized for eradication and monitoring post construction.
 - A listing of all weed control treatments, which shall include all legally permitted herbicide, manual, and mechanical methods applied with the authorization of the FS. The application of herbicides shall be in compliance with all state and federal laws and regulations. Herbicides shall not be applied during or within 24 hours of an anticipated rain event. Herbicides shall not be used within Riparian Conservation Areas (RCAs) on the ANF without approval of the FS. In riparian areas only water-safe herbicides shall be used. Herbicides shall not be applied when wind velocities exceed the mph or temperature described in the herbicide label. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the FS. The timing of the weed control treatment shall be determined for each plant species in consultation with the FS with the goal of controlling populations before they start producing flowers.
- d) In areas subject to ground disturbance and along roads utilized to access the project, ANF high and moderate priority weed infestations (for this project yellowstar thistle, tocalote, smilo grass, sweetclover, tamarisk, bur clover, rabbitfoot grass, perennial pepperweed, Russian knapweed and Spanish broom) shall be treated prior to construction according to control methods and practices for invasive weed populations designed in consultation with the FS and listed in the Weed Control Plan. For project access roads that are paved (or dirt roads that will only receive grading within the existing road prism) the preconstruction weed removal buffer shall be five feet on either side of the roadbed edge. For access roads that will be widened or created by the project the preconstruction weed removal buffer will be 15 feet on either side of the roadbed. Along the Line 63 ROW a preconstruction weed removal buffer of five feet on either side of the proposed project disturbance footprint will be treated to reduce the potential movement of weed seed into the study area.

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- e) On the ANF, from the time construction begins until restoration is deemed complete (typically ten years after restoration is installed), the spread of weed seed shall be mitigated in all areas of soil disturbance (e.g. estimated 18.50 acres of disturbance including the Proposed Re-Route Alignment, HDD Entry/Exit North, HDD Entry/Exit South, and HDD Laydown Area). This mitigation shall include surveying, treatment and monitoring for invasive weed species. Surveying, monitoring and treatment of these weed populations shall occur at a minimum of four times annually from years one to four post restoration implementation, three times annually from years five to seven and twice in years eight to ten and will cease when project restoration is deemed complete in accordance with the project HRRP.

Additionally, weed control shall occur to mitigate the spread of weed seed for three years post-construction along roads (i.e. the ORR and Fisher Springs Road), access roads/spurs, and ANF staging areas utilized during the project (if any of these areas are widened, they shall be subject to the weeding schedule and success listed above for other disturbance areas). This weed control shall occur for a maximum of three years, regardless of weeding success due to impacts from the routine use of such roads in support of other construction activity access, USFS use, the public, and other uses that are beyond the control of PAALP. The weed removal buffer shall be five feet on either side of the roadbed edge and shall focus on ANF high and moderate priority weed infestations (for this project yellowstar thistle, tocalote, smilo grass, sweetclover, tamarisk, bur clover, rabbitfoot grass, perennial pepperweed, Russian knapweed and Spanish broom). Weed control shall occur four times annually along these roads to prevent the spread of weed seed. The timing window for weed control treatments (typically February to May) shall be determined by the FS and complied with by PAALP, with the goal of controlling populations before they start producing flowers. PAALP will treat all 10 roadside invasives at the correct time of year (before flowering occurs) within the four scheduled weed control events. Should PAALP fail to cooperate, additional years of monitoring and treatment shall be required.”

- f) During project preconstruction and construction, all seeds and straw materials shall be weed-free rice straw, and all gravel, sand and fill material shall be certified weed free by the county Agriculture Commissioners’ Offices. Any deviation from this will be approved by a FS botanist. All plant materials used during restoration shall be native, certified weed-free, locally collected and approved by the FS.

BIO-6: Avoid disturbance of nesting special-status migratory birds and raptors. Prior to grading activities, the proposed project shall comply with the following nesting migratory birds’ mitigation:

- a) If on-site grading does not occur during the nesting/breeding season of migratory birds (February 1st-August 31st), no additional measures are required.

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- b) If on-site grading is planned to occur during the nesting/breeding season of migratory birds (February 1 - August 31), a focused survey for migratory bird nests within the project site shall be conducted by a qualified biologist prior to grading activities in order to identify active nests on the project site. The surveys would be conducted within one week before initiation of construction activities at any time between February 1 and September 1. If surveys indicate that migratory bird or raptor nests are located within 300 feet of construction activities, a no-disturbance buffer will be established in consultation with the USFWS and CDFW around the nest to avoid disturbance or destruction of the nest site until after the breeding season or after a qualified wildlife biologist determines that the young have fledged.

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BIO-7: Implement USFWS Conservation Guidelines for California condor.

- a) If California condor are found roosting within 0.5 miles of the construction area, no construction activity will occur between 1 hour before and 1 hour after sunset, or until the California condor leaves the area.
- b) If California condors are observed nesting within 1.5 miles of the construction area, no construction activity will occur until consultation with the USFWS has occurred.
- c) All trash, including "microtrash," will be removed from the construction area. Any road kill discovered, either as a result of the proposed Project or otherwise, within the proposed study area and adjacent areas will be safely disposed of.
- d) If condors are observed landing, feeding, or otherwise located within the area of affect, all work operations will cease within 0.5 miles and the USFWS will be contacted immediately. Workers will secure and leave the area so long as these actions do not jeopardize worker safety or result in take of the condor. If workers are unable to safely leave the area, they will remain in place and avoid direct contact with the condor. Workers may also sequester themselves in vehicles to avoid contact with the condor.
- e) Low altitude aircraft operations (i.e., below 700 feet above ground level) will not occur during sensitive periods for the California condor. Sensitive periods for California condor include the breeding periods. Condors typically select nest sites in December and the breeding period continues through May.
- f) If California condors are observed in the area, aircraft will be kept at least 1,300 feet (400) meters from the birds when in the air or on the ground unless safety concerns override this restriction. Aircraft will move away from airborne condors to the extent possible, as long as this action does not jeopardize safety.

BIO-8: Implement measures to protect ground-dwelling special status species.

- a) Environmental awareness training will be given to all construction personnel by an ANF-approved biologist to brief them on how to recognize special status species and to cease construction and notify the biological monitor if special status species are encountered in the work area. The biological monitor will take appropriate action.
- b) Construction activities will be limited between dawn and dusk. A project specific variance may be requested if operating hours will need to deviate based on unique construction requirements.
- c) Measures to protect biological resources will be implemented in accordance with the ANF Special Use Permit.

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- d) Staging areas, including fueling and maintenance areas, will be a minimum of 100 feet from riparian and aquatic habitats.
- e) PAALP will prepare a Spill Prevention and Clean-Up plan as prescribed in Environmental Commitment HYD-2: Spill Prevention and Contingency Plan located in Section 5.8 of this EA.
- f) The project will administer BMPs to protect water quality and control erosion as prescribed in Environmental Commitment GEO-1: Implement an Erosion Control Plan/SWPPP and Best Management Practices located in Section 5.6 of this EA.
- g) All trenches created for the installation of pipelines will be filled within the same day, or escape ramps will be constructed if trenches are to be left open overnight.
- h) If any ground dwelling special-status species are detected during construction, and until the species leaves the work area, workers will cease activity and secure the work site, and leave the immediate area, as long as these actions do not jeopardize worker safety. If workers are unable to safely leave the area, or if leaving the area would result in take of the species, workers will remain in place or sequester themselves in vehicles to avoid direct contact with the species. The biological monitor will contact the appropriate regulatory agency (USFWS or CDFW) immediately.

BIO-9: Avoid and minimize effects on roosting bats. Bats may use tree habitats in the proposed study area as roost sites. If suitable habitats are present within the study area, the following measures will be taken:

- a) Conduct roosting bat surveys in suitable habitats. Pre-construction roost surveys would be conducted within ten days of implementation, by an approved wildlife biologist for the presence of bats in suitable habitats (e.g., trees, man-made structures). Any roost sites will be avoided to the extent possible.
- b) Where possible, work is not to occur within 100 feet of an active roost. The area around the roost shall be designated as an exclusion area. Airspace access to and from the roost should remain approximately the same. No clearing or grubbing is to occur adjacent to the roost. Combustion equipment such as generators, pumps, and vehicles, are not to be started nor operated under or adjacent to the roost. Personnel are not to be present under the roost, especially during the evening exodus.
- c) Where total avoidance is not possible: work is not to occur directly under or adjacent to the roost. The area under the roost within visual sight of the bats is to be designated as an Environmental Exclusion Area. Airspace access to and from the bridge is not to be severely restricted. Clearing and grubbing is to be minimized wherever possible. Combustion equipment such, as generators, pumps, and vehicles, should not be parked

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nor operated under or adjacent to the structure. Personnel should not be present directly under the colony, especially during the evening exodus.

- d) Where work must occur in the area of a seasonal roost: bats are to be excluded from directly affected work areas prior to April 15 of the construction year. Exclusion is to be done selectively, and only to the extent necessary, to prevent morbidity or mortality to the colony. Expandable foam, steel wool, or other method is to be used. Exclusionary devices are to be removed between August 31 and April 15, once construction is complete. Airspace access to and from the roost is not to be eliminated. Colony ventilation and protection is to remain the same. Clearing and grubbing is to be minimal, whenever possible. Combustion equipment, such as generators, pumps, and vehicles, are not to be parked nor operated under or adjacent to the structure unless they are required to be in contact with the structure. The presence of personnel directly under the colony is to be minimized.

BIO-10: Avoid and minimize impacts to wildlife movement corridors. To avoid and minimize impacts to wildlife movement corridors the following measures will be implemented:

- a) Fencing that limits the movement of wildlife will not be used.
- b) Preserve and protect areas that may function as wildlife movement corridors, such as riparian habitats.
- c) Route pipeline along previously disturbed areas while preserving existing habitat continuity, whenever feasible. The final siting and routing of the pipeline within the ROW will be coordinated with the Forest Service, prior to implementation.
- d) Where preservation is not feasible such habitat will be restored as part of the project Habitat Restoration and Revegetation Plan.

BIO-11: Avoid and minimize effects to oaks and native trees. Impacts to all oaks and native trees will be recorded regardless of size. On non-Federal lands all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance.

PAALP will conduct a preconstruction evaluation of the probable impacts to all oaks and native trees in all construction-related disturbance areas. This evaluation shall be incorporated into the Habitat Restoration Plan and shall include the species and number of individuals, their DBH, location and potential impact type. Construction within the driplines of all native trees and oak trees/shrubs, and incidental trimming or damage to trees along the proposed access/spur routes shall not occur until the trees are evaluated by a qualified arborist. This person shall identify appropriate measures to minimize tree loss, such as the placement of fence around the dripline, padding vehicles, minimizing soil removal or addition around driplines, and the placement of matting under the existing dripline during construction activities. On the ANF, if a tree/oak must

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have any construction-related activities such as equipment or soil staging within the drip zone, root pruning, or excessive branch pruning (greater than 25 percent in one year), then the tree/oak shall be mitigated for.

The replacement ratios (using container plants) for native trees or any oaks which are to have more than 25 percent of the canopy cover removed shall be as follows: DBH's less than three inches will be replaced at 2:1; three to five inch DBH shall be replaced at 3:1; 5 to 12 inches shall be replaced at 5:1; 12 to 24 inches shall be replaced at 10:1; 24 to 36 inches shall be replaced at 15:1; and greater than 36 inches shall be replanted at a ratio of 20:1. The DBHs for scrub oaks will be measured following DFG guidelines. Trees shall be planted at locations acceptable to the ANF.

CULT-1: Transportation Plan for Construction. Prior to the start of construction, PAALP shall prepare and submit a Transportation Plan for Construction to the Forest Service, for all construction traffic to occur on Forest Service lands. The Plan shall define the type, quantity, number of axles, and weight of equipment and vehicles proposed for use. The Transportation Plan shall also include proposed access routes and number of trips for each piece of equipment and vehicle used. Provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage.

CULT-2: Protection of Portions of the Old Ridge Route. PAALP will implement an ORR Protection Plan approved by the ANF to protect portions of the ORR (CA-LAN-990H) and to minimize any adverse effects resulting to the ORR during implementation of the Proposed Action.

CULT-3: Archaeological Monitoring. Archaeological monitoring shall be conducted along CA-LAN-990H (Old Ridge Route), during disturbances to previously undisturbed areas, and during disturbances within 30 feet of known cultural resources (including, but not limited to the National Forest Inn). If archaeological resources are discovered, all work in the immediate vicinity of the find shall be halted until an archaeologist can examine the find and develop a treatment plan in consultation with the ANF.

CULT-4: Reestablish Flagging Around National Forest Inn. The existing T-bar and rope delineating the boundary of the National Forest Inn shall be inspected and repaired, if necessary, prior to construction to provide a visual reference of non-permitted entry areas to protect the resource. Workers will be instructed not to enter roped off areas surrounding the National Forest Inn or pick up potentially historic refuse or debris.

CULT-5: Relocate Historic Artifacts near the National Forest Inn. Prior to construction and vegetation clearing, an archaeologist shall photograph in place, collect, and place outside the ROW and identifiable pieces of historic refuse or debris so they will not be impacted by construction.

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CULT-6: Establish Fencing Around the View Service Station Site. This site is located along the shoulder of the ORR. Although there will be no excavation in this area, the site should be protected from vehicles driving on or parking in the boundaries of the site along ORR. As such, the boundaries of the site should be delineated with T-bar and rope to keep vehicles out of the area. The delineation should be completed under the direction of the archaeological consultant and in coordination with the Forest Service.

CULT-7: Paleontological Monitoring. Paleontological monitoring during ground disturbing activities to previously undisturbed areas shall be conducted.

GEO-1: Implement a Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs). PAALP shall develop and submit, at least 30-days prior to construction, a SWPPP that covers the entire project. According to Section 402 of the CWA, construction activities disturbing more than one acre shall apply for coverage under California's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit), SWRCB Order No. 2009-0009-DWQ. The SWPPP shall include erosion and sedimentation control devices to contain non-point source runoff from adversely affecting the water quality. The SWWP shall include, but will not be limited to, the following BMPs:

- a) Identify all locations of soil-disturbing activities;
- b) Provide measures to trap sediment and stabilize excavated soil;
- c) Identify the location and types of BMPs to be implemented, including but not limited to:
 - Regularly watering newly graded areas and exposed dirt stockpiles (does not include topsoil);
 - Covering stockpiled dirt with plastic sheeting, sandbags, and/or wattles prior to a storm event;
 - Properly containing and disposing of construction waste, including food waste;
 - Inspecting and maintaining construction equipment and vehicles without fluid leaks;
 - Specifying appropriate areas for storage and equipment maintenance (i.e., away from streams or exposed soils)
- d) Stabilize and revegetate disturbed areas, impacted during Project construction;
- e) Provide a proposed schedule for implementation and removal of BMPs;
- f) Protective measures, such as WoodStraw, rice straw, certified weed free rice strawbales, coir rolls, hydromulch, jute, burlap, and other BMP's, shall be made entirely of biodegradable natural fibers and shall be used in areas of bare soil, and in drainages near all areas of disturbance, to reduce runoff velocities and to prevent sediment from

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entering drainages. Hydromulching shall not be utilized in areas that are scheduled to be hydroseeded for revegetation purposes;

- g) Maintenance or erosion and sediment control measures will be conducted on a weekly basis during active construction as necessary and appropriate or until temporary erosion control measures have been removed. Ineffective BMPs shall be replaced per the provisions within this Environmental Commitment and as contained in the SWPPP. Any material from pre-existing BMPs (i.e. bailing string, straw wattle netting) that is damaged and exposed as a result of the Proposed Action shall be considered work-related trash and shall be removed off-forest.
- h) Inspection and maintenance of sediment control measures shall occur, and fixes of failed or ineffective BMPs shall be initiated, within 72-hours post storm event.
- i) Post-construction, the pre-existing contours shall be restored, decompaction to less than 85 percent shall be completed and the revegetation of all graded and disturbed areas of bare soil with native vegetation shall be completed within six months, or prior to the fall rainy season.
- j) Maintain a record of all precipitation events, including date of event and approximate duration (measured as the largest amount recorded by a rain gauge or weather station within one mile of the construction area) within the construction area that produce more than 0.5-inches of precipitation within a 24-hour period;
- k) Include a narrative evaluation of the erosion prevention effectiveness of the implemented BMPs, as well as a description of any post-storm modifications to those BMPs.

All records shall be maintained at the Project site and submitted to the Forest Service within 30 days of any and all recorded precipitation event.

HAZ-1: Existing Hazardous Substances Encountered. If any stained or soils with hydrocarbon odors are encountered during trenching operations, those soils shall be containerized and/or segregated from clean soils. Analytical samples shall be collected and analyzed as appropriate. The analyzed soils shall be disposed of in a licensed, approved disposal facility or replaced in the location it was removed should concentrations of hazardous materials be determined to be below threshold levels.

HYD-1: Target Dry Season Construction. Construction shall target the dry season (typically April–October). In addition, construction will be scheduled to avoid ground disturbance within 100 feet of drainages during anticipated rain events that are predicted to produce more than 0.5-inch of precipitation over a 24-hour period. If over 0.5 inches of precipitation over 24 hours occurs while construction is underway, cessation of construction activities and access road usage in non-drainage areas may also be required by the ANF. In addition, the Project will

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comply with the provisions of the SWPPP, the Fire Plan, and daily Project Activity Levels (PALS) in order to avoid construction during periods of high fire danger.

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HYD-2: Spill Prevention and Contingency Plan. In order to reduce the potential for materials and pollutants associated with construction to be discharged to the environment, PAALP will implement the following:

- a) Containment and cleanup equipment (e.g., absorbent pads, mats, socks, granules, drip pans, shovels, and lined clean drums) will be at the staging areas and construction site for use, as needed.
- b) Staging areas where refueling, storage, and maintenance of equipment occur will not be located within 100 feet of drainages to reduce the potential for contamination by spills. Where a 100 foot setback is infeasible, containment and cleanup equipment will be placed between the staging area and drainage.
- c) Construction equipment will be maintained and kept in good operating condition to reduce the likelihood of line breaks or leakage.
- d) No refueling or servicing will be done without absorbent material (e.g. absorbent pads, mats, socks, pillows, and granules) or drip pans underneath to contain spilled material. If these activities result in an accumulation of materials on the soil, the soil will be removed and disposed of properly.
- e) If a spill is detected, construction activity will cease immediately and PAALP will immediately react to safely contain and remove spilled materials.
- f) Spill areas will be restored to pre-spill conditions, as practicable.
- g) Spills will be documented and reported to the Lead Agency and appropriate resource agency personnel.

HYD-3: Prepare and Implement a Dewatering Plan. If water is present within the stream channel during construction activities (i.e. Gun Club Creek or the seep wetland), a Construction Dewatering Management Plan will be implemented. Water generated by dewatering activities will be pumped around construction activities and released back into the channel downstream. This will ensure that the water infiltrates rather than running offsite to storm drain systems or receiving waters. In order to reduce the potential for water from dewatering activities impacting the water quality of nearby waterways, the project proponent will require that the selected contractor develop a dewatering management plan prior to construction to include the following measures:

- a) Non-contaminated water shall be discharged downstream, when 1) the water contains sediment, but is not contaminated with other pollutants, 2) the water does not runoff from the land to storm drain systems, to creek beds (even if dry), or other surface waters, 3) the LA RWQCB has been contacted and discharge is authorized or permitted, if applicable.

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- b) The dewatering management plan shall outline a dewatering schedule and water quality monitoring procedures. The plan shall include emergency contingency plans if unanticipated contaminants are observed in the discharge or flooding occurs resulting in cessation of water pumping.

LU-1: Advance Notification of Construction. PAALP shall post notice of construction in the Proposed Action work area at least 14 days prior to the start of any construction-related activities. The notice shall include the dates and location of construction activities, including access roads.

N-1: Implement Best Management Practices for Construction Noise. PAALP shall implement the following noise-suppression techniques during pipeline replacement and re-route activities of the Proposed Action:

- a) On construction equipment, use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- b) Install temporary sound walls or acoustic blankets around stationary noise sources (e.g., generators, pumps) to shield sensitive receptors.
- c) Minimize unnecessary construction vehicle idling time by shutting off the engine if it is not required for immediate or continuous use. (Note: Certain equipment, such as large diesel powered vehicles, require extended idling for warm-up and repetitive construction tasks and would therefore not be subject to being shut off when not in use).

T-1: Transportation Plan for Construction. Prior to the start of construction, PAALP shall prepare and submit a Transportation Plan for Construction to the Forest Service, for all construction traffic to occur on Forest Service lands. The Plan shall define the type, quantity, number of axles, and weight of equipment and vehicles proposed for use. The Transportation Plan shall also include proposed access routes and number of trips for each piece of equipment and vehicle used. Provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage.

UNV-1: Regulatory Compliance. PAALP shall coordinate with USFS to ensure the Proposed Action is consistent with the LMP, and that PAALP shall submit proof to the USFS that all required permits have been issued by applicable jurisdictional agencies prior to the start of construction.

UNV-2: Limit Work Areas. PAALP contractors and personnel shall limit access to and from work sites to existing access roads, trails and the pipeline alignment at all times. All vehicles shall be parked in areas that do not impede access for emergency vehicles. All work areas including staging, vehicle/equipment turnout areas and the established pipeline ROW will be approved by the ANF and flagged prior to project use.

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UNV-3: Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist and an archaeologist prior to the commencement of any construction activities. Training materials and briefings shall include, but not be limited to: discussion of the applicable State and federal laws and regulations; consequences of non-compliance with applicable State and federal laws and regulations; identification and values of plant and wildlife species; cultural resources (including unanticipated discoveries); fire protection measures; sensitivities of working on Forest Service lands and identification of Forest Service sensitive species; hazardous substance spill prevention and containment measures; appropriate contacts in the event of the discovery of injured or dead wildlife; and, review of all Environmental Commitments. Training materials and a course outline shall be provided to the Forest Service at least 14 days prior to the start of construction. PAALP shall provide the Forest Service with a list of all construction personnel who have completed the WEAP prior to the start of construction. This list shall be updated by PAALP as required if and when new construction personnel begin work. WEAP-trained personnel will be identified by hard hat stickers.

UNV-4: Equipment Fueling. Equipment re-fueling would be conducted from portable storage tanks with secondary containment or crew trucks with auxiliary off-road diesel tanks and would not occur within 100 feet of drainages or riparian areas.

UNV-5: Trash Disposal. Project generated trash, including existing material and or debris that has been disturbed and exposed during project activities, would be properly stored and/or disposed of on a daily basis. When project-related activities are completed, any excess materials and/or debris would be removed from work areas within seven days.

UNV-6: Backfill/Borrow Limitations. During pipeline replacement and re-route activities, borrowed soils would only be used if necessary and would be obtained from a local, certified weed free source subjected to approval by the Forest Service. PAALP would consult with the Forest Service prior to importing any borrow materials.

UNV-7: Project Site Surveys, Mapping, Spatial Data Collection and As-Built Plans. All post construction disturbance areas shall be accurately surveyed and mapped. Copies of all project related site surveys, design plans, maps, spatial data and final as-built plans shall be provided to the FS. GIS data shall be collected with the projection NAD 83 Zone 11N. All data shall be collected with survey grade geographic positioning systems. A complete copy of the geodatabase (ArcGIS v 10.1 or earlier) containing all electronic GIS and AutoCAD data shall be provided to the FS. All legal surveys shall be conducted by a California State Licensed surveyor.

VR-1: Tree Preservation at I-5 (Non-ANF Lands) Construction staging activities at the West Templin Staging Area (Figure 2.1-2) location shall not be allowed to remove any trees nor encroach upon their dripline during any portion of project execution. Temporary construction fencing at the dripline of these trees shall be shown on project design plans and field verified.

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VR-2: Treat Surfaces with Appropriate Colors, Textures, and Finishes. To the extent practical, all new permanent construction structures/components/features/materials, etc., shall be specified with FS approved appropriate colors and/or color treatments that most effectively blend the component with the existing native vegetation, native topsoil, or dominant natural feature(s). Metal or typically glossy/shiny materials shall be non-specular and non-reflective unless that is a product requirement.

VR-3: Prevent Illegal OHV use throughout Project Area. Use Existing Natural Landscape Features/Screening to Minimize Views of Construction and Restoration Areas. To the extent practical, design and preserve vegetative rows (eyebrows) or landforms/natural landscape features that screen construction and restoration areas from roads, trails and other potential public views. Where natural screening/barriers are not available, create natural barriers or implement illegal OHV preventive measures that use materials and implementation measures that have the least impact on the resources.

VR-4: Clean Up/Restore Staging Areas, Storage Areas, and Construction Areas. Keep construction-related operations areas clean and tidy by storing building materials and equipment within the proposed construction staging areas and/or generally away from public view when feasible. Remove construction debris, including temporary features, when no longer needed. When the construction period is over the sites shall be cleaned up, and their areas will be restored in accordance with the Habitat Restoration Plan.

VR-5: Non-native Vegetation Clearance. Where non-native plant communities are partially cleared of non-natives, restore these areas with native vegetation, in accordance with the Revegetation Plan.

VR-6: Blend Edges of Native Plant Community. Shape and blend cleared edges of vegetation to conform with the natural terrain and have a non-uniform, non-geometric, non-linear form.

VR-7: Cut/fill Contouring. Reestablish contours to match appearance/form pre-disturbance; special emphasis is to be placed on eliminating appearance of cut/fill slopes and/or alterations in silhouette of ridgelines to the extent feasible. This does not apply to existing landform alterations.

VR-8: Revegetation of Disturbed Areas. All areas disturbed during construction shall be restored and revegetated in accordance with the ANF Habitat Restoration Plan.

VR-9: Increase Restoration Levels within Immediate Foreground and Foreground Views of the ORR. To the extent practical, restoration levels shall be increased in areas in the immediate foreground viewshed of the ORR; priority shall be given to areas within the immediate foreground, secondary level of emphasis on foreground areas; tertiary level of emphasis on middle-ground areas.

VR-10: Distribute Rocky Fill Consistent with Habitat Restoration Plan (HRP). Trenching spoils not suitable for backfill shall be spread evenly within the ROW. All material shall be free of trash and contain no rock material greater than six-inches in diameter or length. Any nonnative material found in the fill shall be disposed of off-forest. Rocks greater than six -inches shall be removed from the site by an approved transportation and disposal contractor and properly disposed of off-forest or at an on-forest location acceptable to the ANF. When spread, rocky-fill material depth shall not exceed layers of greater than two- to three-inches

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(uncompacted and dry), and where appropriate should then be covered to the extent possible with the re-applied topsoil, which has a more weathered and less contrasting color than the freshly exposed fill. The proposal of spreading rocky fill within the ROW shall be reviewed for consistency with the goals and objectives of the HRP. This practice shall not be allowed if deemed counterproductive to restoration efforts in the Plan.

VR-11: Document Sensitive Features. Existing edges of native plant communities and rock outcrops shall be clearly shown and clearly labeled on the detailed site survey.

VR-12: Minimize Disturbance to Sensitive Features. Minimize disturbance of native plant communities and rock outcrops to the extent feasible.

VR-13: Provide for Ease of Review for Impacts to Sensitive Features. Display and clearly label the current extents and proposed extents of existing native plant communities and rock outcrops on design and engineering drawings used for construction. Clearly indicate and label the location and extents of all cut and fill slopes on project design and engineering plans.

VR-14: Collaborate to Reduce Impacts to Sensitive Features. Design engineers shall work with pipeline contractors to identify minor adjustments to the route alignment and/or reductions to the required ROW clearing where such actions would result in the reduction of cut/fill slopes and disturbance of native plant communities. Any adjustments seeking approval for compliance with this environmental commitment shall demonstrate superiority in achieving the intent of the measure.

VR-15: Conduct Design Study of HDD Drilling Location. A preliminary design/engineering study of the HDD drilling location shall be done to reduce the footprint and limit clearing and grading to the extent feasible; Rock outcrops and large exposed boulders at this location shall be protected in place to the extent feasible.

VR-16: Operate and Maintain with Visual Impacts Considered. Future pipeline maintenance activities of the pipeline segment addressed in this analysis shall give priority consideration to techniques and methods which limit vegetation disturbance and exposure of contrasting soils. Habitat restoration and monitoring shall be conducted in these areas in accordance with practices outlined in the HRRP.

VR-17: Preserve Natural Character of Proposed New ROW. To the extent feasible, minimize the corridor width for construction activity in the new ROW area, to limit the amount of vegetative clearing and ground disturbance needed for this area. Prior to ground disturbance photographs will be taken to capture the undisturbed new ROW and will be used as a reference when restoration for the area takes place. Existing above ground boulders or prominent above ground rock formations, within the new ROW construction area, larger than 4' in diameter, will be removed and stored or marked for avoidance prior to construction, and put back in place (using photographs as reference) prior to the restoration process.

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VR-18: On NFS Lands Provide Compensation for Permanent Visual Impacts to Project Area. Three years after completion of the proposed project, PAALP in conjunction with the FS will review the Project area to determine the resulting Scenic Integrity (Moderate Scenic Integrity minimum) within the Project area. If it is determined by the FS that despite Environmental Commitment efforts, the project area(s) does not meet the minimum allowed Project Scenic Integrity level, then compensation for the Project's long-term visual impacts to the landscape character and visual quality would be required. PAALP and the Forest Supervisor shall reach a consensus on what is a commensurate amount of compensation. Adequate compensation, could include, but would not be limited to additional restoration efforts, aesthetic treatment of exposed pipe (including removal), monetary compensation, and/or ORR improvements.

WF-1: Comply with Applicable Laws and Fire Prevention Plan. Comply with all applicable laws of the State of California and Fire Prevention Plan. Ensure that a copy of this Fire Prevention Plan and any special permits are to be known and in possession of project foreman/supervisor on work site daily.

WF-2: Confine Welding Activity. Confine welding activity to areas having a minimum radius of ten feet cleared to mineral soil, wet down an area within 25 feet in all directions from welding operations with water, utilize a welding tent or metal shield where possible to deflect sparks, and obtain a welding permit from the ANF. Only use enough water to mitigate potential fire starts. Avoid creating mud by overwatering.

WF-3: Prevent and Extinguish Fires. Take all steps necessary to prevent project personnel from setting fires not required in completion of the project. Be responsible for preventing the escape of fires set directly or indirectly as a result of project operations, and extinguish all such fires which may escape.

WF-4: Comply with Fire Prevention Plan. Take all steps necessary to ensure that personnel are knowledgeable and comply with the requirements of the Fire Prevention Plan and the Fire Prevention Safety Measures adopted by the project, including required awareness training and certification, as appropriate.

WF-5: Test Fire Equipment. Periodically test and inspect required fire equipment.

WF-6: Designate Fire Supervisor. Designate a qualified on-site fire supervisor during project construction authorized to act on behalf of PAALP in fire prevention and suppression matters.

WF-7: Prohibit Campfires and Barbecues. Prohibit burning, campfires, and barbecues in the ANF during project implementation.

WF-8: Post No Smoking Signs. Smoking shall not be permitted except in a barren area or in an area cleared to mineral soil at least three feet in diameter. PAALP shall post signs regarding smoking and fire rules in conspicuous places for all personnel to see. Under no circumstances shall smoking be permitted while employees are operating light or heavy equipment, or walking

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or working in grass and woodlands. If the ANF goes into Emergency Fire Conditions, smoking is allowed in enclosed vehicles and buildings only.

WF-9: Clear Key Areas of Flammable Material. Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least ten feet. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least ten feet from such engine.

WF-10: Limit Glass Bottle Use. PAALP shall prohibit use of glass bottles and jugs on project operations.

WF-11: Remove Waste. PAALP shall remove all waste materials from the National Forest.

WF-12: Notify Forest Service of Any Fires. PAALP shall notify the Forest Service of any fires along roads or study area as soon as feasible, within designated contract.

WF-13: Connect Project Operations to Forest Service Dispatch Center. PAALP shall furnish an agreed upon communication system connecting each operation with the designated Forest Service Dispatch Center. The communications system shall be capable of contacting the designated Forest Service Dispatch Center within five minutes of discovery of a fire in PAALP's operating area.

WF-14: Designate a Fire Patrol Monitor. PAALP would furnish a Fire Patrol Monitor during project construction. The sole responsibility of the patrol person shall be to patrol the operation for prevention and detection of fires, and to make sure all State, County and Federal Fire regulations and Fire Prevention Plan conditions are met, and to take/direct suppression action where necessary. The Fire Patrol Monitor would not be permitted to perform other non-fire-related duties. The Fire Patrol shall remain on duty at least one hour after the close of work or sunset (whichever comes first) at Activity Level B; a Fire Patrol person is required until sunset local time at Activity Level C and above.

WF-15: Comply with Red Flag Warning. If a Red Flag Warning is issued (despite the PAL), ALL work would cease until the Red Flag warning is canceled, and the Forest Service approves a resumption of the project. An exception for construction during Red Flag Warning events shall only be made by the Forest Service, Los Angeles District Ranger for the ANF, via a temporary permit issued to PAALP. The permit shall specify date(s) of the exception for construction activities to continue, the location of such activities, and the types of activities allowed. Conditions of the temporary permit may also require an on-site monitor while construction activities continue under the permit.

WF-16: Maintain Fire Prevention Service Access. Forest Service roads shall remain open and passable within five minutes for emergency vehicles.

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WF-17: Use Spark Arrestors. Equip all diesel and/or gasoline-operated engines with spark arresters that meet Forest Service standards set forth in the National Wildfire Coordinating Group publication for Multi-position Small Engines, #430-1, or General Purpose and Locomotive, #430-2. Spark arrestors are not required on equipment powered by exhaust-driven turbo charged engines or motor vehicles equipped with a maintained muffler.

WF-18: Fire Prevention Construction Equipment Requirements. Furnish and have available the following for emergency use on each vehicle or piece of equipment used in conjunction with performance or the work:

- a) One shovel, one axe (or Pulaski), and a fully charged fire extinguisher (U.L. rated at 2-A: 10-B: C, or larger) on each truck, personnel vehicle, tractor, grader and other heavy equipment.
- b) One shovel and one backpack five-gallon water-filled tank with pump with each welder.
- c) One shovel and one pressurized chemical fire extinguisher for each gasoline-powered tool, including but not restricted to chain saws, chippers, soil auger, rock drills, etc. Fire extinguishers shall be of the type and size set forth in the California Public Resources Code Section 4431 and must be with equipment at all times. Shovel must be kept within 25 feet from each chain saw when in use.
- d) PAALP would furnish sealed boxes of fire-fighting tools at multiple locations within the operating area, at points accessible in the event of fire. The boxes shall remain unlocked, but be sealed with a Forest Service seal to be broken for emergency use only. Each box shall contain:
 - Two, five-gallon, backpack pump-type fire extinguisher filled with water;
 - Two axes;
 - Three McCleod fire tools;
 - One serviceable chain saw of three and one-half or more horsepower with a cutting bar 20 inches in length or longer; and
 - Five shovels.
- e) All tools and equipment required above shall be in good workable conditions and shall meet the following Forest Service requirements for the fire tools:
 - Shovels shall be "O" or larger and be not less than 46 inches in overall length.
 - Axes (or Pulaskis) shall have 2-1/2 pound or larger heads and not be less than 28 inches in overall length.

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WF-19: Use Water Tank. Unless directed otherwise by the ANF, PAALP would furnish a water tank truck or trailer on or immediately adjacent to the study area during construction and meet the following minimum specifications:

- a) Water tank truck and operator must be ready to put out fires at all times.
- b) Water truck or trailer shall contain or meet the following specifications:
 - At least 300 gallons of water
 - A combination straight stream and fog nozzle with 300 feet of one-inch fire hose, with no segment longer than 50 feet
 - Fire hose with nozzle closed shall be capable of withstanding 200 psi pump pressure without leaking, slipping or couplings, distortions, or other failures
 - Nozzle discharge rating of six to 20 gallons per minute
 - A pump capable of delivering 23 gallons per minute at 175 pounds psi at sea level
 - Power unit for pump shall have fuel for at least two hours of operation, be in good working order, with ample transport available for immediate and safe movement of tank over roads serving the study area; pump outlet shall be equipped with 1-½ inch National Standard Fire Hose thread.
 - The Water Truck or Trailer MAY NOT be used for other work on the contract.
 - When Water Truck or Trailer is used for other operations, water level must always have 300 gallons minimum at all times.
 - If study area is beyond 200' of Water Truck or Trailer accessibility, a charged hose capable of reaching 100' beyond the study area is required.

WF-20: Use Backpack Pump. PAALP would furnish an additional filled five-gallon backpack pump at each work site at Activity Level C or above.

2.3.2 Best Management Practices (BMP)

According to the USDA National Best Management Practices for Water Quality Management on National Forest System Lands (USDA, 2012), measures should be taken to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources. Measures should be incorporated into the project design as appropriate.

The following BMPs for water quality management have been identified in Forest Service Manual (FSM) 2726 and Forest Service Handbook (FSH) 2709.11, Chapter 50, as those pertinent to Pipelines, Transmission Facilities, and Rights-of-Way on National Forest System Lands.

- Consider soil and water impacts from factors such as stream head cutting and channel expansion, stream crossings, slope stability and steepness, and amount of riparian area, floodplain, and wetland acreage to be disturbed when determining corridor location.

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- Co-locate pipelines and transmission lines with roads or their rights-of-way where practicable.
- Limit corridor disturbance, particularly in or near surface waters, shallow groundwater, unstable areas, hydric soils, or wetlands.
- Consider service road location and standards, type of construction equipment (wheeled, tracked, and helicopter), size and location of footings and guy anchors, and revegetation requirements during project design.
- Use applicable BMPs for Mechanical Vegetation Management Activities when using mechanical treatments to remove vegetation from the project corridor.
- Use applicable practices of BMP Fac-2 (Facility Construction and Stormwater Control), BMP Road-3 (Road Construction and Reconstruction), and BMP Road-7 (Stream Crossings) when constructing pipelines, power lines, and transmission facilities and associated roads.
- Use design and construction measures that sustain long-term wetland or stream function when a buried transmission line, pipeline, or tower support must be placed in a wetland or cross a stream (see BMP AqEco-2 [Operations in Aquatic Ecosystems]).
- Use suitable measures for pipeline thickness, corrosion prevention, pipeline casing, cathodic protection and pipeline valves, and shut-off systems to prevent or minimize spills or leaks where pipelines cross water bodies.
- Require suitable and regular inspections, testing, and leak detection systems to identify and mitigate pipeline deformities and leaks.
- Use applicable practices of BMP WatUses-3 (Administrative Water Developments) and BMP Min-7 (Produced Water) when obtaining or disposing of water used for hydraulic testing of pipelines on NFS lands.
- Ensure that pipeline corridors, transmission lines, facilities, and other rights-of-ways are properly maintained to minimize damage to NFS resources in the event of an accident or natural disturbance.
- Use applicable practices of BMP Fac-6 (Hazardous Materials), including preparation of an adequate Spill and Emergency Response Plan for pipelines carrying toxic or hazardous materials.
- Use applicable BMPs for Mechanical Vegetation Management Activities when using mechanical treatments to manage vegetation within the corridor.

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- Use applicable practices of BMP Road-4 (Road Maintenance and Operations) for maintenance of access roads.
- Aggressively address unauthorized uses of the corridor, such as motorized vehicle use, that are exposing soils, increasing erosion, or damaging the facilities.

2.3.3 Forest Service Construction Requirements

In addition to implementing the above Environmental Commitments, PAALP would comply with construction requirements set forth by the Forest Service. FSM 2081.03 directs that all equipment be cleaned when working in a site contaminated with noxious weeds. Pursuant to FSM 2081.03, the following components will be required at all Proposed Action work sites during construction.

- 1) **WASH ALL EQUIPMENT AND VEHICLES:** All **heavy equipment** (e.g., backhoes, dozers, water trucks) and **vegetation maintenance tools** (e.g., chain saws, hand clippers, pruners) shall be cleaned prior to entering ANF lands. Any **transport vehicles** (e.g., cars, pickups, vans) that have operated in an off-road area since that vehicle's last washing shall be cleaned prior to entering ANF lands. To prevent the spread of noxious weeds in the ANF, all equipment, tools and vehicles that have been **staged, operated or created ground disturbance within areas infested by "high priority" weeds** (for this project: yellow star thistle, tocalote, tamarisk, smilo grass, sweetclover, Russian Knapweed Spanish broom and perennial pepperweed) shall be cleaned prior to leaving the infested area (applies when travel or use is required in areas not infested and typically requires the installation of an onsite washing station). Cleanings shall include: wheels, undercarriages, bumpers, and all parts of vehicles and heavy equipment. All washing done on ANF lands must take place where rinse water is appropriately filtered or otherwise collected and disposed of in either a sanitary sewer, landfill or other authorized facility.
- 2) **KEEP WRITTEN LOGS:** When vehicles and equipment are washed, a daily log must be kept stating:
 - Location
 - Date
 - Time
 - Staff Present
 - Equipment Washed
 - Signature of Responsible Crew
- 3) **TURN IN WRITTEN LOGS:** These written logs will be turned in to the Forest Service Botanist every week.

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3.0 DIRECT AND INDIRECT EFFECTS ANALYSIS

This section analyzes the direct and indirect environmental effects of implementing the Proposed Action and No Action Alternative. Direct effects are considered those directly associated with the Proposed Action. Indirect effects would occur, for example, if a particular vegetation habitat was removed or disturbed by Project actions, which resulted in mortality to an animal species dependent on that particular habitat.

Cumulative effects of implementing the Proposed Action and No Action Alternative with respect to other nearby projects that have a spatial (location) and temporal (time) relationship to the Proposed Action are addressed as well. Pursuant with the US Forest Service's NEPA Handbook (Forest Service Handbook 1909.15) and 40 CFR 1508.7 (definition of a cumulative impact), individual actions when considered alone may not have a significant impact on the quality of the human environment. Groups of actions may have collective or cumulative impacts that are significant. Cumulative effects must be considered and analyzed without regard to land ownership boundaries or who proposes the actions. Consideration must be given to the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources. Cumulative effects are addressed in Section 4.0.

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3.1 AIR QUALITY

3.1.1 Environmental Setting

The study area is located in a portion of the ANF in the Santa Clarita Valley Corridor, which is part of the Los Angeles County region of the South Coast Air Basin (SCAB). Regulatory oversight authority regarding air quality rests at the local, state, and federal levels with the South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), and U.S. Environmental Protection Agency (USEPA), respectively.

3.1.2 Regulatory Framework

Ambient air quality is determined by comparing pollutant levels in ambient air samples to national and state standards. These standards are established by the USEPA and CARB at levels determined to be protective of public health and welfare, with an adequate margin of safety. California Ambient Air Quality Standards (CAAQS) were established in 1967, whereas National Ambient Air Quality Standards (NAAQS) were first established by the federal Clean Air Act of 1970. California standards are generally more stringent than national standards.

Air quality standards specify the upper limits of pollutant concentrations, over defined durations, in ambient air, consistent with the management goal of preventing specific harmful effects. There are national and state standards for the “criteria pollutants” ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), fine particulate matter with an aerodynamic diameter of less than 2.5 microns (PM_{2.5}), airborne respirable particulate matter with an aerodynamic diameter of less than 10 microns (PM₁₀), sulfur dioxide (SO₂), and lead (Pb). Federal/National and State Ambient Air Quality Standards are presented in Table 3.1-1.

Table 3.1-1: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards*	National Standards*
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	--
	8 Hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³
	Annual Mean	20 µg/m ³	--
Fine Particulate Matter (PM _{2.5})	24 Hour	--	35 µg/m ³
	Annual Mean	12 µg/m ³	15 µg/m ³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 µg/m ³)	35 ppm (40 mg/m ³)
	8 Hour	9.0 ppm (10 mg/m ³)	9.0 ppm (10 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)
	Annual Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)
	3 Hour	--	--
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm
	Annual Mean	--	0.030 ppm
Lead (Pb)	30 Day Average	1.5 µg/m ³	--
	Calendar Quarter	--	1.5 µg/m ³

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Pollutant	Averaging Time	California Standards*	National Standards*
	Rolling 3-Month Average	--	0.15 µg/m ³
Notes: * ppm = parts per million; µg/m ³ = micrograms per cubic meter; "--" = no standard. CARB Ambient Air Quality Standards Chart, CARB 2012a.			

The USEPA and CARB determine the air quality attainment status of designated areas by comparing local ambient air quality measurements from state or local ambient air monitoring stations with the CAAQS and NAAQS. These attainment designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable designation is treated as an attainment designation. Table 3.1-2 presents the federal and state attainment status for the SCAB.

Table 3.1-2: Ambient Status of South Coast Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O ₃)	Non-Attainment	Non-Attainment
Particulate Matter (PM _{2.5})	Non-Attainment	Non-Attainment
Particulate Matter (PM ₁₀)	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Attainment	Unclassifiable/ Attainment
Nitrogen Dioxide (NO ₂)	Non-Attainment	Unclassifiable/ Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Non-Attainment	Non-Attainment
Hydrogen Sulfide	Unclassified	*
Sulfates	Attainment	*
Visibility Reducing Particles	Unclassified	*
Notes: (*) = Not Identified/ No Status CARB 2011c. USEPA 2011b.		

The study area is designated in attainment for both the national and state CO and SO₂ standards. However, the study area is designated non-attainment for national and state O₃, PM_{2.5}, PM₁₀, and Pb standards, as well as national NO₂ standards.

The SCAQMD in conjunction with the Southern California Association of Governments (SCAG), CARB, and USEPA recently prepared the 2012 Air Quality Management Plan (AQMP). The purpose of the 2012 AQMP is to provide a comprehensive and integrated program to lead the SCAB into compliance with the national 24-hour PM_{2.5} AAQS. In addition, the AQMP outlines the plan toward meeting the USEPA's 1-hour and 8-hour ozone standards and vehicle miles travelled (VMT) emissions offset demonstration (2012 AQMP, pp. 30-33).

The 2012 AQMP accounts for projected population growth, predicted future emissions in energy and transportation demand, and determine control strategies for the eventual achievement of AAQS attainment designation. These control strategies are either organized into the SCAQMD rules and regulations, or otherwise set forth as formal SCAQMD recommendations to other agencies.

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The 2012 AQMP includes policies that are consistent with the SCAQMD and specify review according to the recommendations of SCAQMD guidelines. Other policies are aimed at reducing transportation emissions and emissions from major stationary sources. As this assessment was prepared in accordance with SCAQMD guidelines, consistency with their air quality policies is assured.

The Proposed Action does not include stationary emission sources; therefore, it would not be subject to most SCAQMD rules and regulations. The Proposed Action would, however, be subject to the following general regulations during implementation of construction activities associated with the proposed Line 63 replacement and re-route component:

- a) Rule 401 – Visible Emissions
- b) Rule 402 – Nuisance
- c) Rule 403 – Fugitive Dust

Additionally, the Proposed Action would be subject to Federal General Conformity regulations.

2005 ANF Land Management Plan (LMP)

The study area is located in the ANF (1.5 miles northwest of Lake Castaic), and as such, is subject to the Forest Service's Land Management Plan (LMP) (U.S. Department of Agriculture, Forest Service: 2005 LMP). The ANF LMP Air Quality Strategies are limited to the following:

- a) AIR 1: Minimize Smoke and Dust
- b) AIR 2: Forest Air Quality Emissions

The ANF LMP Strategy AIR 1 is general in its directive to "control and reduce fugitive dust to protect human health, improve safety and moderate or eliminate environmental impacts," and the only action item is to "incorporate visibility requirements into project plans." The ANF Strategy AIR 2 relates to providing an air quality inventory for prescribed burns and wildfires and is unrelated to the Proposed Action's construction and operation emissions.

3.1.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Implementation of the Proposed Action would occur within an approximately 60 day timeframe in 2014. Project emissions of criteria pollutants include VOC, nitrogen oxides (NO_x), CO, PM_{2.5}, PM₁₀ and sulfur oxides (SO_x) associated with exhaust from combustion sources (construction equipment and vehicles). In addition, PM_{2.5} and PM₁₀ would be generated during the construction phase from the daily ingress and egress of vehicles travelling on unpaved access surfaces and grading activities.

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Construction emissions can be distinguished as either on- or off-site. On-site air pollutant emissions during construction would principally consist of exhaust emissions from mobile heavy-duty diesel and gasoline powered construction equipment, as well as fugitive particulates generated during soil disturbance. Off-site air pollutant emissions would result from workers commuting to and from staging areas, transportation of workers to and from staging areas to the worksite, and trucks' transporting pipe and other materials to construction spreads.

Air quality impacts associated with the Proposed Action are primarily characterized by using the SCAQMD significance criteria presented in Table 3.1-3 and are discussed in this section with regards to the indicator criteria presented in Table 3.1-2. The SCAQMD Localized Significance Thresholds (LST) are not considered in this analysis as a result of the Proposed Action's location in the ANF and relative absence of nearby sensitive receptors.

Table 3.1-3: SCAQMD Air Quality Significance Thresholds (Mass Daily Thresholds)

Regional Thresholds (lbs/day)	VOC	NO_x	SO_x	CO	PM₁₀	PM_{2.5}	Lead (Pb)
Construction	75	100	150	550	150	55	3
Notes: Source: SCAQMD Air Quality Significance (Mass Daily) Thresholds, March 2011							

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce effect to air quality as a result of the Project can be found in Section 2.3.1.

Pipeline Replacement and Re-Route

The Proposed Action would not be in conflict with, nor obstruct implementation of the AQMP or the ANF LMP, as the project would not result in population or employment growth exceeding the prospective growth discussed in the AQMP.

3.1.3.1.1 Violate any air quality standards or contribute to an existing or projected air quality violation.

Pipeline Replacement and Re-Route

Activities associated with the pipeline replacement and re-route component of the Proposed Action would result in short-term emissions generated by clearing/grading and replacing/re-routing sections of the underground pipe and on-road vehicles associated with construction and excavation activities.

Small equipment and hand tools would be used as necessary throughout the construction period. Project emissions associated with construction activities include equipment and vehicle

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exhaust emissions, earth handling fugitive dust emissions, and fugitive dust from vehicle/equipment travel on unpaved surfaces. Specific on- and off-road equipment and vehicle assumptions are presented in Appendix B.

On-road vehicle emissions were estimated using emissions factors from EMFAC 2011. Off-road equipment emissions were estimated using emissions factors from CalEEMod and applicable USEPA Tier 3 engine standards. Project emissions estimated for the Proposed Action in comparison to SCAQMD significance criteria are presented in Table 3.1-4. Detailed project emissions associated with the Proposed Action are provided in Appendix B.

Table 3.1-4: Peak Daily Project Emissions Estimated for the Proposed Action in Comparison to SCAQMD Significance Criteria

Peak Daily Project Emissions (lbs/day)	VOC	NOx	SOx	CO	PM ₁₀	PM _{2.5}	Lead (Pb)
Line 63 Conventional Re-Route (Construction)	6.65	93.68	0.14	59.35	78.86	12.66	--
Regional Thresholds (lbs/day)	VOC	NOx	SOx	CO	PM ₁₀	PM _{2.5}	Lead (Pb)
Construction	75	100	150	550	150	55	3
Exceeds Threshold?	No	No	No	No	No	No	N/A
Notes:							
Source: SCAQMD Air Quality Significance (Mass Daily) Thresholds, March 2011							

As shown in Table 3.1-4, the Proposed Action's total project emissions in pounds per day would be below the regional significance thresholds for all criteria air pollutants. A General Conformity Analysis for the Proposed Action has been prepared to determine conformity with the Federal Clean Air Act (Appendix C). Appendix C demonstrates that total Proposed Action emissions are below the general conformity de minimis threshold emission rates. Considering the Proposed Action is exempt from a conformity determination, is below the applicable SCAQMD thresholds and would reduce construction emissions by adhering to Environmental Commitments AQ-1 through AQ-7, the Proposed Action is not expected to violate any air quality standards or contribute to an existing or projected air quality violation and would not result in a substantial adverse environmental effect.

3.1.3.1.2 Result in a cumulatively considerable net increase of any criteria non-attainment pollutant.

Pipeline Replacement and Re-Route

The study area is designated non-attainment for national and state O₃, PM_{2.5}, PM₁₀, and Pb AAQS, as well as non-attainment for the state NO₂ CAAQS (2011 State and National Area Designations). Construction activities associated with the Proposed Action would be temporary in nature and are expected to occur over a period of approximately 60 days. Equipment staging and construction would be mobile and would not be confined to one area for an extended period of time. As shown in Table 3.1-4, the Proposed Action's total project emissions in pounds per day would be below the regional significance thresholds for all criteria air pollutants. A General

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Conformity Analysis for the Proposed Action has been prepared to determine conformity with the Federal Clean Air Act (Appendix C). Appendix C demonstrates that total Proposed Action emissions are below the general conformity de minimis threshold emission rates. Considering the Proposed Action is exempt from a conformity determination, is below the applicable SCAQMD thresholds and would reduce construction emissions by adhering to Environmental Commitments AQ-1 through AQ-7, the Proposed Action is not expected to result in a cumulatively considerable net increase of any criteria non-attainment pollutant.

3.1.3.1.3 Expose the public to substantial pollutant concentrations.

Pipeline Replacement and Re-Route

Some land uses are considered more sensitive to air pollution than others due to associated population groups and activities. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill. Those affected by cardio-respiratory diseases are considered especially sensitive.

Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

The study area is located approximately one mile east of I-5 and approximately 1.5 miles west of Lake Castaic. There are few sensitive receptors located in close proximity to the Proposed Action. All off-road construction equipment and some support vehicles are expected to be diesel fueled. Diesel exhaust particulate matter has been identified by the State of California as a Toxic Air Contaminant. Construction activities would not occur in close proximity to sensitive receptors; however, if any receptors are exposed, impacts would be for a short-period of time, are mobile in nature, and would not involve significant numbers of emissions sources. Therefore, no adverse effects are anticipated as air pollutant emissions would be adequately dispersed and would not expose sensitive receptors to substantial pollutant concentrations.

3.1.3.1.4 Create objectionable odors affecting a substantial number of people.

Pipeline Replacement and Re-Route

Any odors (e.g., odors from construction vehicle emissions, etc.) that would be generated by activities associated with the Proposed Action would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions). No activities are anticipated to occur or materials anticipated to be used that would create objectionable odors affecting a substantial number of people. Therefore, there would be no adverse effects related to odor.

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3.1.3.2 No Action Alternative

Under the No Action Alternative, no pipeline re-route or repairs would occur along the subject pipeline segment. As such no short- or long-term emissions of criteria air pollutants would result and there would be no air quality impacts.

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3.2 BIOLOGICAL RESOURCES

This section addresses the biological resources that are potentially present within the study area. These resources include USFWS federally listed threatened, endangered, proposed, candidate and Forest Service sensitive species (TEPCS), their habitats, as well as waters of the U.S. and State. The potential for the Proposed Action to affect such biological resources are addressed. The analysis of biological resources is based upon data collected during literature reviews and field surveys in the study area. This section summarizes the findings contained within a Biological Assessment/Biological Evaluation (BA/BE), Management Indicator Species Report, Project Preliminary Delineation of Waters of the United States, including Wetlands and Waters of the State, and Weed Risk Assessment which was prepared by Stantec for the proposed Project and provided as Appendices E, F, H, and I.

3.2.1 Environmental Setting

The Proposed Action is located within the Sierra Pelona Ridge Mountain Range. The region has a Mediterranean climate of mild winters and long, hot summers. Average precipitation is 20 inches and rains generally occur during the winter months. The region's topography is characterized by high mountains, steep canyons, and hills with vegetation communities including chaparral, woodlands, annual grasslands and riparian forests. Elevation range in the study area is approximately 2,600 to 3,300 feet above mean sea level. Land use types and vegetation communities are further detailed below.

3.2.1.1 Vegetation Communities

Vegetation communities in the vicinity of the Proposed Action and Alternatives are generally described in *A Manual of California Vegetation* (Sawyer et al. 2009) as various associations/alliances of chaparral: Chamise, Chamise– Black sage, California buckwheat, and herbaceous grasslands: Giant wild-rye and various semi-natural stands of Wild oats, Bromus and Centaurea are semi-natural and are found within and adjacent to Pipeline Corridors and other mechanically disturbed areas. Riparian areas of the Proposed Action are composed of the Fremont cottonwood forest alliance. Table 3.2-1 quantifies the Proposed Action vegetation community estimated acreages of disturbance. A full description of these vegetation types can be found in the BA/BE (Appendix E).

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Table 3.2-1: Approximate Temporary Disturbance Acreage for Vegetation Alliances in the Proposed Action

Vegetation Community	Disturbance (acres)
Proposed Action - Re-Route	
Adenostoma fasciculatum	3.1
Adenostoma fasciculatum – Salvia mellifera	2.23
Eriogonum fasciculatum	6.14
Bromus and Centaurea semi-natural stands	8.07
Populus fremontii	0.13
Total Disturbance	13.81
Proposed Action - HDD	
Adenostoma fasciculatum	3.1
Eriogonum fasciculatum	0.15
Bromus and Centaurea semi-natural stands	1.82
Total Disturbance	5.07

Table 3.2-2: Maximum Number of Trees Disturbed by the Proposed Action

Common/Scientific Name	Number of Trees
Proposed Action - Re-Route	
Fremont cottonwood (Populus fremontii)	21
Red Willow (<i>Salix laevigata</i>)	3

*Please see Table 6.1-1 in the BA/BE (Appendix E for a complete table showing diameter at breast height (dbh) associated with each tree that could be disturbed.

A single oak tree (*Quercus spp.*) is located partially with the HDD laydown area; however, effects to this tree will be avoided. Within the Line 2000 corridor alignment (i.e., location of the proposed Line 63 re-route), historic disturbances associated with the Line 2000 installation and other utilities within the pipeline corridor have caused significant effects to native community composition within these areas. These historical effects have led to the development of early seral and/or semi-natural vegetation communities within the boundaries of the utility corridor. These communities vary greatly from the established late seral or climax communities found immediately adjacent to the corridor, and differ depending on topographic features and disturbance history. A full description of the aforementioned vegetation communities are provided in the BA/BE (Appendix E).

Canopy cover along most of the existing Line 63 corridor consists of native shrub species and climax or late seral communities.

3.2.1.2 Special Status Plant Species

Using pre-field examination for species that had ranges overlapping the study area and/or consideration of habitats found there and record searches of the California Natural Diversity

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Database (CNDDDB) database, it was determined the potential exists for seven Forest Service Sensitive plant species (slender mariposa-lily, short-joint beavertail, club-haired mariposa lily, Parry’s spineflower, fragrant pitcher sage, Ross’ pitcher sage, and Robbins’ nemacladus); and one CNPS listed species: Peirson’s morning glory to be found in the study area. Of these sensitive plant species with the potential to exist, only slender mariposa lily and Peirson’s morning glory were observed during the rare plant surveys. The slender mariposa lily occurrence (one individual) is located within the Proposed Action alignment near the northern portion of the HDD laydown area. Three Peirson’s morning glories were observed within the southern end of the HDD laydown area.

Table 3.2-3 provides a summary of each species status and general information related to the species and the study area.

Table 3.2-3: Summary of Federally Listed, Proposed, Candidate and Forest Service Sensitive Plant Species Considered in this Analysis

Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
Plants						
Braunton’s Milk-vetch (<i>Astragalus brauntonii</i>)	FC, SE, 1B.1	Coastal scrub and chaparral. Recent burns or disturbed areas. <700 m. Los Angeles, Orange, and Ventura Counties.	No	No	No	Study area outside the known elevation range of plant. No suitable habitat present.
Nevin’s Barberry (<i>Berberis nevinii</i>)	FE, SE, 1B.1	Sandy to gravelly soils. Washes, chaparral, cismontane woodland, and coastal scrub. Generally found in lowlands or drainages. <675 m.	No	No	No	Study area outside the known elevation of plant. No suitable habitat present.
Thread-leaved Brodiaea (<i>Brodiaea filifolia</i>)	FT, SE, 1B.1	Grasslands and vernal pools, openings in chaparral or coastal sage scrub, playas. 30-900 m. Often found in clay. Southern base of San Gabriel Mts. At Glendora and San Dimas and San Bernardino at Arrowhead Springs.	No	No	No	Study area outside the known elevation range of plant. No suitable habitat present.
Slender-horned Spineflower	FC, SE,	Sandy alluvial fans, benches, and terraces	No	No	No	Study area does not contain sandy alluvial

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
<i>(Dodecahema leptoceras)</i>	1B.	in coastal scrub, chaparral and cismontane woodland areas. 200-900 m.				fans, benches, and terraces No suitable habitat present.
San Fernando Valley Spineflower <i>(Chorizanthe parryi var. fernandina)</i>	FC, SE, 1B.1	Sandy places, generally in coastal scrub. 200-1,200 m., present near Elizabeth Lake in Liebre Mountains. Historically present at southern base of San Gabriel mountains.	No	No	No	Study area consists of chaparral and does not contain coastal sage scrub. No suitable habitat present.
Abrams' Flowery Puncturebract <i>(Acanthoscyphus parishii var. abramsii)</i>	FSS, 1B.2	Chaparral in sandy or shale substrates from 1,143 -1,257 m in elevation.	No	No	No	Study area outside the known elevation range for this species. No suitable habitat present.
San Gabriel Manzanita <i>(Arctostaphylos gabrielensis) (=A. glandulosa ssp. gabrielensis)</i>	FSS, 1B.2	Rocky outcroppings, chaparral around 1,500 m. Only known from the area near Mill Creek Summit. Often associated with gneiss outcroppings.	No	No	No	No suitable habitat present. Project site is outside known geographic range of species.
Interior Manzanita <i>(Arctostaphylos parryana ssp. tumescens)</i>	FSS, 4.3	Montane chaparral and cismontane woodland	No	No	No	No suitable habitat present. Project site is outside known geographic range of species.
Crested Milk-vetch <i>(Astragalus bicristatus)</i>	FSS, 4.3	Open, rocky areas in coniferous forests. 1,700-2,750 m. Los Angeles, Riverside and San Bernardino Counties.	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
San Antonio Milk-vetch <i>(Astragalus lentiginosus var. antonius)</i>	FSS, 1B.3	Open slopes in pine forest, 1,500-2,600 m, San Gabriel Mountains.	No	No	No	No suitable habitat present. Project is outside known geographic range.
Scalloped Moonwort <i>(Botrychium crenulatum)</i>	FSS, 2B.2	Bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes &	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
		swamps (freshwater). 1,500-3,300 m.				
Club-haired Mariposa Lily (<i>Calochortus clavatus var. clavatus</i>)	FSS, 4.3	Chaparral, Valley Grassland, Foothill Woodland, serpentinite, clay, rocky. 75-1,300 m	Yes	Yes	No	No club-haired mariposa lily individuals were found in the study area, however suitable habitat is present and several populations have been found within two miles of the project. It is also possible that because 2013 was a well below average precipitation year the mariposa lilies may not have been observable during surveys.
Slender Mariposa Lily (<i>Calochortus clavatus var. gracilis</i>)	FSS, 1B.2	Chaparral on steep rocky slopes or in canyon bottoms with benches of gravel boulders, and sand of granite and gneiss below 1,300 m, occurs in Liebre Mountains Region from 866 - 915 m in elevation.	Yes	Yes	No	One slender mariposa lily was observed within the area of effect. It is possible that other populations were not observed within the area of effect due to 2013 being a well below average precipitation year.
Late-flowered Mariposa Lily (<i>Calochortus fimbriatus</i>)	FSS, 1B.2	Chaparral, Cismontane woodland and Riparian woodland often serpentinite, a rock formation comprised of silicate and magnesium. Found at elevation between 275-1,905 m.	No	No	No	Very little soil preference for this species is present, not known from the Angeles NF.
Palmer's Mariposa Lily (<i>Calochortus palmeri var. palmeri</i>)	FSC, FSS, 1B.2	Meadows, vernal moist places in pine forest or chaparral, or occasionally dry areas in yellow pine forest. 1,100-2,200 m.	No	No	No	No suitable habitat present.
Alkali Mariposa Lily (<i>Calochortus striatus</i>)	FSC, FSS, 1B.2	Alkaline meadows and seeps, moist creosote bush scrub, and	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
		chenopod scrub. 60-1,400 m.				
Pygmy Poppy (<i>Canbya candida</i>)	FSS, 4.2	Sandy places, 610-1,200 m. Joshua tree woodland, Mojavean scrub, and pinyon/juniper woodland. Mojave desert adjacent to Sierra Nevada.	No	No	No	No suitable habitat present. Project site is outside known range of species.
Mt. Gleason Paintbrush (<i>Castilleja gleasoni</i>)	FSS, 1B.2	Granitic substrates in coniferous forest, generally west of Chilao area. 1,200-2,200 m.	No	No	No	No suitable habitat present on Project site.
Mojave Indian Paintbrush (<i>Castilleja plagiotoma</i>)	FSS, 4.3	Dry flats and ridges, Sagebrush Scrub, Joshua Tree Woodland, Pinyon/Juniper Woodland, Yellow Pine Forest. North base of mountains, 300-2,500 m.	No	No	No	No suitable habitat present. Project site is well outside known range of species.
Parry's Spineflower (<i>Chorizanthe parryi var. parryi</i>)	FSS, 1B.1	Dry slopes in chaparral coastal sage scrub, or alluvial scrub, often in ecotones. Dry, sandy areas, 40-1,700 m. Nearest known location about 3 miles NW of the Project site in Freeman Canyon, in ecotonal area, Hungry Valley State Vehicular Park.	Yes	Yes	No	No Parry's spineflower individuals were found in the study area and the closest known population is more than ten miles away, however marginal suitable habitat is present. There is also a chance that because 2013 was a well below average precipitation year the spineflower may not have been observable during surveys.
California Saw- grass (<i>Cladium californicum</i>)	FSS, 2B.2	Freshwater Wetlands, Alkali Sink, wetland-riparian; Occurs almost always under natural conditions in wetlands per the U.S.	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
		Fish & Wildlife Service. Elevation 0 – 2,000 m				
Peirson's Spring Beauty (<i>Claytonia lanceolata</i> var. <i>peirsonii</i>)	FSS, 3.1	Gravelly conifer woodlands, scree slopes. 1,500-2,600 m.	No	No	No	No suitable habitat present; associated species not present. Outside known range of species
Mojave tarplant (<i>Deinandra mohavensis</i>)	FSS, SE 1B.3	Washes, seasonal creeks/seeps, openings in chaparral, disturbed areas. Not known from ANF, most occurrences in San Bernardino, San Jacinto mts. 900-1,600 m.	No	No	No	No suitable habitat present. Project site is well outside known range of species.
Ewan's Cinquefoil (<i>Drymocallis cuneifolia</i> var. <i>ewanii</i>)	FSS, 1B.3	Lower montane coniferous forest (near seeps and springs) also in Meadows and seeps from 1,900-2,400 m	No	No	No	No suitable habitat present.
San Gabriel River Dudleya (<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>)	FSS, 1B.2	On exposed granite outcroppings in CSS or chaparral areas. Fish Canyon, possibly Lytle Creek area. 300-1,100 m.	No	No	No	No suitable habitat present; no rock outcroppings in study area.
San Gabriel Mountain Dudleya (<i>Dudleya densiflora</i>)	FSC, FSS, 1B.1	Steep granitic canyon walls adjacent to chaparral, coastal scrub, and coniferous forest. Southeast San Gabriel Mountains. 275-525 m.	No	No	No	No suitable habitat present; no rock outcroppings in study area.
Many-stemmed Dudleya (<i>Dudleya multicaulis</i>)	FSC, FSS, 1B.2	Heavy soils, often clayey, coastal plain. Chaparral, coastal scrub, and valley & foothill grassland. <600 m.	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
Forest Camp Sandwort (<i>Eremogone</i>	FSS	Dry, often gravelly (decomposing granite) canyon slopes, dry	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
<i>macradenia var. arcuifolia</i>		yellow-pine and oak forests, ridges, summits; 650–2,400 m. s Sierra Nevada, Western Transverse Ranges, San Gabriel Mountains.				
Southern Alpine Buckwheat (<i>Eriogonum kennedyi var. alpigenum</i>)	FSS, 1B.3	Alpine boulder and rock fields, subalpine, granitic gravel, found on high peaks and ridgetops. 2,600-3,500 m.	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
Johnston's Buckwheat (<i>Eriogonum microthecum var. johnstonii</i>)	FSS, 1B.3	Rocky, subalpine coniferous forest and upper montane coniferous forest. 1,850-2,900 m.	No	No	No	No suitable habitat present.
San Gabriel Bedstraw (<i>Galium grande</i>)	FSC, FSS, 1B.2	Open, broad-leaved forest, open chaparral, cismontane woodland, and lower forest. Rocky slopes. 455-1,525 m. San Gabriel Mountains.	No	No	No	No suitable habitat present. Project site is outside known geographic range of species.
Abram's Alumroot (<i>Heuchera abramsii</i>)	FSS, 4.3	Upper Montane Coniferous Forest, 2,700-3,500 m. High peaks of eastern San Gabriel Mountains	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
Urn-Flowered Alumroot (<i>Heuchera elegans</i>) (= <i>H. caespitosa</i>)	FSS, 4	Rocky areas in coniferous forest, 1,200-2,600 m, San Gabriel and San Bernardino Mountains	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
Mesa horkelia (<i>Horkelia cuneata var. puberula</i>)	FSS, 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy/gravelly sites at 75-800 m.	No	No	No	No suitable habitat present. Project site is outside known elevation range of species.
San Gabriel Mountains sunflower	FSS, 4.3	Rocky sites in montane coniferous forest, 1,200-2,800 m.	No	No	No	No suitable habitat present.

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<i>(Hulsea vestita ssp. gabrielensis)</i>		San Gabriel Mountains, Mt. Pinos				
Pygmy hulsea <i>(Hulsea vestita ssp. pygmaea)</i>	FSS, 1B.3	Gravelly sites of granitic substrate alpine areas or subalpine forest ; 2,800-3,900 m	No	No	No	No suitable habitat present. Project site is outside known geographic and elevation range of species.
California satintail <i>(Imperata brevifolia)</i>	FSS, 2B.1	Calcareous seeps, hot springs, disturbed wet areas. Generally 300-1,500 m	No	No	No	No suitable habitat present.
Fragrant Pitcher Sage <i>(Lepechinia fragrans)</i>	FSS, 4.2	Chaparral areas, including those recovering from recent fire. Mt. Lukens, western Santa Monica Mountains. 20-1,350 m.	Yes	No	No	Suitable habitat is present within the project for fragrant pitcher sage, however, no individuals were found. Pitcher sage is a medium sized, conspicuous shrub and would have been detected during surveys, even after a poor precipitation year.
Ross' Pitcher Sage <i>(Lepechinia rossii)</i>	FSS, 1B.2	Rocky outcrops of reddish sedimentary rock, on north to northeast facing slopes; between 305-790 m in elevation.	Yes	No	No	Suitable habitat is present in within the project, however, no Ross's pitcher sage individuals were found. Pitcher sage is a medium sized, conspicuous shrub and would have been detected during surveys, even after a poor precipitation year.
Short-sepaled Lewisia <i>(Lewisia brachycalyx)</i>	FSS, 2B.2	Mesic conditions within lower montane coniferous forest also in meadows and seeps; 1,370 – 2,300 meters	No	No	No	No suitable habitat present.
Lemon Lily <i>(Lilium parryi)</i>	FSC, FSS, 1B.2	Meadows, streams, and springs in montane coniferous	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
		forest, riparian scrub. 1,225-2,750 m.				
San Gabriel Linanthus (<i>Linanthus concinus</i>)	FSC, FSS, 1B.2	Dry, rocky slopes, coniferous forest. 1,525-2,800 m. San Gabriel Mountains.	No	No	No	No suitable habitat present in study area. Outside known range of species.
Orcutt's Linanthus (<i>Linanthus orcuttii</i>)	FSS, 1B.3	Openings in chaparral and lower montane coniferous forest also in pinyon and juniper woodland at elevations 915 – 2,145 meters	No	No	No	No suitable habitat is present; the study area is outside the geographic range for this species.
Peirson's Lupine (<i>Lupinus peirsonii</i>)	FSS, 1B.3	Loose slopes of rock or gravel, Joshua Tree or Pinyon-Juniper Woodland, Yellow Pine Forest. 1,200- 2,400, desert slopes of San Gabriel and Tehachapi mountains	No	No	No	No suitable habitat present. The study area is outside known range of species.
Jokerst's Monardella (<i>Monardella australis ssp.jokerstii</i>)	FSS, 1B.1	Steep scree or talus, stony benches on canyon bottoms in montane forest (or chaparral); 1,350– 1,750 m. San Gabriel Mountains. Intergrades with Monardella australis ssp. cinerea, and M. australis ssp. australis.	No	No	No	No suitable habitat. The study area is outside the known geographic and elevation range for this species.
Hall's Monardella (<i>Monardella macrantha ssp. hallii</i>)	FSS, 1B.3	Chaparral, broadleaved upland woodland, cismontane woodland, coniferous forest (usually Bigcone Spruce), and valley & foothill grassland. 600-2,000 m. San Gabriel and San Bernardino Mountains.	No	No	No	No suitable habitat present. The study area is outside known range of species.
Rock Monardella	FSS,	Broadleaved upland	No	No	No	No suitable habitat

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
<i>(Monardella viridis</i> <i>ssp. saxicola)</i>	4.2	forest, montane chaparral, coniferous forest, and cismontane woodland. Usually in dry, rocky areas. 500-1,825 m'; San Gabriel Mts.				present. Study area is outside known range of species.
Baja Navarretia <i>(Navarretia</i> <i>peninsularis)</i>	FSS, 1B.2	Wet areas in open forest or chaparral. 1,500-2,300 m.	No	No	No	No suitable habitat present.
Robbins' Nemacladus <i>(Nemacladus</i> <i>secundiflorus var.</i> <i>robbinsii)</i>	FSS, 1B.2	Openings in chaparral and valley and foothill grassland; 350 – 1,700 meters. Observed nearby on sandy soils in open oak-juniper woodland: Blooms April-June.	Yes	Yes	No	This species has been found within 5 miles of the project site and suitable habitat is present within the project. No Robbin's nemacladus individuals were found during surveys. However, because 2013 was a well below average precipitation year and this species is an ephemeral annual it is possible that Robbin's nemacladus may not have been observable during surveys.
Short-joint Beavertail <i>(Opuntia basilaris</i> <i>var.</i> <i>brachyclada)</i>	FSC, FSS, 1B.2	Chaparral, Joshua tree woodland, pinyon/juniper woodland, and Mojavean desert scrub. 1,225-2,300 m. Northern regions, San Gabriel and San Bernardino Mountains.	Yes	No	No	Short-joint beavertail cactus is a conspicuous sub-shrub and would have been detected during surveys, even after a season of low precipitation.
Woolly mountain- parsley <i>(Oreonana</i> <i>vestita)</i>	FSS, 1B.3	Loose rock, upper montane and subalpine coniferous forest. High ridges of San Gabriel Mountains. 2,400-3,500 m.	No	No	No	No suitable habitat present. Study area is outside known geographic and elevation range of species.
Rock Creek	FSC,	Chaparral,	No	No	No	No suitable habitat

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
Broomrape (<i>Orobancha valida</i> <i>ssp. valida</i>)	FSS, 1B.2	pinyon/juniper, decomposed granite. 1,250-2,000 m. Topatopa Mountains and San Gabriel Mountains.				present. Study area is outside known geographic and elevation range of species.
Rock-loving Oxytrope (<i>Oxytropis</i> <i>oreophila</i> var. <i>oreophila</i>)	FSS, 2B.3	Occurs on gravelly or rocky substrates in alpine boulder and rock fields and subalpine coniferous forests at elevations that range from 3,400 to 3,800 m.	No	No	No	No suitable habitat present.
San Bernardino Grass-Of- Parnassus (<i>Parnassia cirrata</i> var. <i>cirrata</i>)	FSS, 1B.3	Calcareous seeps and meadows, 1,250- 2,450 m. San Gabriel and San Bernardino mountains.	No	No	No	No suitable habitat present, the Study area lacks calcareous seeps and meadows.
Southern Skullcap (<i>Scutellaria</i> <i>bolanderi</i> ssp. <i>austromontana</i>)	FSS, 1B.2	Gravelly streambanks and mesic sites, chaparral, cismontane woodland, lower montane conifer forest. 425-2,000 m. Mainly in Riverside and San Diego counties.	No	No	No	No suitable habitat present. Site is well outside known range of species.
Parish's Checkerbloom (<i>Sidalcea</i> <i>hickmanii</i> ssp. <i>parishii</i>)	FSS, SR, 1B.2	Chaparral, cismontane woodland, and open coniferous forest. Often in disturbed areas. 1,000-2,500 m in Santa Barbara and San Bernardino counties	No	No	No	Site is outside known range of plant.
Salt Spring Checkerbloom (<i>Sidalcea</i> <i>neomexicana</i>)	FSS, 2B.2	Occurs in alkaline and mesic areas within creosote bush scrub, chaparral, yellow pine forest, coastal sage scrub, alkali sink and playa. Usually occurs in wetlands, but occasionally found in	No	No	No	No alkaline and mesic areas within the study area.

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		non-wetland areas from 15 -1,530 m				
Chickweed starry puncturebract (<i>Sidothea caryophylloides</i>)	FSS, 4.3	Sandy or gravelly flats, washes, and slopes, chaparral, montane conifer woodlands; 1,300- 2,600 m	No	No	No	No suitable habitat present. Study area is outside known geographic and elevation range of species.
Southern Jewelflower (<i>Streptanthus campestris</i>)	FSS, 1B.3	Rocky openings in chaparral, conifer forest, oak woodland, 600-2790 m. High variation in habitat and elevation of species. San Diego, Riverside, San Bernardino counties.	No	No	No	No suitable habitat present. Site is outside known range of species.
Mason's Neststraw (<i>Stylocline masonii</i>)	FSS, 1B.1	Occurs in sandy areas within chenopod scrub and pinyon and juniper woodland from 100 to 1,200 m in elevation.	No	No	No	No suitable habitat present.
San Bernardino Aster (<i>Symphotrichum defoliatum</i>)	FSS, 1B.2	Occurs near ditches, streams, springs within cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland (vernally mesic); between 2 and 2,040 m.	No	No	No	No suitable habitat present.
Sonoran Maiden Fern (<i>Thelypteris puberula var. sonorensis</i>)	FSS, 2B.2	Streams, meadows, and seeps below 550 m.	No	No	No	No suitable habitat present.
Rigid Fringepod (<i>Thysanocarpus rigidus</i>)	FSS, 1B.2	Occurs on dry rocky slopes in pinyon and juniper woodland between 600 and 2,200m	No	No	No	No suitable habitat present.

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Notes:						
Federal Status:		California Native Plant Society (CNPS) Threat Rank:				
FE	Federally Listed Endangered	1A Presumed extinct in California				
FT	Federally Listed Threatened	1B Rare or Endangered in California and elsewhere				
FPE	Federally proposed (Endangered)	2 Rare or Endangered in California, more common elsewhere				
FPT	Federally proposed (Threatened)	3 Plants for which we need more information				
FSC	Federal Species of Concern Review list	4 Plants of limited distribution – Watch list				
FC	Federal Candidate					
State Status:		Forest Service Status:				
SE	State listed as Endangered	FSS Forest Service Sensitive Species				
ST	State listed as Threatened					
SR	State listed as Rare					
SCE	State candidate for listing as Endangered					
SCT	State candidate for listing as Threatened					

3.2.1.3 Invasive Plant Species

Twenty-one ANF-listed noxious and invasive plant species were observed within the study area. These species include: *Acropitilon repens*, *Avena barbata/fatua*, *Centaurea melitensis*, *Centaurea solstitialis*, *Brassica nigra*, *Bromus diandrus*, *Bromus tectorum*, *Bromus rubens*, *Tamarix sp.*, *Hirshfeldia incana*, *Erodium cicutarium*, *Medicago polymorpha*, *Melilotus indica*, *Marubium vulgare*, *Polypogon monospermiensis*, *Piptatherum milaceum*, *Spartium junceum*, *Schismus barbatus*, *Vulpia myuros*, and *Lepidium latifolium*. Project priority levels (high, moderate, low) for these listed species are further defined in the Noxious Weed Risk Assessment, as approved by the ANF prior to issuance of a Special Use Permit and initiation of construction activities.

Past actions involving ground disturbing activities such as pipeline and powerline construction, road and trail creation/maintenance, unauthorized OHV use and other dispersed recreation have impacted invasive plant infestations across the study area. The invasive species known to occur within the study area are believed to have been introduced and spread primarily through transport on vehicles, in straw and hay, on earthmoving and mowing/weed-eating equipment, associated with these activities.

Given the current data it appears that tocalote, yellow star-thistle, red-stem filaree, and Brome grass are by far the most common species within the study area. To a lesser extent, several other invasive weed species occur, primarily along roads or in specific localized populations (such as perennial pepperweed).

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The risk of creating new or expanding populations throughout the study area depends on a variety of factors:

- **Species-specific dispersal traits of weeds:** Weed species with seeds dispersed by wind (tocalote, star-thistle), by tumbleweed (shortpod mustard), water (tamarisk), or animals (bromes) can potentially spread weed propagules miles from their original sources. Most seeds are not moved far from the parent plant, but a small proportion of seeds can be found long distances away. Even propagules with low innate dispersal abilities, such as stem fragments of giant reed or castor bean seeds which fall close to the plant, can be carried far after initial dispersal by streams or surface runoff. However, species without wind, water, or animal-mediated dispersal are less likely to disperse propagules far from the original source.
- **Habitat disturbed:** While many weed species are generalists that can potentially colonize a fairly wide range of vegetation types, it is true that some habitats, particularly those with ample nutrients and soil moisture or those that have been recently disturbed, are more susceptible to invasion. Additionally, the suite of weed species one would expect to colonize a site is dependent to some degree on the habitat where the disturbance occurred.
- **Regional patterns in weed occurrence and propagule pressure:** The project occurs across a transitional area with regards to microclimate, elevation, and vegetation communities. The most commonly observed weeds differed within these areas, possibly due to species-specific habitat preferences.
- **Type of ground disturbance.** The type of disturbance creates conditions favoring release and establishment of different weed species. For example, tree removal is expected to favor the establishment of weed species that do best in full sun, such as yellow starthistle; burning is expected to favor the establishment of fire-adapted weed species such as French broom; and soil disturbance is expected to favor the establishment of early-colonizing weed species, such as mustards or tocalote, that respond favorably to disturbed, denuded soils.

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These factors were used to consider the risks associated with the establishment of new weed infestations due to project activities. In addition to these four factors, the results of the Noxious Weed Risk Assessment (project record) were focused on risks associated with 1) the release of pre-existing but currently dormant weed seed banks at disturbed sites, 2) the rapid build-up of transient weed seed banks at disturbed sites, and/or 3) the creation of conditions favoring weed establishment at disturbed sites.

3.2.1.4 Special Status Wildlife Species

Using pre-field examination for species that had ranges overlapping the study area and/or consideration of habitats found there, record searches of the California Natural Diversity Database (CNDDB) database and study area field surveys, it was determined seven federal TEPCS species share habitat characteristics with the proposed Area of Effect and have the potential to occur in the proposed Area of Effect; California condor (*Gymnogyps californianus*), California legless lizard (*Anniella pulchra*), coastal rosy boa (*Charina trivirgata oseofusca*), San Bernardino Mountain Kingsnake (*Lampropeltis zonata parvarubra*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Table 3.2-4 provides a summary of each species' status and general information related to the species within southern California and the study area.

Table 3.2-4: Summary of Federally Listed, Proposed or Forest Service Sensitive Wildlife Species Considered in this Analysis

Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
INVERTEBRATES						
San Gabriel Mountains Blue Butterfly (<i>Plebejus saepiolus aureolus</i>)	FSS	Occurs in bogs, roadsides, stream edges, open fields, meadows, and open forests. Big Pines Meadow (San Gabriel Mnts) is significant as the primary location for this species.	No	No	No	No suitable habitat present.
San Emigdio Blue Butterfly (<i>Plebulina emigdionis</i>)	FSS	Occurs in montane desert regions of southern California. The host plant for its caterpillar is four-winged saltbush (shadscale) (<i>Atriplex canescens</i>). It	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
		is found only in desert canyons where shadscale scrub grows.				
FISH						
Santa Ana Sucker (<i>Catostomus santaanae</i>)	FT, SSC	Small, shallow streams, less than 25 feet in width with currents ranging from swift to sluggish. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae. Most abundant where the water is cool, clean, and clear.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present.
Unarmored Threespine Stickleback (<i>Gasterosteus aculeatus williamsoni</i>)	FE, SE	Occurs in clear, small pools within streams with a constant, gentle water flow or under the protection of algal mats along the edges of swiftly-flowing streams. It is unusual to find them in turbid water because they are visual feeders.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present.
Arroyo Chub (<i>Gila orcutti</i>)	FSS, SSC	Slow-moving or backwater sections of warm to cool (10-24 C) streams with mud or sand substrates. Depths typically greater than 40 cm.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present.
Santa Ana speckled dace (<i>Rhinichthys osculus ssp. 8</i>)	FSS, SSC	Permanent flowing streams with summer water temperatures of 17-20 C. Shallow cobble and gravel riffles. Limited distribution in the headwaters of only the Santa Ana and San Gabriel rivers.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present.
AMPHIBIANS						
Arroyo Toad	FE, SSC	Washes, arroyos, sandy	No	No	No	Study area consists of

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
(<i>Anaxyrus</i> (= <i>Bufo</i>) <i>californicus</i>)		riverbanks, riparian areas with willows, sycamores, oaks, cottonwoods. Requires exposed sandy streambanks with stable terraces for burrowing, scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. Sea level to 1,000 m.				chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for Arroyo toad. Amphibian survey did not detect the presence of any amphibians.
California Red-Legged Frog (<i>Rana draytonii</i>)	FT, SSC	Lowland streams, wetlands and marshes, lakes, riparian woodlands, ponds, reservoirs, and other sources of permanent water. Require cold water pond habitats (including stream pools) with emergent and submergent vegetation. Near sea level to 1,585 m. Nearly all sightings have occurred below 1,067 m.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for California red legged frog.
Mountain Yellow-Legged Frog (<i>Rana muscosa</i>)	FE, SCE, SSC, FSS	Sunny riverbanks, meadow streams, isolated pools, lake borders, and rocky stream courses. Sierra Nevada: 1,372 m to over 3,652 m. Southern California: 366 m. to 2,286 m.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for mountain yellow legged frog.
Yellow-Blotched Ensatina	FSS, SSC	Found in evergreen and deciduous forests, under rocks, logs, and other surface debris. Occurs in the Tehachapi Mountains including Mt. Pinos at elevations up to 2,000 m.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for Yellow-Blotched Ensatina.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
San Gabriel Mtn. Slender Salamander	FSS, SSC	Closely associated with extensive rock talus on forested slopes, often near streams. Found in at least 13 locations in the San Gabriel Mtns. at elevations from 850 - 2,380 m.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for San Gabriel Mtn. Salamander.
REPTILES						
Desert Tortoise (<i>Gopherus agassizii</i>)	FT, ST	Occurs in almost every desert habitat except on the most precipitous slopes. Require friable soils for burrow construction and grasses or other low growing vegetation (wildflowers) for food. Below sea level to 2,200 m.	No	No	No	Study area consists of chaparral in sandy substrate. Project area is outside of known range of species. No suitable habitat present.
Western Pond Turtle (<i>Emys marmorata</i>)	FSS, SSC	Permanent ponds, lakes, marshes, streams, rivers, irrigation ditches or permanent pools along intermittent streams. Require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Near sea level to 1,430 m.	No	No	No	Study area consists of chaparral in sandy substrate. No suitable habitat present. Wetlands/ waters habitat is not suitable for western pond turtle.
California Legless Lizard (<i>Anniella pulchra</i>)	FSS, SSC	Areas with sandy or loose organic soil or where there is plenty of leaf litter and some moisture content and vegetative cover. Rocky soils or areas disturbed by agriculture, or other human uses apparently lack legless lizards. Sea level to 2,000 m.	Yes	Yes	No	Unlikely to be present; marginally suitable habitat due to sparse leaf litter with soils of low available water capacity.
San Bernardino	FSS	Moist habitats including	Yes	Yes	No	Moist habitats, ie

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
Ring-necked Snake (<i>Diadophis punctatus modestus</i>)		oak woodlands, mixed coniferous forests, grassland, wet meadows, rocky hillsides, coastal sage scrub, chaparral, riparian areas, farms and gardens. Requires surface litter/herbaceous vegetation. Sea level to 2,150 m.				litter/herbaceous vegetation, preferred by this species are limited in the study area. In addition, existing habitat is marginal and no individuals of the species were observed in the project area. No historic occurrences of the species in the study area.
Coastal Rosy Boa (<i>Lichanura orcutti</i>)	FSS	Arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas. Only occur west of the desert < 1,200m.	Yes	Yes	No	Suitable habitat is present. Although this habitat exists within the project area, it is marginal. No individuals of the species were observed. No historic occurrences of the species in the study area.
San Bernardino Mtn. Kingsnake (<i>Lampropeltis zonata parvirubra</i>)	FSS, SSC	Occurs in diverse habitats: coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub. Wooded areas near a stream with rock outcrops, talus or rotting logs that are exposed to the sun are good places to find this snake. From 245 – 2,750 m.	Yes	Yes	No	Suitable habitat is present.
Two-Striped Garter Snake (<i>Thamnophis hammondi</i>)	FSS, SSC	Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.	No	No	No	No suitable habitat present.
BIRDS						
California condor	FE, SE	Species inhabits large expanses of open	Yes	No	No	While suitable foraging habitat is found within

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
<i>(Gymnogyps californianus)</i>		savanna, grasslands, and foothill chaparral of moderate altitude. Occur from sea level to 2,743 m.				the area and condors may fly over the study area it is not anticipated that they will land within the Project area.
Least Bell's Vireo (<i>Vireo bellii pusillus</i>)	FE, SE	Occurs in riverine riparian habitats that typically feature dense cover within 1-2 m of the ground and a dense, stratified canopy.	No	No	No	No suitable habitat present. Wetlands/waters habitat is not suitable for Least Bell's vireo.
Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	FE, SE	Restricted to riparian woodlands along streams, rivers, wetlands and marshes with mature, dense stands of willows, cottonwoods, or smaller spring fed or boggy areas with willows or alders.	No	No	No	No suitable habitat present. Wetlands/waters habitat is not suitable for Southwestern Willow fly catcher.
Coastal California Gnatcatcher (<i>Polioptila californica californica</i>)	FT, SSC	Generally "prefers open sage scrub with California sagebrush as a dominant or co-dominant species. More abundant near sage scrub-grassland interface than where sage scrub grades into chaparral. Dense sage scrub occupied less frequently than more open sites.	No	No	No	No suitable habitat present.
Northern Goshawk (<i>Accipiter gentilis</i>)	FSS, SSC	Inhabit mature coniferous forests, often on moderate slopes, especially at mid- to high elevations. Found along the forest edge: will use mixed coniferous and deciduous forests.	No	No	No	No suitable habitat present.
California Spotted Owl (<i>Strix</i>	FSS, SSC	Occupies habitats dominated by hardwoods, primarily	No	No	No	No suitable habitat present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
<i>occidentalis occidentalis</i>		oak and oak-conifer woodlands. At higher elevations, they inhabit areas dominated by conifers.				
Western Yellow-billed Cuckoo (<i>Coccyzus americanus occidentalis</i>)	FC, SE, FSS	Occupies open woodlands with clearings and dense scrubby vegetation, often along water.	No	No	No	No suitable habitat present.
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	FSS, SE	Occurs primarily in or near seacoasts, rivers, wetlands swamps, and large lakes. Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches and nesting sites to support them.	No	No	No	No suitable habitat present.
Gray Vireo (<i>Vireo vicinior</i>)	FSS, SSC	An uncommon, local, summer resident in arid, shrub-covered slopes in pinyon-juniper, juniper, and chamise-redshank chaparral habitats on foothills and mesas, between 610 to 1,981 m. While junipers are the dominant tree in gray vireo habitat, oaks may also be common.	No	No	No	Marginally suitable habitat is present; no junipers are present within the study area.
MAMMALS						
Pallid Bat (<i>Antrozous pallidus</i>)	FSS, SSC	Occurs in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. They are most common in deserts, preferring areas of open, dry habitats, with rocky areas for roosting and water nearby.	Yes	Yes	No	Foraging habitat is present. Suitable roosting habitat with nearby water is present.

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
Townsend's Big-Eared Bat (<i>Corynorhinus townsendii</i>)	FSS, SSC	Edge habitat between forested and open areas is preferred for foraging. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. May use separate sites for night, day, hibernation, or maternity roosts.	Yes	Yes	No	Preferred habitats are marginal. No suitable foraging or roosting habitat is present.
Fringed Myotis (<i>Myotis thysanodes</i>)	FSS	Occurs in habitats ranging from mountainous pine, oak, and pinyon-juniper to desert scrub but seems to prefer grassland areas at intermediate elevations. Roosts in caves, mine tunnels, rock crevices, and old buildings in colonies that may number several hundred.	No	No	No	Preferred habitats are absent. No suitable foraging or roosting habitat is present.
Nelson's Bighorn Sheep (<i>Ovis canadensis nelsoni</i>)	FSS	Occur in dry, relatively barren, desert mountain ranges throughout North America. Require escape terrain defined as steep slopes (80 percent or steeper) with abundant rock outcrops and sparse shrub cover (canopy cover of 30 percent or less).	No	No	No	No suitable habitat is present.
Tehachapi Pocket Mouse (<i>Perognathus alticolus inexpectatus</i>)	FSS, SSC	Inhabits arid annual grassland and desert shrub communities, but also taken in fallow grain field and in Russian thistle. Burrows for cover and nesting. Forages on open ground and under shrubs.	No	No	No	No suitable habitat present.

Notes:

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Common Name (Scientific Name)	Listing Status	General Habitat Description	Suitable Habitat Present within Site?	Potentially Affected By Project?	Viability Threat?	Comments
Federal Status:			State Status:			
FT Federally Listed Threatened			SE State listed as Endangered			
FE Federally Listed Endangered			ST State listed as Threatened			
FC Federal Candidate			CDFW:SSC Species of species concern			
			SCE State candidate for listing as Endangered			
Forest Service Status:						
FSS Forest Service Sensitive Species						

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3.2.1.5 Management Indicator Species

Two Management Indicator Species (MIS) were identified for the project-level analysis (Mule Deer, Mountain lion). Project-level habitat impacts are not expected to have any measurable effect on forest wide population trends for the mule deer or mountain lion. The *MIS Report for the Line 63 Project* indicates that the Project would result in direct impact to 18.5 acres of native vegetation considered habitat for mule deer and mountain lion. Until the native vegetation is recovered, the site would not provide suitable habitat for mule deer and mountain lion. However, with successful implementation of post construction restoration efforts, full recovery of the habitat would occur within approximately five or more years. In addition, the total area of impact (approximately 18.5 acres) is only .002 percent of the ANF and would not result in a loss of wildlife corridor connectivity. The Proposed Action would not eliminate corridor linkages for mule deer or mountain lion within the ANF. As a result, Project-level habitat impacts are not expected to have significant effect on forest wide population trends for the mule deer or mountain lions. A full MIS report has been provided in Appendix F.

3.2.1.6 Critical Habitat

Critical habitat is designated by the USFWS as habitats that contain essential features for the existence of threatened or endangered species. No USFWS designated critical habitat exists with the proposed study area.

3.2.1.7 Wildlife Movement Corridors

Wildlife movement corridors serve as landscape linkages between areas of suitable wildlife habitat. Natural or man-made barriers can prevent movement between habitats. Increasingly, man-made fragmentation of the landscape has affected wildlife movement corridors, resulting in reduced genetic flow in wildlife populations, isolation of populations, and loss of habitat.

The study area is within a wildlife corridor or “linkage” that connects the Los Padres National Forest with the ANF (South Coast Wildlands 2008, Los Angeles County 2012). Within this area, an estimated 75 percent of the area is currently already protected by USFS-administered lands (South Coast Wildlands 2008). I-5 is the largest barrier to movement within the corridor area, due to the lack of adequate crossing mechanisms. The study area runs parallel of I-5, approximately one mile to the east. Vegetated channels and riparian areas often provide suitable habitat wildlife movement corridors. Within the study area, habitats along stream corridors such as Gun Club Creek and in the steep-sided canyon along the Line 63 ROW between approximately MPs 38.1 and 39.9 may be used as wildlife movement corridors.

3.2.1.8 Water and Wetlands

Hydrologic features within the Proposed Action study area include ten tributaries to (and including) Gun Club Creek. Gun Club Creek is a tributary to Castaic Lake, which is found in the greater Santa Clara Watershed (Hydrologic Unit Code #18070102). Eight ephemeral tributaries are potentially jurisdictional features and are characterized by the presence of an OHWM and established bed and bank (Features 1, 2, 3, 4, 5, 6, 7 and 10). Feature 8 is Gun Club Creek

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which is designated by USGS as an intermittent stream blue line; however, depending on the year it sometimes does have sections with water in late summer due to a perennial seep (pers. obs., Bezy, 2013). Feature 9 is preliminarily defined as a “seep wetland” and is found adjacent to Feature 8, Gun Club Creek. Feature 10 is an additional ephemeral drainage along the HDD alignment. Each ephemeral drainage feature identified along the route has a defined bed, bank, and channel. The bed of the channel consists of mixed alluvium consisting of fine clays, coarse sands, gravel, cobble, and boulders. With the exception of Feature 8, Gun Club Creek, the potential waters of the US are not lined by riparian trees or obligate riparian species, with the exception of Feature (5), where a single cottonwood tree was removed a previously permitted activity on a different pipeline, and a single cottonwood at Feature 4. Restoration actions are currently scheduled to occur after the construction of the Proposed Action and will mitigate for any effects to the riparian habitat.

A summary of the potential waters of the US crossings and acreage of construction in undisturbed areas is included in Table 3.2-5.

Table 3.2-5: Summary of Jurisdictional Waters of the U.S./State for the Proposed Action

Alignment	Number of crossings	Jurisdictional Waters of the State (acres)	Jurisdictional Waters of the U.S. (acres)
Proposed Action	10	0.126	0.086

3.2.2 Regulatory Framework

The following federal direction guides management of plants, wildlife and riparian areas and other habitats on NFS lands. Dates provided as available:

Federal Standards and Regulations

Endangered Species Act of 1973

Under the Endangered Species Act (ESA), the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (16 U.S. Code 1533[c]). The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over plants, wildlife, and resident fish, while the National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish, marine fish, and marine mammals. In addition to listed species, USFWS publishes a list of candidate species. Candidate species are those for which USFWS has sufficient biological information to support a proposal to list as endangered or threatened. Species on the candidate list are not protected under the ESA, but they receive special attention during environmental review.

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Sections 404 and 401 of the Clean Water Act of 1977

US Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) regulate the discharge of dredge or fill material into waters of the United States as defined by Section 404 of the Clean Water Act (CWA, "Waters of the U.S." including wetlands and lakes, rivers, streams, and their tributaries). Project proponents must obtain a permit from the USACE for all discharges of fill material into waters of the U.S., including wetlands, before proceeding with a proposed action. Section 401 of the CWA requires an applicant, for any federal permit which may result in a discharge into waters of the U.S., to obtain a certification from the state that the discharge will comply with provisions of the CWA. The nine regions of the State Water Resources Control Board (SWRCB) administer this program. Any condition of water quality certification would be incorporated into the USACE permit. The state has a policy of no-net-loss of wetlands and typically requires mitigation for affects to wetlands before it will issue a water quality certification.

Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act of 1940

The Migratory Bird Treaty Act (MBTA, 16 U.S. Code Section 703-711) and the Bald and Golden Eagle Protection Act (16 U.S. Code Section 668) protect certain species of birds from direct take. The MBTA protects migrant bird species from take through setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Gold Eagle Protection Act prohibits the take or commerce of any part of these species. The USFWS administers both Acts and reviews federal agency actions that may affect species protected by the Acts.

Federal Policies on Californian Riparian Communities (Riparian Conservation Areas)

Riparian communities have a variety of functions, including providing high-quality habitat for resident and migrant wildlife, stream bank stabilization, and runoff water filtration. Throughout the U.S., riparian habitats have declined substantially in extent and quality compared with their historical distribution and condition. These declines have increased concerns about dependent plant and wildlife species, leading federal agencies to adopt policies to arrest further loss. USFWS Mitigation Policy identifies California's riparian habitats as belonging to resource Category 2, for which "no net loss" of existing habitat value is recommended. Furthermore, the Angeles National Forest Land Management Plan (LMP) specifically requires a Riparian Conservation Area Assessment to ensure affects to state riparian areas are fully analyzed.

Executive Order 13112 Invasive Species 64 FR 6183 (February 8, 1999) (Clinton 1999)

Executive Order 13112 prevents the introduction of invasive species, provides for their control, and minimizes the economic, ecological, and human health impacts that invasive species cause. Federal agencies whose actions may affect the status of invasive species must use relevant programs and authorities to prevent the introduction of invasive species; detect and control populations invasive species; monitor invasive species populations accurately and reliably; restore native species and habitat conditions; conduct research and develop

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technologies to prevent introduction of invasive species; promote public education on invasive species; and not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species.

Forest Service Manual 2900 (November 21, 2011) (USDA 2011)

The Forest Service Manual 2900 provides foundational comprehensive guidance for the management of invasive species on aquatic and terrestrial areas of the National Forest System (NFS). The purpose of this policy is to bring existing efforts together for a more coordinated management approach. The policy adds new requirements for agency-wide integration of invasive species prevention, early detection and rapid response, control, restoration, and collaborative activities across all National Forest System lands.

Forest Service Manual 2670, (September 23, 2005), (USDA 2005)

The purpose of the manual is to manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the Endangered Species Act are no longer necessary. The manual also promotes recovery efforts through Research and Development and State and Private Forestry programs. The manual places top priority on conservation and recovery of endangered, threatened, and proposed species and their habitats through relevant National Forest System, State and Private Forestry, and Research and Development activities and programs.

Forest Service Manual 2070, Native Plant Material Policy (February 13, 2008) (USDA 2008)

The manual for native plant materials provides direction for the use, growth, development, and storage of native plant materials. This policy defines a native plant as: all indigenous terrestrial and aquatic plant species that evolved naturally in an ecosystem. This policy also requires the use of best available information to choose ecologically adapted plant materials for the site and situation. Moreover, the policy states that native plants are to be used when timely natural regeneration of the native plant community is not likely to occur; native plant materials are the first choice in revegetation for restoration and rehabilitation efforts. Non-native, non-invasive plant species may be used when needed: (1) In emergency conditions to protect basic resource values such as soil stability and water quality; (2) As an interim, non-persistent measure designed to aid in new establishment of native plants (unless natural soil, water and biotic conditions have been permanently altered); (3) In conditions and management situations where native plant species are not available; and (4) When working in permanently altered plant communities. Under no circumstances will invasive plant species be used (USDA 2008).

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National Forest Management Act of 1982

The National Forest Management Act (NFMA) is an amendment of the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA). This Act establishes standards for how the Forest Service manages the national forests, requires the development of land management plans for national forests and grasslands, and directs the Forest Service to develop regular reports on the status and trends of the Nation's renewable resources on all forest and rangelands.

Angeles National Forest Management Indicator Species (MIS)

The Management Indicator Species (MIS) program consists of plant or animal species that serves as the focus for the USFS monitoring efforts because changes in the population trends of select species indicated as "MIS" species are thought to be reflective of the effects of management activities and because they can be effectively monitored (USDA 2005b). The National Forest Management Act of 1982 regulations requires the selection of MIS during the development of forest plans.

Angeles National Forest Land Management Plan, 2005

The ANF Land Management Plan (USFS 2005abc) outlines goals, desired conditions, and objectives.

- a) Goal 2.1 - Reverse the trend of increasing loss of natural resource values due to invasive species.
- b) Goal 5.1 – Improve Watershed Conditions through cooperative management.

The following state/county/city direction guides management of plants, wildlife and riparian areas and other habitats on non-NFS lands:

State Standards and Regulations

California Endangered Species Act of 1984

The California Endangered Species Act (CESA) and Section 2081 of the *California Fish and Game Code* require an incidental take permit from the CDFW for projects that could result in the take of a State-listed Threatened or Endangered species. According to the CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass", as the federal act does. A CDFW-authorized Incidental Take Permit under Section 2081(b) is required when a project could result in the take of a State-listed Threatened or Endangered Species. The application for an Incidental Take Permit under Section 2081(b) includes, but is not limited to, preparing a conservation plan, generally referred to as a Habitat Conservation Plan.

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Porter-Cologne Water Quality Control Act of 1969 (amended January 1, 2013)

This act provides the State with broad authority to regulate "Waters of the State." "Any surface or groundwater, including saline waters, within the boundaries of the state," including rivers, streams, or lakes are protected by Sections 1600-1616 of the *California Fish and Game Code*. Any proposed waste discharge into a water body that could affect its water quality must file a "Report of Waste Discharge" when there is no federal nexus, such as Section 404(b)(1) of the Clean Water Act. "Waste" is defined as any waste substance associated with human habitation. The RWQCB interprets "waste" to include fill discharge into water bodies.

California Fish and Wildlife Code 1601 to 1607

Sections 1600–1616 of the *California Fish and Game Code* protect "Waters of the State". Activities of State and local agencies, as well as public utilities that are project proponents, are regulated by the CDFG under Section 1602 of the code; this section regulates any work that would (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. For project activities that may affect stream channels and/or riparian vegetation regulated under Sections 1600 through 1603, CDFG authorization is required in the form of a Streambed Alteration Agreement.

California Fish and Wildlife Code 3503, 3503.5, 3800

Sections 3503 and 3503.5 of the *California Fish and Game Code* makes it unlawful to take, possess, or destroy the nests and eggs of birds of prey.

Section 3513 of the *California Fish and Game Code* duplicates the federal protection of migratory birds and prohibits the taking and possession of any migratory nongame bird, as designated in the MBTA.

Native Plant Protection Act of 1977

The NPPA was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations (see Fish and Game Code section 1900 et seq. for more information).

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Local Regulations and Guidelines

Los Angeles County Draft General Plan, 2014

The Los Angeles County 2035 General Plan accommodates new housing and jobs within the unincorporated areas in anticipation of population growth in the County and the region. The General Plan Update effort includes goals, policies, implementation programs, and ordinances.

The General Plan outlines several policies to conserve natural resources in the County Policy C/NR 3.1 – 3.12 and Policy C/NR 4.1. These policies are aimed at conserving ecological resources particularly in areas dedicated as Significant Ecological Areas (SEA) or protected species and their habitat. Policy C/NR 3.5, in particular, is aligned with ensuring compatibility of development in the national forests in conjunction with the USFS Land and Resource Management Plan.

Los Angeles County Oak Tree Ordinance (1982) (Non Federal Lands)

This ordinance protects oak trees that are at least eight inches in diameter as measured 4.5 feet above natural ground, and requires that all potential impacts to oak trees regulated by this ordinance be preceded by an application to the County that includes a detailed Oak Tree Report. Mitigation for impacts to oak trees is usually required as a condition of an Oak Tree Permit.

Los Angeles County Brushing Ordinance 12.28

The County Brush Clearance Ordinance requires treatment or thinning of vegetation within project boundaries to reduce fire hazards. Proper maintenance of fire safety does not mean eradication of all plants, but rather the selective removal of highly flammable vegetation to protect against excessive erosion and provide wildlife habitat. This ordinance requires a permit for removal or destruction of natural vegetation on terrain with eight percent slope or greater. The permit request must include a description of the property and by a map showing topography, drainage courses; the location and extent of the proposed work; and details of the precautionary measures or devices to be used to prevent erosion. Conditions may be attached to the permit including limitation on the time of year when vegetation removal is performed, requirements for erosion control devices, vegetation removal methods, and replanting.

Santa Clarita Valley Area Plan, 2012

The Santa Clarita Valley Area Plan is a component of the Los Angeles County General Plan and is intended to provide focused goals, policies, and maps to guide the regulation of development within the unincorporated portions of the Santa Clarita Valley. This updated Santa Clarita Valley Area Plan replaces in its entirety the Santa Clarita Valley Plan adopted by the Los Angeles County Board of Supervisor on February 16, 1984 and amended on December 6, 1990. The Area Plan is intended to serve as a long-term blueprint for development over the next

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approximately 20-year planning period, except where specific policies address other target dates as set forth in the plan. The Area plan contains Objectives CO-3.1 through CO-3.7 pertaining to protection of biological resources. Objective CO-3.4 ensure that development in the Santa Clarita Valley does not adversely impact habitat within the adjacent National Forest Lands (see Policies CO-3.4.1 – 3.4.4, pg. 179)

3.2.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce effect to biological resources as a result of the Project can be found in Section 2.3.1.

3.2.3.1 Preferred Re-Route (Proposed Action)

3.2.3.1.1 Result in effects to federal waters/wetlands of the U.S. and/or waters of the State.

Proposed Replacement and Re-Route Direct and Indirect Effects

Based on information obtained during the field delineation, and documented within *Preliminary Delineation of Waters of the United States, including Wetlands and Waters of the State* prepared by Stantec in August 2013 located in Appendix H of this EA, the Proposed Action would potentially effect 0.098 acres/581.82 linear feet of potentially jurisdictional “waters of the U.S.” and wetlands and a total of 0.127 acres/581.2 linear feet of potentially jurisdictional “waters of the state” as a result of grading, excavating, trenching, or other related activities. If Project actions encroach into jurisdictional areas, such actions may result in adverse effects such as siltation, erosion, modifications to bed and bank, and/or downstream water quality effects to Jurisdictional waters.

The Proposed Action has the potential to adversely affect riparian habitat described above, during construction through actions such as grading, excavating, trenching, or other related activities. If the Proposed Action encroaches into riparian habitat, such actions may result in adverse effects such as erosion, modifications to bed and bank, and removal of vegetation. Should these actions occur within the riparian habitat, associated affects to riparian habitat would be considered significant environmental impacts. All impacts are temporary in scope and would be fully restored upon implementation of the Environmental Commitments. PAALP would implement Environmental Commitments BIO-2 and BIO-3 to ensure that impacts to jurisdictional

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waters or riparian areas are not substantially adverse. Therefore, the Proposed Action would **not likely adversely affect** federal and state jurisdictional waters.

3.2.3.1.2 Result in effects to threatened, endangered, candidate, or proposed for listed plant species

Pipeline Replacement and Re-Route Direct and Indirect Effects

No threatened, endangered, candidate or proposed for listing plant species were identified as having the potential to occur within the Proposed Action. Field surveys did not identify any federally threatened, endangered, candidate, or proposed for listing plant species and no suitable habitat for such species was observed. No occurrence records for any aforementioned species were present within a reasonable distance of the Proposed Action, and no other evidence for occurrence was documented during the desktop analysis. With the implementation of Environmental Commitments BIO-4, BIO-5, BIO-6 and BIO-11 would be avoided or minimized. Therefore, the Proposed Action with implementation of the above Environmental Commitments would avoid the potential for adverse effects to threatened, endangered, candidate, or proposed plant species to and result in a **no effect** determination.

3.2.3.1.3 Result in effects to threatened, endangered, candidate, or proposed for listed wildlife species

Pipeline Replacement and Re-Route Direct and Indirect Effects

The California condor is the only federally and state listed wildlife species identified as having the potential to occur within the proposed study area.

California condor

California condor may be directly affected if construction activities disturb use of the airspace or habitats used for resting or foraging within or adjacent to the Proposed Action.

There is potential that construction debris and trash or road kill could attract the California condor to the Proposed Action pipeline corridor. California condors are known to be negatively affected by ingesting debris (i.e., "microtrash") or feeding it to their young. Because the existing and Proposed Action pipelines are underground, and finished grading would restore the ground surface to pre-existing conditions, installation of the Proposed Action would not permanently remove suitable foraging habitat. Indirect effects may occur as a result of temporary removal of foraging habitat. These affects would likely be discountable, as the area is surrounded by suitable foraging habitat and the disturbed areas would be fully restored. The amount of acreage disturbed as a result of the project is negligible when compared spatially to the available condor habitat in the surrounding areas. With the implementation of Environmental Commitments BIO-6 and BIO-7, direct and indirect adverse effects to California condors would be avoided or minimized. Therefore, the Proposed Action would result in a **no effect** determination for the California condor. This determination is based on the minimal presence of

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suitable foraging, roosting, nesting, or critical habitats within the proposed area of effect, as well as the temporary nature of disturbance. California Condors may use the airspace over the proposed Area of Effect when traveling between suitable habitats; however these activities will not be affected by the proposed Project.

3.2.3.1.4 Effects to Forest Service sensitive and CNPS listed plant species

Pipeline Replacement and Re-Route Direct and Indirect Effects

Clearing, grading, and construction activities along the Proposed Action pipeline corridor may result in direct mortality of protected plants and degrading or removal of habitats. Trampling or crushing of sensitive plant populations may also result from equipment, tools, and foot traffic within the proposed study area.

One individual from a single population of slender mariposa lily and three individuals from the single population of Peirson's morning glory are expected to be impacted by this project. There is the potential for the loss or mortality of some individual sensitive plants, especially those not detected during surveys. If sensitive plant species are present at a site, they are more likely to be more adversely impacted if the proposed treatment occurs while the species is in a flowering or reproductive stage. Impacts to special status plant species will be mitigated by BIO-4, which requires these species to be flagged and avoided, translocated, or have occupied off site land purchase/restoration.

Project activities that would occur during the implementation of this alternative may result in the indirect effect of the proliferation and spread of non-native invasive plants to new areas (Kayes et al. 2011). It would be required that, prior to commencing project implementation, surveys would be conducted to determine the locations of weed species within the treatment area. To minimize the spread of invasive vegetation propagules (reproductive parts or dispersal agents), all treated target weeds would be bagged and removed off-Forest for disposal (Environmental Commitment BIO-5) or herbicided before they are in flower. If not out-competed by invasive plants, sensitive plant species will benefit from the reduction in competing vegetation.

Other indirect effects could include soil compaction, which decreases water absorption and increases water runoff and may decrease the ability of native species to become established or survive; dust and mud splatter generated by vehicles may land on vegetation adjacent to roads and parking areas and reduce plant vigor; increased erosion may alter hydrology and soil stability and decrease the ability of native species to become established or survive and disturbance areas with a lack of vegetation may allow for increased unauthorized OHV travel. In turn, OHV traffic often prohibits or reduces the vigor of native vegetation regrowth, while allowing for the spread of non-native species. These indirect effects will be mitigated in part by environmental commitment BIO-1; AQ-4; BIO-3 and BIO-1 requiring the closure of potential OHV areas by the use of barricades and vegetative screening.

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The proposed project would lead to a ***may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability*** determination for Forest Service sensitive species that would potentially be affected by the Proposed Action (slender mariposa-lily, club-haired mariposa lily, Parry's spineflower, and Robbins' nemacladus) as well as the CNPS listed Peirson's morning glory. There is the potential for minor adverse impacts to undetected individuals if present in construction areas, but environmental criteria are in place to ensure that species are protected from greater adverse thresholds of impacts.

The proposed project ***will have no effect on*** short-joint beavertail, fragrant pitcher sage, and Ross' pitcher sage. Suitable habitat exists within the proposed Area of Effect, but no individuals were observed during field surveys. As these species are conspicuous shrubs, it is unlikely that undetected individuals are present. Additionally, implementation of the environmental criteria in the proposed action will avoid potential effects.

3.2.3.1.5 Effects to Invasive Species

Direct and Indirect Effects

There are three major ways that Project-related activities and impacts could contribute to an increase in invasive plants: (1) the creation of conditions that favor establishment of invasive plant (weed) species, such as soil disturbance, removal of native vegetation, breakup of cryptogamic crusts; (2) spread of new and pre-existing weed infestations into newly disturbed areas via project tools, equipment, and personnel; and 3) the subsequent release of pre-existing weed seed banks from dormancy; or the quick build-up of new weed seed banks on disturbed soils.

Disturbance by heavy equipment can have long-term effects to soils and favor weed establishment if unmitigated. Heavy equipment can compact soils, reducing water infiltration and accelerating erosion, and displace soils and shear off vegetative roots. If these effects are severe, a loss of soil productivity may occur. Numerous passes by equipment over vegetation often causes plant mortality or severe injury, thus exposing the soil organic layer and making it more susceptible to erosion. Loss of vegetative cover and the soil organic layer reduces the ability of the soil to hold moisture. Many weed species are more capable of utilizing less productive soils with less soil moisture. In addition, some weeds produce secondary chemical compounds that inhibit native plant germination and growth. These compounds also affect nutrient cycling rates by inhibiting soil microbial fauna activity (Sheley et.al.1999).

Maintenance, reconstruction and the creation of roads can also spread invasives. Grading disturbs soil and competing native vegetation in addition to dispersing soil, weed seeds and plant parts. Cleaning ditches, grading, installing overside drains and road construction moves soil and creates ideal weed seedbeds. Seeds from equipment can be deposited in stream crossings and washed downstream. This movement of weed seed/parts can happen at any time of the year since the seeds and parts are present in the soil at infested sites at all times of the year. Stockpiles of crushed aggregate can also be infested with weeds. Weeds are

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dispersed when that aggregate is moved to a new location. This translocation of weed seed is of particular concern when dispersal vectors (streamside, areas of high human use, staging and action areas, roads, etc.) are nearby.

Project sites in remote native communities may be expected to contain an existing weed seed bank. Seed banks are known to regularly contain a different suite of species than is represented by the standing vegetation due to succession, low reproduction rates of some perennials (by seed), and other factors (Thompson, 2000). In most cases it is rare to find species in the seed bank that are not represented to any degree in the above-ground vegetation; the exception being seeds from invasive, aggressive, disturbance-adapted, and early colonizing weeds (Thompson, 2000). For example, large cheatgrass seed banks are commonly found throughout western North America, often regardless of such factors as remoteness of the site, grazing, or fire history. Within intact communities however, these seeds are typically held in the above-ground vegetation or in crevices on cryptogamic crusts. Germination is therefore prevented until disturbance allows the cheatgrass seeds to come into contact with broken soil surfaces (Boudell et al., 2002).

Following establishment, new populations of weeds are often extremely difficult to eradicate and even if controlled or eradicated it may take several years or decades to re-establish the native soil structure and biota. If allowed to expand, dense infestations can occur that not only displace native plants and animals, but also threaten natural ecosystems by fragmenting sensitive plant and animal habitat (Scott and Pratini 1995). For example, when equipment disturbance activities introduce or release weeds, the vegetative pattern is changed, often providing more flammable fuels into the system. As the weeds spread and increase in volume, an increase in ladder fuels occurs. Weeds such as Spanish broom, yellow star-thistle and others change the arrangement of vegetation, the amount of soil moisture at specific times of the year, the amount of fuel available to burn, and how fire behaves (Keeley et. al. 2011). These changes in fire behavior often mean that areas that previously would not ordinarily burn frequently or at high intensity are now doing so (DiTomaso and Healy 2007).

The risk of creating new or expanding weed populations throughout the Project Area differs depending on a variety of factors, regardless of the risks associated with spreading existing weed populations through travel routes or on project equipment. These risks are affected by factors including the following:

- Species-specific dispersal traits of weeds. Weed species with seeds dispersed by wind, by tumbleweed, water, or by animals can potentially spread weed propagules miles from their original sources. Most seeds are not moved far from the parent plant, but a small proportion of seeds can be found large distances away. Even propagules with low innate dispersal abilities, such as stem fragments of pepperweed or yellow star-thistle seeds that fall close to the plant, can be carried far after initial dispersal by streams or surface runoff. Species without wind, water, or animal-mediated dispersal are less likely to disperse propagules far from the original source.

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- Habitat being disturbed. While many weed species are generalists that can potentially colonize a fairly wide range of vegetation types, it is true that some habitats, particularly those with ample nutrients and soil moisture or those that have been recently disturbed, are more susceptible to invasion. Additionally, the suite of weed species that one would expect to colonize a site is dependent to some degree on the habitat where the disturbance occurred.
- Regional patterns in weed occurrence and propagule pressure. The Project Area occurs across a transitional area with regards to microclimate, elevation, and vegetation communities. The most commonly observed weeds differed within these areas, possibly due to species-specific habitat preferences.
- Type of ground disturbance. The type of disturbance creates conditions favoring release and establishment of different weed species. For example, shrub and tree removal is expected to favor the establishment of weed species that do best in full sun, such as yellow star-thistle; burning is expected to favor the establishment of fire-adapted weed species such as Spanish broom; and soil disturbance is expected to favor the establishment of early-colonizing weed species, such as mustards or tocalote, that respond favorably to disturbed, denuded soils.

These factors were used to consider the risks associated with the establishment of new weed infestations due to project activities. In addition to these four factors, the results of a Weed Risk Assessment (Appendix I) were focused on risks associated with 1) the release of pre-existing but currently dormant weed seed banks at disturbed sites; 2) the rapid build-up of transient weed seed banks at disturbed sites; and/or 3) the creation of conditions favoring weed establishment at disturbed sites. The risks are labeled “high, moderate and low,” and are defined as follows:

- High: Chances of weed species infesting new areas range between 76-100 percent.
- Moderate: Chances of weed species infesting new areas range between 31-75 percent.
- Low: Chances of weed species infesting new areas range between 1-30 percent.

The Proposed Action is expected to be in the low risk category (1-30 percent) as a result of management requirements for the project including implementation of a transportation plan, vehicle washing prior to entering the forest, containing project activities to previously disturbed and/or infested areas and roads, where possible, and the implementation of a restoration plan to revegetate disturbed areas including weed abatement activities along all project affected areas.

The low risk ranking was assigned after careful consideration of the four factors and three major risks listed in the paragraph above. While the release of seed bank within areas already infested with weeds, and in native habitats would likely occur, restoration and weed abatement, and other management requirements for the project would reduce the seed bank in Project

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Areas over time. The build-up of weed seed is already occurring in all portions of the Project subject to disturbance. Existing seed banks and stands of non-native species are likely present in all Project Areas. Project management requirements would replace these non-native stands with native species, as well as reduce weed species populations by abatement activities. Favorable conditions for weeds exist already within most of the Project Area. Temporarily favorable conditions for weeds would be created, but management requirements would reduce those conditions over the long term.

Weed infestations within the vicinity of the Project are mostly associated with roads and utility activities within designated corridors. The Proposed Action would only impact a small amount of previously undisturbed (by utility activity) native vegetation. The Proposed Action would affect approximately 18.5 acres of mostly previously disturbed utility corridor, as well as associated access roads and staging areas.

3.2.3.1.6 Result in effects to Forest Service Sensitive, Migratory Bird Treaty Act and CDFW Species of Special Concern wildlife species

Pipeline Replacement and Re-Route Direct and Indirect Effects

Migratory Bird Treaty Act

Bird species using the Proposed Action pipeline corridor may be directly affected as a result of removal of vegetation which may alter habitats used for foraging or resting. Suitable breeding habitats within the Proposed Action pipeline corridor are present for some bird species. All bird species may be disrupted by construction activities and may temporarily avoid using habitats within the Proposed Action pipeline corridor as a result of noise or other anthropogenic sources of disturbance, including: presence of workers and/or equipment, dust, attraction of predators and decreased cover. Indirect effects to these species may include fragmentation of habitats used by prey species due to construction. Temporary removal of habitat used by prey species would occur, though restoration would restore native plant communities and potentially enhance existing non-native, semi-natural plant communities within the existing Line 2000 corridor.

Construction of the Proposed Action activities would potentially result in a substantial environmental effect to species under the Migratory Bird Treaty Act. However, Implementation of Environmental Commitments BIO-4, BIO-5, and BIO-6 would avoid or minimize potential effects. Per BIO-6, construction activities that have potential to disturb nesting MBTA protected bird species will be undertaken outside the nesting season (Feb 1 to Sept 1) or If construction activities must occur during the nesting season, pre-construction nesting bird surveys will be conducted by a qualified biologist not more than seven days prior to ground disturbance. If nesting birds are identified, the CDFW and USFWS will be contacted to establish appropriate buffers. All nests will be avoided until the young have fledged as determined by a qualified biologist. Therefore, implementation ***may affect individuals, but is not likely to result in a trend toward Federal listing*** to species under the Migratory Bird Treaty Act.

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San Bernardino mountain kingsnake, San Bernardino ring-necked snake, California legless lizard, coastal rosy boa

The San Bernardino mountain kingsnake, San Bernardino ring-necked snake, California legless lizard, and coastal rosy boa may be directly affected by injury or mortality as a result of the Proposed Action. These species may be crushed while above or below ground as a result of construction traffic (i.e., vehicles, equipment, and foot). Direct effects to these species may also occur as a result of temporary destruction or degradation of suitable habitats or burrow sites within the Proposed Action pipeline corridor. Indirect effects include disruption of movement corridors or habitat fragmentation. These effects typically occur when individuals enter or are found within the study area. Individuals may take up residence in staged materials, or in equipment left overnight, or sitting for long periods of time.

Implementation of Environmental Commitments BIO-3, BIO-4, BIO-6, BIO-8 and BIO-10 would avoid or minimize the potential for adverse effects resulting from short-term construction activity. As discussed in Environmental Commitments BIO-4, BIO-6, BIO-8 and BIO-10 if species are observed, appropriate avoidance measures would be followed to prevent take. Typically, these include: limiting the species access and exposure to equipment and materials, regularly inspecting the project site, equipment, and materials for species presence, creating worker awareness of potential species, limiting vehicle speed and reducing collisions with motor vehicles, and conducting regular inspections of all study areas prior to commencement of work activity. Furthermore, all ground disturbing activities such as excavation would occur under the supervision of the biological monitor and vehicle movements off of established road ways would be escorted by the biological monitor. If species are observed within the study area, CDFW and USFWS will be contacted and appropriate measures taken to avoid impacts. Because the existing and Proposed Action Pipelines are underground and finished grading would restore the ground surface to pre-existing conditions, installation of the Proposed Action would not permanently reduce or remove potential habitat for these species. Implementation of the Environmental Commitments listed in this discussion above (i.e., BIO-3, -4, -6, -8 and -10) would reduce the potential for effects as a result of the proposed project. Therefore, implementation ***may affect individuals, but is not likely to result in a trend toward Federal listing*** for the San Bernardino mountain kingsnake, San Bernardino ring-necked snake, California legless lizard, or coastal rosy boa.

Townsend's big-eared bat, pallid bat

There is approximately 18.5 acres of habitat that would be disturbed and could be used as bat foraging habitat within the Proposed Action pipeline corridor. Direct effects to sensitive bat species such as pallid bat and Townsend's big-eared bat may occur if suitable habitats are disturbed or removed within the Proposed Action pipeline corridor. Suitable roosting and breeding habitats generally do not exist within the Proposed Action pipeline corridor. Bats may potentially travel through the Proposed Action pipeline corridor during foraging, migratory, or other flights and could be directly affected by construction disturbances. These effects would

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likely not be considered a substantial adverse environmental effect, as construction activities would avoid nighttime disturbances and no roosting or nesting habitat is found within the study area. Indirect effects to bats would be minor and may include temporary reduction in prey abundance as a result of foraging habitat removal.

Because the Proposed Action and existing pipelines are below ground and finished grading would restore the ground surface to pre-existing conditions, installation of the Proposed Action would not permanently reduce or remove potential habitat for these species. Additionally, PAALP would avoid adverse impacts to pallid bats by implementing Environmental Commitments BIO-4, BIO-5 and BIO-9. As such, the Proposed Action ***may affect individuals, but is not likely to result in a trend toward Federal listing*** to the Townsend's big-eared bat and pallid bat.

3.2.3.1.7 Effects to Management Indicator Species

Pipeline Replacement and Re-Route Direct and Indirect Effects

Two Management Indicator Species (MIS) were identified for the project-level analysis (Mule Deer, Mountain lion). Project-level habitat impacts are not expected to have any measurable effect on forest wide population trends for the mule deer or mountain lion. A full MIS report has been provided in Appendix F. Project level habitat impacts are expected to result in a **no effect** determination

3.2.3.2 No Action Alternative Direct and Indirect Effects

Under the No Action Alternative, no pipeline re-route or repairs in place would be completed. Therefore, the study area would continue to exist in its current state. No change to biological resources in the study area from existing conditions would occur as a result of implementation of the No Action Alternative.

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3.3 CULTURAL AND PALEONTOLOGICAL RESOURCES

The area of potential affect (APE) for this Project was designed to consider both direct and indirect effects on cultural resources from the undertaking. An APE is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any properties exist” (36 CFR 800.16(d)). The APE for direct effects to archaeological and historical resources for this undertaking is defined to include the proposed construction footprint of the proposed Line 63 re-route with access routes, and any staging areas that would be used during construction.

3.3.1 Environmental Setting

The APE is located in the Sierra Pelona Ridge Mountain range, within the Transverse Range Geomorphic Province. The Sierra Pelona Mountains are northwest of the San Gabriel Mountains, bordered by the San Emigdio Mountains to the northwest and the Tehachapi Mountain Range to the north. These ranges are aligned on an east-west axis, an orientation quite different from all other ranges of the state, as well as other mountain ranges in the United States. Such alignment is caused by northward motion of the Pacific plate along the San Andreas Fault (Schoenherr 1992:314). The topography of the Sierra Pelona Mountain Range is characterized by steep terrain with narrow, deep canyons, sharp to rounded summits, and prominent cliff faces.

The climate is Mediterranean, which is characterized by long, hot summers. While four distinct seasons occur in southern California, the primary growing season is winter. Winter rain is followed by spring fogs, which give way to summer haze and smog. Summer temperatures are often in the high 80's and 90's (Schoenherr 1992:316). Mean annual precipitation ranges from 20 to 40 inches, with lower elevations receiving mostly rain, while the higher elevations commonly have more snow (Miles and Goudey 1997).

Most streams in the vicinity of the APE are ephemeral, meaning that they primarily only flow during and immediately following rain events. Several canyons dominate the landscape and they include Canton, Osito, and Big Oak Canyons on the west side of the APE. Geologically speaking, the APE is located within an area of the Transverse Range known as the Castaic Block (Diblee 1982). This triangular formation is bound on the northeast by the San Andreas Fault, on the southeast by the San Gabriel Mountains, on the southwest by the San Gabriel Fault, and at its northwestern corner by the convergence of San Andreas and San Gabriel Faults. The Castaic Block is divided into two geologically distinct areas: a northeastern mountainous area paralleling the San Andreas Fault and a southern area with lower lying hills and valley. The APE is located within the southern portion of the Castaic Block within a sedimentary feature known as the Ridge Basin, which contains sedimentary rocks that were deposited in streams and lake environments between 12 and 13 million years ago. Specifically, sediments occurring within the proposed APE include the Peace Valley Shale Facies and the Ridge Route Sandstone Facies, both part of the Ridge Basin Group (Smith 2013a).

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The plants associated with this region vary and include at least three distinct plant associations including the Upper- Sonoran Grassland, chaparral, and Shin Oak brush with major plant species including Douglas oak (*Quercus Douglasii*), valley white oak (*Quercus lobata*), Shin oak (*Quercus Garryana* var. *Breweri*), dwarf oak (*Quercus turbinella* ssp. *Californica*), canyon live oaks (*Quercus chrysolepis*), California buckwheat (*Eriogonum fasciculatum* ssp. *Polifolium*), manzanita (*Arctostaphylos*), and buck brush (*Ceanothus vestitus*) (Twisselmann 1967:101). Common animals in the area include the California jay, plain titmouse, canyon wren, brush rabbit, gray fox, and spotted skunk.

Archaeological Resources

Cultural resource studies for the proposed Line 63 Re-Route were conducted by LSA Associates, Inc. (LSA) on behalf of Stantec Consulting Services Inc. (Stantec) for PAALP on public lands managed by ANF. LSA conducted the aforementioned cultural resource studies under a Special Use Permit obtained from ANF between January and July of 2013 (see Smith and Delu 2013a, 2013b, 2013c). LSA's Archaeological Reconnaissance Report is included in Appendix J.

Archival background research for the project conducted at the South Central Coastal Information Center (SCCIC) located at the California State University, Fullerton (CSUF) and consultation with the United States Department of Agriculture (USDA), Angeles National Forest Supervisor's Office (ANF SO) in Arcadia revealed that most areas of the proposed undertaking, including new ROW, have been surveyed in the past. Most of those studies were associated with pipeline projects and were conducted along an existing alignment of Line 63. However, as many of these previous surveys were over five to ten years old, ANF recommended to survey all existing and proposed ROWs, where any ground disturbance associated with the proposed Project would occur, including dirt and paved access routes.

The initial cultural resources survey was conducted in January 2013 along the proposed 3.4 mile (5.5 km.) re-route of Line 63 and approximately 4.6 miles (11.5 km.) of access routes, including existing dirt and paved roadways (Smith and Delu 2013a). Subsequently, due to a slight re-alignment of the proposed Line 63 re-route, Smith and Delu (2013b), between May and July of 2013, conducted another cultural resources inventory of the 0.9 mile (1.4 km.) long proposed re-route segment. Lastly, Smith and Delu (2013c) prepared another cultural resources survey report addressing the proposed Geotechnical Borings and HDD along the proposed re-route of Line 63. The cultural resources survey encompassed approximately 1.4 miles (2.1 kilometers) of proposed lay down areas, access roads, and each proposed geotech boring location.

None of the studies conducted by Smith and Delu (2013a, 2013b, 2013c) identified any new cultural resources; however, two previously documented historic period resources CA-LAN-990H (Old Ridge Route/FS No. 05-01-53-032) and CA-LAN-991H (National Forest Inn/FS No. 05-01-53-033) were identified within the APE of the proposed Line 63 re-route. Although not within the APE, the project is in close proximity to three other known resources: the "View

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Service Station Site” (Trinomial No. CA-LAN-2463H, USFS No. 05-01-53-165), the “Oly Can Site” (Primary No. P-19-003577, USFS No. 05-01-53-332), and the “Gun Club BRM Site” (Primary No. P-19-003977, USFS No. 05-01-53-370). The “Gun Club BRM Site” (Primary P-19-003977, USFS No. 05-01-53-370) is located approximately 600 feet at its closest to the APE; as such, no attempt was made to relocate this resource.

The “View Service Station Site” (Trinomial No. CA-LAN-2463H, USFS No. 01-01-53-165) is located along the shoulder of the ORR; as no excavation is planned in this area and the ORR is only being used as an access route, no attempt was made to relocate this resource. According to the most recent update for the “Oly Can Site” (Primary No. P-19-003577, USFS No. 05-01-53-332), the site could not be relocated and may have been destroyed. Like the View Service Station Site, this site is located near the shoulder of the ORR in an area where no excavation is planned; as such, no attempt was made to relocate this resource. In addition, a historic transmission line, USFS No. 05-01-53-250, crosses Fisher Springs Road.

The ORR (also known as Ridge Route Road and State Highway 4) was constructed to connect southern California with the San Joaquin Valley and areas located further north. Prior to its construction, no direct route between southern California and the San Joaquin Valley existed. The construction of the ORR began in 1914 with construction crews using mule-powered graders to clear path for the alignment of the new road. However, due to difficult and rugged terrain and the lack of funds for both blasting and the construction of bridges, the route between Castaic and Gorman had to conform to the existing topography and took 697 turns. Thus, in part it got its name because it often ran along the ridges of the mountains (Wlodarski 1991).

The ORR was opened to traffic in 1915, but was originally unpaved and had only a coating of oil to reduce and minimize dust. In 1919, construction began for a 20 feet wide swath of reinforced concrete paving approximately 4.5 inch thick with the majority of this undertaking completed by the end of 1919. Once completed, the ORR was the first paved roadway linking Los Angeles with the southern San Joaquin Valley. While the ORR provided a direct link over the mountains, its many turns proved deadly. Between 1921 and 1928, 31 people died in accidents, mostly the results of speeding, brake failure, and the driver’s failure to negotiate the ORR’s many turns. Subsequently, many of the more dangerous curves were widened and paved with asphalt and a speed limit of 15 miles per hour was imposed between Castaic School and Quail Lake (Wlodarski 1991).

The construction of the ORR also resulted in the establishment of many inns, garages, and stops along the route to cater to many drivers travelling between Bakersfield to the north and Los Angeles to the south. Among these were the National Forest Inn, the Tumble Inn, the Summit Hotel, and the Halfway Inn. In the early 1930s another, much wider, roadway known as the Alternate Ridge Route (US Route 99) was constructed and further reduced the travel time between Los Angeles and the southern San Joaquin Valley. Furthermore, with much less travel occurring along the ORR, many businesses and establishments that relied so heavily on travelers and traffic were forced to close their businesses. Subsequently, between 1963 and

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1970 construction of another, much wider and improved, Interstate Highway 5 (I-5) was completed. This new roadway with its eight lanes capable of carrying heavy traffic between Los Angeles and San Joaquin Valley made the Alternate Ridge Route simply obsolete. While several segments of the Alternate Ridge Route were incorporated into the new I-5, some segments of the windy roadway between Templin Highway and Pyramid Lake were left behind and they were not incorporated into the new alignment of I-5.

In 1991 the ORR District, which includes a portion of the ORR and the associated inns, was nominated for inclusion into the NR. The section of the ORR within the ANF between Highway 138 to the north and Templin Highway to the south was officially added to the NR in 1997 (National Register No. 97-001113). Smith (2013a), during the initial survey along the ORR, noted that many areas of the ORR were in poor condition, especially in the area between Templin Highway and Fisher Springs Road. These included deteriorating asphalt, macadam, and concrete, which are numerous and are sporadically spaced, and some areas in poor condition span the entire road surface. While the Proposed Action re-route would avoid the Old Ridge Route in its entirety, vehicle access along the ORR, could potentially cause irreversible changes to its overall integrity (surface), especially heavy equipment with non-standard, oversized rubber tires and/or oversized tracked heavy equipment.

A previously documented resource, CA-LAN-991H (National Forest Inn, FS No. 05-01-53-33), was also identified within the APE of the proposed undertaking. The resource is a historic period motel that was constructed along the Old Ridge Route (CA-LAN-990H/FS No. 05-01-53-32) in order to provide travelers with necessary road services, including lodging. While the resource has not been formally evaluated for eligibility to the NRHP, it appears to be potentially eligible as a contributing element to a larger, NRHP-listed resource (Old Ridge Route).

Paleontological Resources

Paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

Between January and July 2013, LSA on behalf of Stantec conducted a series of paleontological surveys for the proposed re-route of Line 63 (Smith 2013a, 2013b, 2013c). The initial paleontological study included the original re-route alignment of Line 63, with the second study incorporating a modified re-route alignment, and the most recent study included staging areas and access routes. LSA's Paleontological Reconnaissance Report is included in Appendix J. The three studies did not identify any new paleontological resources; however, a number of paleontological resources as reported by Govean (1993) were identified during the excavation for Mobil M70 pipeline in 1992, which runs parallel and crosses Line 63 at various locations throughout public lands managed by ANF.

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The entire APE is located within sandstone and siltstone formations classified as Peace Valley Shale Facies and Ridge Route Sandstone Facies of the Late Miocene to early Pliocene (approximately nine to three million years ago). Ridge Basin Group was also observed within the APE of the Project; limited exposures of Holocene alluvium were also observed in the bottoms of canyons. The Ridge Route Sandstone Facies was located primarily on the northwest side of the Project, while the Peace Valley Shale Facies tended to be on the southeastern portion of the project. Occasional interbeds of gravel and conglomerate were also noted, mainly in the Ridge Route Sandstone Facies, but also in the Peace Valley Shale Facies. In situ exposures were primarily limited to the cut slopes areas and also provided best visibility of the sediments, In situ outcrops were presents on the portions of the project that are still within natural terrain (Smith 2013a).

Previously documented paleontological resources included: leaves (*Cercocarpus* sp., *Equisetum* sp., *Mahonia* sp., *Populus parcedata*, *Populus* sp., *Rhus* sp., *Salix* sp., and many other identified plants), fish coprolites, pygmy rabbit (*Brachylagus idahoensis*), plant material including *Sabal* sp., fish operculum, plants including *Ceanothus* sp., unidentified dicot leaf, and fragments of palm or wood (Govean 1993). All of these resources were previously identified within the PAALP Line 2000 ROW that would be used as part of Line 63 re-route. Additionally, according to the online search of the fossil localities maintained by the University of California Museum of Paleontology (UCMP) at Berkley, both the Peace Valley Shale Facies and the Ridge Route Formation that are exposed within the current APE, have produced fossils in other areas where these units are mapped, including other pipeline projects. Previous fossil finds included: vertebrates, invertebrates such as bivalves and gastropods, and impressions of well-preserved leaves. In addition, the UCMP knows of two localities in the Gorman area, approximately 20 miles north of the current APE, which reportedly contained remains of a fossil antelope (*Ottoceros peacevalleyensis*) from within the Peace Valley Shale Facies of the Ridge Basin Group (Smith 2013a).

Smith (2013a, 2013b, 2013c) indicated that trenching for the installation of Mobil M70 pipeline, which runs parallel to PAALP Line 63 and Line 2000, encountered a number of paleontological resources. Moreover, sandstone and siltstone formations known as Peace Valley Shale Facies and Ridge Sandstone Facies, which occur along the proposed Action Re-route, have produced finds which included: vertebrates, invertebrates such as bivalves and gastropods, impressions of well-preserved leaves, and the remains of a fossil antelope (*Ottoceros peacevalleyensis*).

3.3.2 Regulatory Framework

Cultural Resources

For cultural resources the proposed Line 63 Re-route Project is subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations (36 Code of Federal Regulations [CFR] 800) as it has the potential to cause adverse impacts to such resources. Generally, the assessment of project impacts on cultural resources is a process in which: 1) determination of whether cultural resources (defined as prehistoric

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archaeological, historic archaeological, or historic architectural resources) are located within an area of undertaking is made, and if such resources are identified, then, 2) a determination of whether such undertaking could cause an irreversible adverse change to such resources is evaluated.

The Native American Graves Protection and Repatriation Act (NAGPRA) (Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants and Indian tribes with respect to the treatment, repatriation, and disposition of cultural items, with which they can show a relationship of lineal descent or cultural affiliation. One major purpose of this statute is to require that Federal agencies receiving Federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The agencies must consult with Indian Tribes to attempt to reach agreements on the repatriation or other disposition of these remains and objects.

The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes be consulted whenever archeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act.

Paleontological Resources

For paleontological resources the proposed re-route of Line 63 is subject to the Omnibus Public Land Management Act (OPLMA) of 2009 (Public Law 111-011), Title VI, Subtitle D, Sections 6301-6312 of this Act is also known as the Paleontological Resources Preservation Act (PRPA), which dictates that any undertaking conducted on public lands shall follow procedures that will protect and preserve those resources for scientific study and future generations.

ANF 2005 Land Management Plan

The 2005 Forest Plan for the ANF includes a description of Program Strategies (Part 2, Appendix B) which addresses goals for heritage resource protection, including protecting heritage resources for cultural and scientific value and public benefit. Heritage (cultural) resources consist of prehistoric and historic archaeological sites, standing buildings and structures, and properties of importance to Native Americans and other ethnic groups.

3.3.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

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Construction activities associated with the Proposed Action would require excavation and grading for pipeline installation. A majority of pipeline re-routing/replacement would occur within existing and previously disturbed pipeline ROWs (Line 2000 and/or Line 63). Based on field surveys and reports prepared by LSA (Smith and Delu 2013a, 2013b, 2013c), it appears that existing ROWs have been heavily impacted by installation of crude oil pipelines and natural gas pipelines.

It is anticipated that the equipment used during construction would include, but would not be limited to the following: backhoes, dozers, track excavators, water trucks, welding trucks, 2-ton flatbed trucks, flatbed lowboy trailers, air compressors, service trucks, pickup trucks, and workers personal vehicles. Based on information provided by PAALP, the following construction methods would be utilized during the proposed project: 1) area requiring new ROW would be cleared of brush and moderate grading may occur to prepare the area for construction and to create a more uniform surface; 2) areas within the existing ROW may need to be cleared of brush and minor grading may be required before any repair activities take place; 3) access to work areas would be via existing roadways, including paved and unpaved access routes (no new roads would be created during the proposed project); 4) work within the existing ROW would require that existing pipeline may be excavated and removed and/or pipeline segments may be excavated and repair may be conducted in place, as needed and determine by PAALP; 5) excavation depths may vary, but it is anticipated that excavation depths for the new re-route would not exceed ten feet; 6) once pipeline segments have been installed in the trench, or any needed repairs have been made, the trench would be backfilled and the soil would be compacted to avoid erosion; 7) ROW cleanup, erosion control, and re-vegetation activities would take place as needed; 8) existing access routes may be widened to accommodate access for heavy equipment, as needed.

Generally, it is anticipated that required repairs within an existing ROW would be conducted within an already disturbed context. Proposed repairs conducted within the proposed re-route, thus within new ROW, would be conducted in areas that are relatively disturbance free. The only exception is the proposed segment of Line 63 that would run parallel to PAALP Line 2000, in which any proposed repairs would be conducted adjacent to areas that have been heavily disturbed for the construction of crude oil and gas pipelines.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce effects to cultural and paleontological resources as a result of the Project can be found in Section 2.3.1.

3.3.3.1 Preferred Re-Route (Proposed Action)

The Line 63 and Line 2000 ROWs in the vicinity of the proposed re-route are in remote, mountainous terrain. The ROWs intersect or are adjacent to roadways at limited locations.

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Access to project work areas would be through Fisher Springs Road, the ORR, Templin Highway, and approved spurs branching off these roads. Initial access to these roads is gained from I-5. The ORR surface would be protected from damage from heavy equipment with a layer of dirt, steel plates, rubber pads, or other approved method. In order to prevent adverse effects to the historically significant ORR, PAALP shall implement Environmental Commitments CULT-1, CULT-2, CULT-3, and UNV-3 during construction of the Proposed Action. In addition, PAALP shall implement CULT-7 to reduce the potential for substantial adverse effects to paleontological resources to occur.

3.3.3.1.1 Adversely affect through alteration, direct or indirect, of the characteristics of a historic property that qualifies for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Pipeline Replacement and Re-Route

The Proposed Action re-route could potentially have a direct impact on a previously documented historic resource (CA-LAN-990H/FS No. 05-01-53-032/Old Ridge Route), which is a historic property listed on the NRHP (NR No.97-001113). The Proposed Action could also result in direct or indirect impacts to other previously documented historic period resources, CA-LAN-991H (National Forest Inn/FS No. 05-01-53-033) and the "View Service Station Site" (Trinomial No. CA-LAN-2463H, USFS No. 01-01-53-165), located along the shoulder of the ORR.

Thus, the Proposed Action re-route would potentially adversely affect the characteristic historic property listed on the NRHP (NFI and other sites (mentioned above) potentially eligible to the NRHP.) In order to reduce the potential for substantial adverse effects Environmental Commitments CULT-1, CULT-2, CULT-3, CULT-4, CULT-5, CULT-6, and UNV-3 shall be implemented and followed throughout the duration of the project to render such effect less than significant. Additionally, any protection measures should be approved by the ANF prior to the commencement of construction activities.

Implementation of the Proposed Action would not result in a substantial adverse effect.

3.3.3.1.2 Cause a substantial adverse change in the significance of a unique archeological resource.

Pipeline Replacement and Re-Route

The Proposed Action re-route would traverse approximately 0.27 miles of previously undisturbed terrain, with the remaining two miles comprised of previously disturbed terrain along PAALP Line 63 and Line 2000 ROWs. Cultural resource surveys and archival background research conducted along the Proposed Action re-route alignment did not identify any new archaeological resources. While there is always a chance of encountering buried,

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undocumented resources; given the terrain, topography and proximity to existing and already disturbed PAALP Line 63 and Line 2000 ROWs, the likelihood of disturbing archaeological resources is low.

While the proposed Project activities associated with pipeline replacement and re-route would be located outside the boundaries of CA-LAN-990H/FS No. 05-01-53-032/Old Ridge Route and CA-LAN-2463H/FS No. 01-01-53-165/View Service Station Site), the potential exists that inadvertent, adverse impacts could occur during project development as a result of staging activities or traffic along the Old Ridge Route if no specific environmental commitments are implemented. In addition, a portion of the pipeline reroute will go through the previously disturbed boundaries of CA-LAN-991H/FS No. 05-01-53-033/National Forest Inn which could adversely affect archaeological resources. In order to reduce the potential for irreversible effects, PAALP shall implement Environmental Commitments CULT-1, CULT-2, CULT-3, CULT-4, CULT-5, CULT-6, and UNV-3. Implementation of the Proposed Action would not result in a substantial adverse effect.

3.3.3.1.3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Pipeline Replacement and Re-Route

The Proposed Action re-route would traverse approximately 0.27 miles of previously undisturbed terrain, with the remaining two miles comprised of previously disturbed terrain along PAALP Line 63 and Line 2000 ROWs. Any ground disturbing activities, including trenching along existing PAALP Line 63 and Line 2000, as well as trenching within a previously undisturbed ROW, has the potential to encounter paleontological resources. Based on information provided by Smith (2013a, 2013b, 2013c) the likelihood of encountering buried paleontological resources during ground disturbing activities appears to be very high. In order to reduce potential adverse effects to paleontological resources, PAALP would implement Environmental Commitment CULT-7.

Implementation of the Proposed Action would not result in a substantial effect on unique paleontological resources or sites or unique geologic features.

3.3.3.1.4 Disturb any human remains, including those interred outside of formal cemeteries.

Pipeline Replacement and Re-Route

The Proposed Action re-route would traverse approximately 0.27 miles of previously undisturbed terrain, with the remaining two miles comprised of previously disturbed terrain along PAALP Line 63 and Line 2000 ROWs. Cultural resource surveys and archival background research conducted along the Proposed Action re-route alignment did not identify any new archaeological resources or new or known cemeteries. While there is always a possibility that activities could encounter buried, undocumented resources, given the terrain, topography and

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proximity to existing PAALP Line 63 and Line 2000 ROWs, the likelihood of disturbing human remains during project related ground disturbing activities is low. However, if human remains are encountered during construction, State Health and Safety Code Section 7050.5 requires that no further work shall continue at the location of the find until the County Coroner has made all the necessary findings as to the origin and distribution of such remains pursuant to Public Code Resources Code Section 5097.98. Depending on the findings of the County Coroner, NAGPRA may also be implemented to repatriate or manage human remains in consultation with affiliated Indian tribes. Therefore, implementation of the Proposed Action would have no adverse effect on human remains.

3.3.3.2 No Action Alternative

Under No Action Alternative, no construction activities associated with pipeline re-routing and replacement would occur. Line 63 would remain idle and would not be used to transport crude oil. As Line 63 is classified as an active pipeline by the California State Fire Marshal, PAALP would continue routine O&M activities in compliance with applicable pipeline safety standards.

Crude oil would continue to be transported from Kern and Santa Barbara County oil fields to refineries in the Los Angeles areas through Line 2000. The current volume on the combined Line 63/Line 2000 system is approximately 100,000 bpd, which is 95 percent of the system capacity of 105,000 bpd. The United States Energy Information Administration believes that California's Monterey Shale formation contains 64 percent of all recoverable shale oil in the continental US. Despite producing a significant volume of oil for over 90 years, new technologies and techniques are now being pioneered and implemented to significantly increase production in California.

If additional volumes are added to the system, the pipeline would have to be prorated and volumes over 105,000 bpd would be rejected. Limitation of the pipeline would adversely affect the current trend of increasing production from Kern and Santa Barbara Counties.

Implementation of the No action Alternative would not result in a substantial effect on archaeological, historical, or paleontological resources.

3.4 ENVIRONMENTAL CONTAMINATION AND HAZARDS

3.4.1 Environmental Setting

The study area is located within the ANF in Los Angeles County. No schools or airstrips are located within five miles of the study area. The federal, regional and local environmental setting applicable to environmental contamination and hazards is presented below.

3.4.2 Regulatory Framework

Federal Standards and Regulations

Department of Transportation Pipeline and Hazardous Materials Safety Administration

To reduce the potential risk of transporting hazardous liquids by pipelines, the Federal Hazardous Liquid Pipeline Safety Act of 1979 established the basic safety standards for the transportation of hazardous liquids and pipeline facilities. Authority for enforcement of this law rests with the Department of Transportation's (DOT) Office of Pipeline Safety. Specific federal regulations concerning the safety of hazardous liquid pipelines relevant to the Preferred Re-Route (Proposed Action) are 49 Code of Federal Regulations (CFR) Part 195 (Transportation of Hazardous Liquids by Pipeline). The Elder California Pipeline Safety Act of 1981 authorized the California State Fire Marshal to exercise exclusive safety and enforcement authority over intrastate hazardous liquid pipelines. According to 49 CFR Part 195 crude oil is defined as a hazardous material and Line 63 is a common carrier, intrastate crude oil transmission pipeline; therefore it falls under the above regulations.

United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) administers numerous statutes pertaining to human health and the environment. The USEPA regulates toxic air contaminants through its implementation of the Clean Air Act (CAA). The USEPA also regulates the land disposal of hazardous materials through the Resource Conservation and Recovery Act (RCRA). Under RCRA, the USEPA regulates the activities of waste generators, transporters, and handlers (any individual who treats, stores, and/or disposes of a designated hazardous waste). RCRA further requires the tracking of hazardous waste from its generation to its final disposal through a process often referred to as the "cradle-to-grave" regulation. The "cradle-to-grave" regulation requires detailed documentation and record keeping for hazardous materials generators, transporters, and/or handlers in order to ensure proper accountability for violations.

Federal Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration (OSHA) regulates the preparation and enforcement of occupational health and safety regulations with the goal of providing employees a safe working environment. OSHA regulations apply to the work place and cover activities

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ranging from confined space entry to toxic chemical exposure. OSHA regulates workplace exposure to hazardous chemicals and activities through regulations governing work place procedures and equipment.

U.S. Department of Transportation (USDOT)

The United States Department of Transportation (USDOT) regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This Act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as RCRA, discussed previously.

2005 ANF Land Management Plan

Appendix B of the LMP summarizes management of hazardous materials within the ANF. The LMP emphasizes the importance of coordinating with federal, tribal, state, city and county agencies and local land owners to develop emergency response guidelines for hazardous spills on National Forest System land or adjacent land with potential to affect threatened, endangered, proposed, candidate or sensitive fish or amphibian habitat. In the event of hazardous material spills in known habitat on National Forest System land, the USFWS must be contacted within 24 hours. The LMP also requires that a written Materials Response Plan that addresses risk and standard cleanup procedures of hazardous materials be developed and managed for all projects within the ANF.

State Standards and Regulations

Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under RCRA and the State Hazardous Waste Control Law. Both laws impose “cradle-to-grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

California Occupational Safety and Health Administration (Cal-OSHA)

The California Occupational Safety and Health Administration (Cal-OSHA) assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 Code of Federal Regulations (CFR). Cal-OSHA standards are generally more stringent than Federal regulations.

Cal-OSHA regulations concerning the use of hazardous materials in the workplace, as detailed in Title 8 of the California Code of Regulations (CCR), include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance

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exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets (MSDSs) be available to employees and that employee information and training programs be documented.

Regional Water Quality Control Board

The State Water Resources Control Board and the Regional Water Quality Control Boards, also regulate hazardous substances, materials and wastes through a variety of state statutes including, for example, the Porter Cologne Water Quality Control Act, Cal. Water Code §13000 et seq., and the underground storage tank cleanup laws contained in Cal. Health and Safety Code §§25280-25299.8. Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within any region must file a report of waste discharge with the appropriate regional board. The Preferred Re-Route (Proposed Action) is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB).

Cortese List - Government Code Section 65962.5

The provisions in California Government Code § 65962.5 require the California Environmental Protection Agency (Cal-EPA) to compile a database listing of hazardous waste facilities and other permitted activities within their jurisdiction. This database is collectively referred to as the "Hazardous Waste and Substances Sites (Cortese) List." The sites for the list are designated by the State Water Resource Control Board, the Integrated Waste Management Board, and the DTSC.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by Federal, State, and local government and private agencies. Response to hazardous materials incidents is one part of this Plan. The Emergency Response Plan is administered by the State of California Office of Emergency Services (OES), which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol (CHP), California Department of Fish and Wildlife (CDFW), the Los Angeles RWQCB and Local Standards and Regulations.

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3.4.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

A desktop analysis was performed to determine potential impacts to the public or the environment through the routine transport, use, disposal, or release of hazardous materials. For a list of documents and websites reviewed during the desktop analysis please see the references section. All hazardous materials are currently regulated and controlled by Cal-EPA in a manner that minimizes risks of spills or accidents. Any hazardous materials used in the construction start up and operation of the Preferred Re-Route (Proposed Action) would be handled according to PAALP's Integrity Management Plan as well as applicable regulations, specifically, 49 CFR Part 195 – Transportation of Hazardous Liquids by Pipeline, Subpart F – Operation and Maintenance (§§195.501-195.509).

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. In addition to PAALP's Integrity Management Plan and applicable regulations, Environmental Commitment designed to specifically reduce potential effects associated with environmental contamination and hazards as a result of the Project can be found in Section 2.3.1.

3.4.3.1 Preferred Re-Route (Proposed Action)

3.4.3.1.1 Result in soil contamination, including flammable and/or toxic gases at levels exceeding federal, state, or local hazardous waste limits established by CFR Part 261 and Title 22 CCR 66262.21, 66261.22, 66261.23 and 66261.24.

Pipeline Replacement and Re-Route

Construction and excavation activities associated with the Proposed Action would include the use of heavy equipment and vehicles. Gasoline, diesel fuel, oil, hydraulic fluid, lubricants, paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles have the potential to be released during construction as a result of accidents, and/or leaking equipment or vehicles. A Spill Prevention and Contingency Plan (HYD-2) would be implemented as part of the Proposed Action which would serve to avoid and/or minimize the potential for an accidental release of hazardous materials to occur. Also, all vehicles and heavy equipment would be maintained in good condition and inspected daily for leaks and loose, damaged, or cracked hydraulic lines. Any chemicals used during construction would be handled in accordance with applicable federal, state and local regulations pertaining to the handling and transport of hazardous materials. With implementation of Environmental Commitment HYD-2, PAALP's Integrity Management Plan, and other applicable federal and

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state regulations, the Proposed Action would not be anticipated to result in soil contamination, including flammable and/or toxic gases at levels exceeding federal, state, or local hazardous waste limits established by CFR Part 261 and Title 22 CCR 66262.21, 66261.22, 66261.23 and 66261.24. Therefore, the Proposed Action would not result substantial adverse effects.

- 3.4.3.1.2** Result in mobilization of contaminants currently existing in the soil, creating potential pathways of exposure to humans or other sensitive receptors.

Pipeline Replacement and Re-Route

Construction activities associated with the Proposed Action would occur predominantly in previously disturbed areas where no known hazardous materials existing in the soil have been identified. Approximately 0.27 miles of the re-route would cross through previously undisturbed terrain. Although naturally occurring asbestos has the potential to occur in Los Angeles County, it is not likely that it would be present in the undisturbed terrain due to the fact that ultramafic rocks are not present. It is not expected that construction activities would result in encountering contaminants or potentially hazardous materials. However, in the event any contaminants or potentially hazardous materials are encountered, implementation of HAZ-1 (Existing Hazardous Substances Encountered) would ensure there would be no mobilization of contaminants currently existing in the soil that may create potential pathways of exposure to humans or other sensitive receptors. Therefore, there would be no substantial adverse environmental effects associated with mobilization of contaminants currently in the soil.

- 3.4.3.1.3** Cause contamination of soils or groundwater within the study area during operation of the Project, resulting in exposure of workers and/or the public to contaminated or hazardous materials at levels in excess of those permitted by the California Occupations Safety and Health Administration (Cal-OSHA) in CCR Title 8 and Federal Occupational Safety and Health Administration (OSHA) in Title 29 CFR Part 1910.

Pipeline Replacement and Re-Route

Pipeline replacement and re-route would be a short-term construction activity.

- 3.4.3.1.4** Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Pipeline Replacement and Re-Route

Construction activities would include the use of limited volumes of hazardous materials such as fuels and lubricants necessary to operate conventional construction equipment commonly used in support of pipeline installation activities. Compliance with existing regulations pertaining to the transport, storage, use, and disposal of hazardous materials during construction activities

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would be expected to minimize the potential hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Although not anticipated to occur, any releases of hazardous materials during construction would be expected to be small due to the limited volumes present and would be appropriately responded to in compliance with PAALP's Emergency Response Plan and a project-specific Spill Prevention and Contingency Plan. With implementation of Environmental Commitment HYD-2 (Spill Prevention and Contingency Plan), PAALP's Integrity Management Plan, and other applicable federal and state regulations, the Proposed Action would not be anticipated to incur any reasonably foreseeable risk of upset conditions. Therefore, the Proposed Action would not result in substantial adverse effects.

3.4.3.2 No Action Alternative

The No-Action Alternative would result in not re-routing Line 63 along the proposed alignment. There would be no use of hazardous materials associated with the No Action Alternative that could cause contamination of soils or groundwater or create a significant hazard to the public or the environment involving the release of hazardous materials into the environment. As Line 63 has been pigged and purged, the pipeline would not represent a potential source for releasing or mobilizing hazardous materials. As such, the No Action Alternative would have no impact on environmental contamination and hazards.

3.5 GEOLOGY/SOIL RESOURCES

3.5.1 Environmental Setting

The study area is located in the Transverse Range Geomorphic Province in southern California, a province characterized by east-west trending mountain ranges. The study area is located in the rugged hills of the Sierra Pelona Ridge mountain range, northwest of the San Gabriel Mountains, immediately south of the Liebre Mountains., to the northeast are the Tehachapi Mountains that separate southeastern Kern County from the Mojave Desert.

The study area (existing Line 63 ROW, existing Line 2000 ROW, and the preferred re-route cover portions of Sections 8, 16, 17, 20, 21, and 28 of Township 6 North, Range 17 West, San Bernardino Baseline and Meridian (SBBM). In the study area, surface elevations range from approximately 3,350 feet above mean sea level (msl) near the northern tie-in location down to approximately 2,640 feet above msl along Gun Club Creek Road (USGS 7.5-Minute Whitaker Peak, California Topographic Quadrangle). Surface topography is rugged, characterized by steep ridges and canyons.

Review of published geologic maps reveals that the two primary rock formations within the study area are the Tertiary (Late Miocene age) Peace Valley Formation (Tpv) and the Tertiary (Late Miocene age) Ridge Route Formation (Trr). Both formations are members of the Ridge Basin Group: Tpv is a shale facies consisting of bedded claystone, siltstone, and clay shale with thin layers of sandstone, and Trr is a sandstone facies consisting of fine to medium grained arkosic sandstone with thin interbeds of silty clay shale (Dibblee Geological Foundation Map #DF-63; Geologic Map of the Whitaker Peak Quadrangle, Los Angeles and Ventura Counties, California; 1997 and #DF-92; Geologic Map of the Liebre Mountain Quadrangle, Los Angeles and Ventura Counties, California, 2002).

The sedimentary units have been uplifted, resulting in an overall NE-SW strike with 17° to 25° dip to the NW. Both units are prone to landslides, slumps, and earth flows, all of which can and do occur following periods of heavy rain and which may occur after a significant earthquake. In the study area, there is little to no alluvium, colluvium, or soil (Dibblee, #DF-63).

The closest active fault to the study area is the San Gabriel (SGA) Fault Zone, an Alquist-Priolo (AP) strike-slip fault zone located approximately 1.5 miles west of the study area and west of I-5; however, there is no detailed AP fault zone map for the Whitaker Peak quadrangle as the mapped active traces of the SGA fault zone run along the southern frontal base of the San Gabriel Mountains approximately 45 miles southeast of the study area (California Geological Survey [CGS], 2007, Special Publication 42, Fault-Rupture Hazard Zones in California, AP Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps, Figures 4D and 4E). The second closest active fault to the study area is the San Andreas (SA) Fault Zone, another AP strike-slip fault zone located approximately 15 miles north/northeast of the study area and shown on the nearby Liebre Mountain quadrangle (CGS, Figure 4D). The trace of a small, unnamed east-west fault is located, at its closest point to the study area, approximately 1.5

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miles northeast of the Proposed Action is shown on Dibblee Map #DF-63. The exact age (date) of movement along this fault is uncertain; however, the movement is younger than Late Miocene as the fault impacted both Tpv and Trr formations. No other fault traces are shown on Dibblee Maps #DF-63 or #DF-92 within four miles of the study area.

3.5.2 Regulatory Framework

Goal 4.1a of the ANF LMP is to “Administer Minerals and Energy Resource Development while protecting ecosystem health.” Consistent with this goal, the Forest Service issues permits authorizing both project-related identification and mitigation efforts in addition to research-related investigations based on the provisions of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701 1782) and the Antiquities Act of 1906. Regulations promulgated under 36 CFR 261 state that each Regional Forester has jurisdiction over “protection of objects or places of historical, archaeological, geological or paleontological interest” (36 CFR 261.70(a)(5)), and that the following are prohibited: “Excavating, damaging, or removing any vertebrate fossil or removing any paleontological resource for commercial purposes without a special use permit” (36 CFR 261.9 (g)). FSM Chapter 2880 - Geologic Resources, Hazards, and Services contains policies and regulations related to paleontologic resource management and preservation.

3.5.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Protection of unique geological features and minimization of soil erosion are considered when evaluating potential impacts to geological resources in addition to limitations posed by geological hazards. Within the study area, unique geological/paleontological features have not been identified during the project-specific pre-construction surveys. However, the results of geohazard mapping reveal that geohazards in the form of landslides, slumps, earth flows, and erosional gullies are present throughout the study area. The geohazard mapping was performed in the study area by Stantec professional engineers and geologists licensed in the State of California, providing design and construction recommendations to reduce potential impacts from geologic hazards and/or unstable soil conditions.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce impacts to geological resources as a result of the Project can be found in Section 2.3.1.

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3.5.3.1 Preferred Re-Route (Proposed Action)

3.5.3.1.1 Expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, such as liquefaction and/or landslide.

Pipeline Replacement and Re-Route

The study area is located within a seismically active area of southern California. However, pipeline replacement and re-route activities would occur over an approximate 60-day duration and do not include any component with the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, such as liquefaction and/or landslide. The Proposed Action would not expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, such as liquefaction and/or landslide.

3.5.3.1.2 Result in substantial soil erosion or the loss of topsoil.

Pipeline Replacement and Re-Route

The Proposed Action would have a total length of approximately 12,000 linear feet, or 2.27 miles, between Line 63 MPs and 37.6 and 40.3. The first approximately two miles of the Proposed Action alignment would be located within the existing previously-disturbed Line 2000 ROW beginning near the south end of the Osito Canyon Slide whereas the remaining approximately 0.27 miles would be comprised of previously un-disturbed terrain between the Line 63 and Line 2000 ROWs. The existing Line 2000 ROW is an excavated bench cut into bedrock (Tpv or Trr). There is Recent Alluvium within Gun Club Creek where the proposed re-route crosses the creek. The Proposed Action cuts across a short section of Gun Club Creek. During construction, there may be a small amount of temporary soil erosion or loss of topsoil.

The remaining approximate 0.27-mile segment would cross previously-undisturbed land, cutting along hilltop bedrock ridges with minimal soil. As such, there would be minimal disturbance to soil during construction through this area. To avoid adverse impacts resulting in soil erosion or loss of topsoil, PAALP would implement Environmental Commitment GEO-1 (Implement a SWPPP and Best Management Practices). Therefore, the Proposed Action would not result in substantial adverse effects involving substantial soil erosion or loss of topsoil. In addition to the Proposed Action ROW, an adjacent pipe laydown area comprising approximately 6.43 acres would support the HDD operations proposed at Line 63 MP 39.9, as discussed in Section 2.1.2. Approximately 1.29 acres of this area (40-foot wide corridor within the 1,400 foot long laydown area) would require grading. BMPs set forth in the SWPPP would be implemented to minimize the potential for soil erosion associated with the HDD Laydown Area grading. Therefore, the Proposed Action would not result in substantial adverse effects to geology and soil resources.

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3.5.3.1.3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Pipeline Replacement and Re-Route

The Proposed Action alignment was selected based on the results of aerial and ground-based geohazard mapping and primarily occurs along the existing Line 2000 ROW in previously-disturbed areas of excavated bedrock with little to no soil. In the relative absence of soil, the potential occurrence of lateral spreading, subsidence, liquefaction, and collapse during and after construction would be minimized.

The remaining portion of the Proposed Action ROW would be along previously undisturbed steep sloped and heavily vegetated land located between the Line 2000 and 63 ROWs. Surficial bedrock exposures were not observed on the steep slopes; however, only a thin veneer of soil would be expected to be present overlying near-surface bedrock on the steep slopes.

Construction of the Proposed Action would not be expected to result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse as a result of unstable geologic units or soils. Therefore, the Proposed Action would not result in substantial adverse effects to geology and soil resources.

3.5.3.2 No Action Alternative

Under the No Action Alternative, there would be no construction activities associated with pipeline replacement and re-routing and no impact on risk of loss from seismic activity, soil erosion, or unstable geologic units. As Line 63 is classified as an active pipeline by the CSFM, PAALP would continue to maintain Line 63 in compliance with the requirements of 49 CFR Part 195. These maintenance activities would not be expected to have the potential for substantial risk of loss or result in unstable geologic units/soils. BMPs would be implemented during maintenance to minimize the potential for soil erosion. The No Action Alternative would not result in substantial adverse effects to geology and soil resources.

3.6 GREENHOUSE GAS EMISSIONS

3.6.1 Environmental Setting

Greenhouse Gases (GHGs) are defined as any gas that absorbs infrared radiation in the atmosphere. Common GHGs include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), ozone (O₃), and aerosols (Hendrix et al., 2007). GHGs are emitted by both natural processes and human activities, and lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the "Greenhouse Effect." There is increasing evidence that GHGs and the Greenhouse Effect are leading to global warming and climate change (USEPA, 2007).

Climate change refers to any significant change in measures of climate (e.g., temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (such as changes in ocean circulation); human activities that change the atmosphere's composition (such as burning fossil fuels) and the land surface (such as urbanization) (IPCC, 2007). "The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems" (California Health & Safety Code, Division 25.5, Part 1).

3.6.2 Regulatory Framework

In September 2006, the Global Warming Solutions Act of 2006 (AB 32) was signed into law by former Governor Arnold Schwarzenegger. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020, which will result in a roughly 25 percent reduction from Business as Usual (BAU) estimates. The law requires this reduction to be accomplished through a variety of measures, including an enforceable statewide cap on greenhouse gas emissions that will be phased-in starting in 2013. AB 32 directs California Air Resources Board (CARB) to develop and implement regulations to reduce statewide greenhouse gas emissions from stationary sources.

CARB adopted the AB 32 Scoping Plan on December 12, 2008. The Scoping Plan provides the outline for future actions to reduce California's GHG emissions and establishes a schedule for CARB and other state agencies to adopt implementing regulations and other initiatives to reduce GHG emissions.

CARB has adopted a number of measures required by the Scoping Plan, which calls for the remaining measures to be adopted by the start of 2011 and to be in effect on or before 2012. One of the most significant measures called for in the Scoping Plan is the statewide cap on

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emissions from the largest sources of GHG emissions. The cap-and-trade regulation was approved by CARB on December 16, 2010, following public review and comment. This regulation calls for a phased program starting in 2012, which includes electricity producers, electricity imports, and large industrial facilities (those with greater than 25,000 metric tons carbon dioxide per year). Starting in 2015, distributors of transportation fuels, natural gas, and other fuels will be included in the cap-and-trade program.

Facilities covered in the cap-and-trade program are not given a specific limit on their GHG emissions but must supply a sufficient number of allowances (each covering the equivalent of one metric of carbon dioxide equivalent [CO₂e]) to cover their annual emissions. Each year, the total number of allowances issued in the state drops, requiring covered facilities to find the most cost-effective and efficient approaches to reducing their emissions. Facilities without sufficient allowances to cover their annual emissions must acquire additional allowances or offsets. By the end of the program in 2020, there will be a reduction in GHG emissions sufficient to reach the same level of emissions as the state experienced in 1990, as required under AB 32.

3.6.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

The Draft South Coast Air Quality Management District (SCAQMD) CEQA significance level (SCAQMD 2008) for industrial projects of 10,000 metric tons of CO₂e emissions per year is used to characterize greenhouse gas/climate change impacts; where a project's construction emissions are divided by its anticipated lifetime and added to the project's annual operating emission per SCAQMD guidance for industrial projects. Considering the lack of adopted GHG significance criteria applicable to the project, the above threshold is used in the below impact analysis.

3.6.3.1 Preferred Re-Route (Proposed Action)

3.6.3.1.1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Pipeline Replacement and Re-Route

Construction activities associated with the Proposed Action would require the operation of on-road vehicles and conventional off-road construction equipment that would emit GHG emissions from engine exhaust. GHG emissions for the Proposed Action have been estimated using California Air Resources Board's EMFAC and CalEEMod emissions inventory models. GHG emissions estimates for the Proposed Action are included in Appendix B. Table 3.6-1, below, presents a summary of the estimated total GHG emissions as a result of implementing the Proposed Action.

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Table 3.6-1: Total Estimated Project GHG Emissions (Proposed Action)

Project Components	Total Tons			Total Metric Tons			Total Metric Tons
	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂ e
Off-Road Equipment Emissions	274.74	0.05	--	249.24	0.05	--	250.19
On-Road Vehicles Emissions	53.50	0.00	0.00	48.54	0.00	0.00	48.63
Total Project Emissions	328.24	0.05	0.00	297.78	0.05	0.00	298.82
Draft SCAQMD Threshold							10,000
Project Emissions Exceed SCAQMD Threshold?							No
Note: Emissions estimates rounded to nearest one hundredth.							

As shown above in Table 3.6-1, the Proposed Action’s estimated 298.82 metric tons CO₂e for construction is below the interim 10,000 metric tons CO₂e significance threshold. As such, the Proposed Action would not generate greenhouse gas emissions, either directly or indirectly, that would have a substantial adverse effect on the environment.

3.6.3.1.2 Conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Pipeline Replacement and Re-Route

There are existing regulations/ policies that would apply indirectly to reduce GHG emission from project construction and operation, such as fuel and equipment standards. The project would be constructed or maintained in compliance with these plans, policies and regulations.

The USEPA has developed 40 CFR Part 98, the Mandatory Reporting of Greenhouse Gases rule, to require mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons CO₂e emissions per year. On September 30, 2009, USEPA proposed 40 CFR Part 52 to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO₂e emissions exceed 75,000 tons per year (USEPA, 2009). Since the Proposed Action would not include any stationary source of CO₂e emissions, it would not trigger GHG reporting or PSD permitting under federal regulations.

In 2006, in response to concerns related to global warming and climate change, the California State Legislature adopted Assembly Bill 32 (AB 32), the “California Global Warming Solutions Act of 2006.” CARB promulgated regulations for mandatory GHG emission reporting to comply with AB 32 (CARB, 2011b). On December 16, 2010, the structure of the cap and trade regulations was adopted. The program started on January 1, 2012, with an enforceable compliance obligation beginning with 2013 GHG emissions. The Proposed Action does not include stationary sources of greenhouse gas emissions subject to the cap and trade regulations. Furthermore, the facilities that Line 63 connects to are already permitted and in compliance with applicable cap and trade regulations.

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The 2005 ANF Land Management Plan does not include any plan, policy or regulation pertaining to GHG emissions or climate change. In addition, Los Angeles County does not have an adopted Climate Action Plan. Considering the above, the Proposed Action is not expected to conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

3.6.3.2 No Action Alternative

Under the No Action Alternative, no pipeline re-route would be completed and no GHG emissions from pipeline re-route/replacement activities would result. PAALP would continue to maintain Line 63 in accordance with applicable pipeline safety regulations as it is considered an active pipeline by DOT/CSFM criteria. The No Action Alternative would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 Environmental Setting

Regional Setting

The study area is located outside of known, mapped groundwater basins (California Department of Water Resources [DWR], Bulletin 118 [last update February 27, 2004] and Bulletin 130-85; and the Los Angeles Regional Water Quality Control Board [LARWQCB] Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, 1994, latest Amendments adopted October 28, 2011). The closest known and mapped groundwater basin is the Santa Clara River Valley East basin (DWR Basin ID# 4-4.07), located approximately nine miles southeast of the study area (DWR, Bulletin 118 and RWQCB Basin Plan, Figure 3.7-1). The LARWQCB the primary regional governing agency for the protection of water quality in the study area and the County of Los Angeles would be the local governing agency for protection of water quality in the study area. Similarly, the 2005 ANF LMP calls for the protection/maintenance of the watershed, including water flow, retention, and water quality management.

According to the DWR, the study area straddles the border between two hydrologic areas (surface drainage watersheds): the Upper Piru Hydrologic Subarea (HSA), Piru Hydrologic Area (HA), Santa Clara-Calleguas Hydrologic Unit (HU), Los Angeles Hydrologic Basin (HB) (also known as DWR hydrologic ID# U-03.02) and the Eastern HSA, Upper Santa Clara River HA, Santa Clara-Calleguas HU, Los Angeles HB (DWR hydrologic ID# U-03.E1).

The closest surface water body is Castaic Lake, whose northwestern-most arm closest to the study area is Elderberry Forebay located 1.5 miles southeast of the study area. The project would cross several unnamed drainages that are tributaries to Gun Club Creek. Additionally the Proposed Action would cross Gun Club Creek, represented by a blue-dashed line on the USGS Whitaker Peak, Calif. 7.5-Minute topographic quadrangle (Figure 3.7-2).

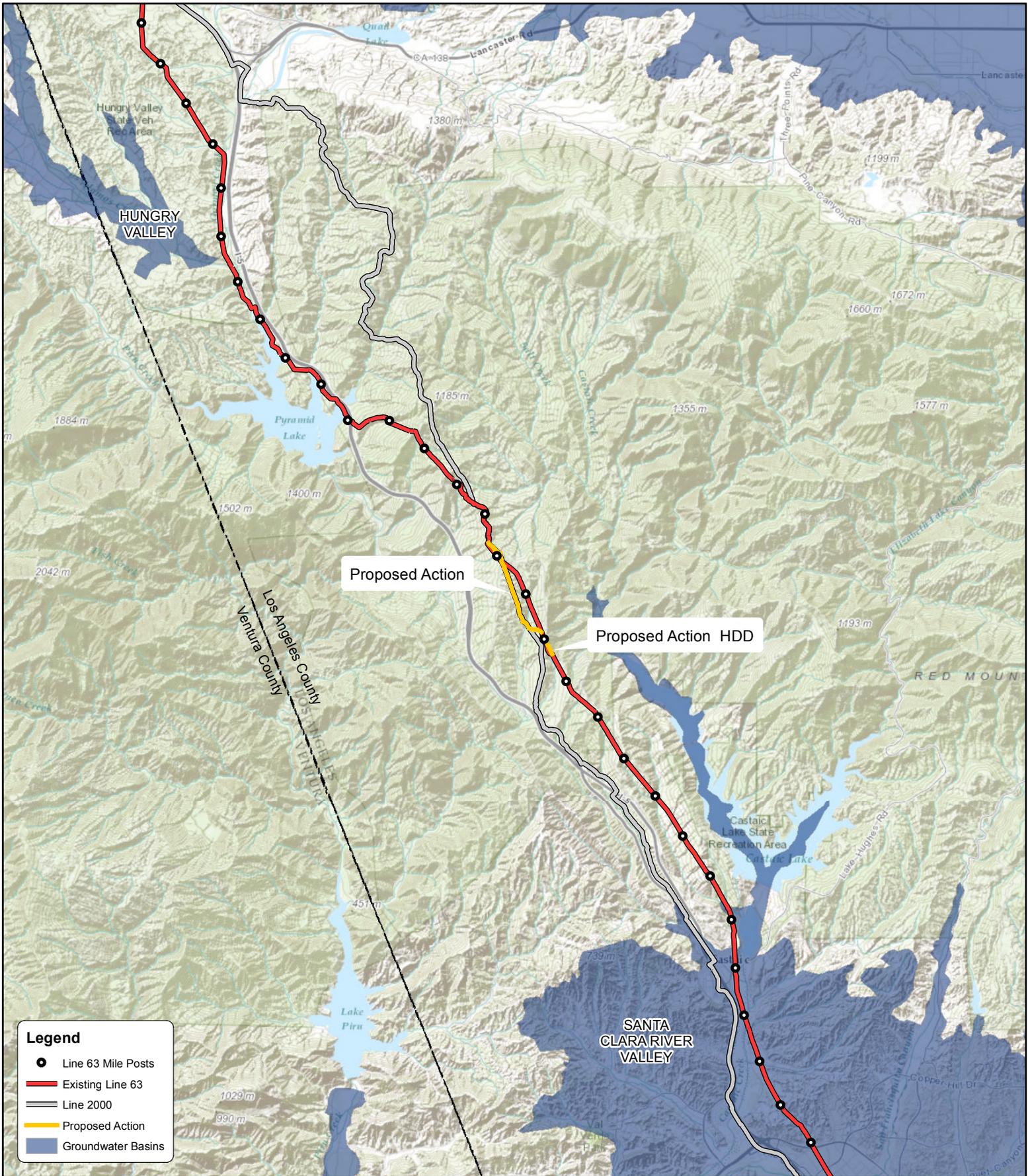
Flooding

The Federal Emergency Management Agency (FEMA) oversees the delineation of flood zones and the provision of Federal disaster assistance. FEMA manages the National Flood Insurance Program (NFIP) and publishes the Flood Insurance Rate Maps (FIRMs), which show the expected frequency and severity of flooding by area. Floodplains are divided into flood hazard zones designated by the potential for an area to flood. Flood Zones designated as shaded and unshaded Zone X include those areas that are located within the 100-year flood plain but are adequately protected by levee systems, while Zone A, AE, and AO are designated as areas inundated by a 100-year storm event. Zone AE is further defined as “the base floodplain where base flood elevations are provided”. Zone D are designated as areas where no flood hazard analysis has been conducted and flood hazards are considered possible but undetermined (FEMA, 2013).

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The study area is located within FEMA designated Zone D or areas where flood hazards are possible but undetermined. Castaic Lake just downstream of the study area is designated by FEMA as Zone A, or 100-year flood zone. FEMA 100-year flood zones are shown on Figure 3.7-3.



Legend

- Line 63 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action
- Groundwater Basins

Line 63 - Plains Pipeline, LP

Line 63
California Department of Water Resources - Groundwater Basins

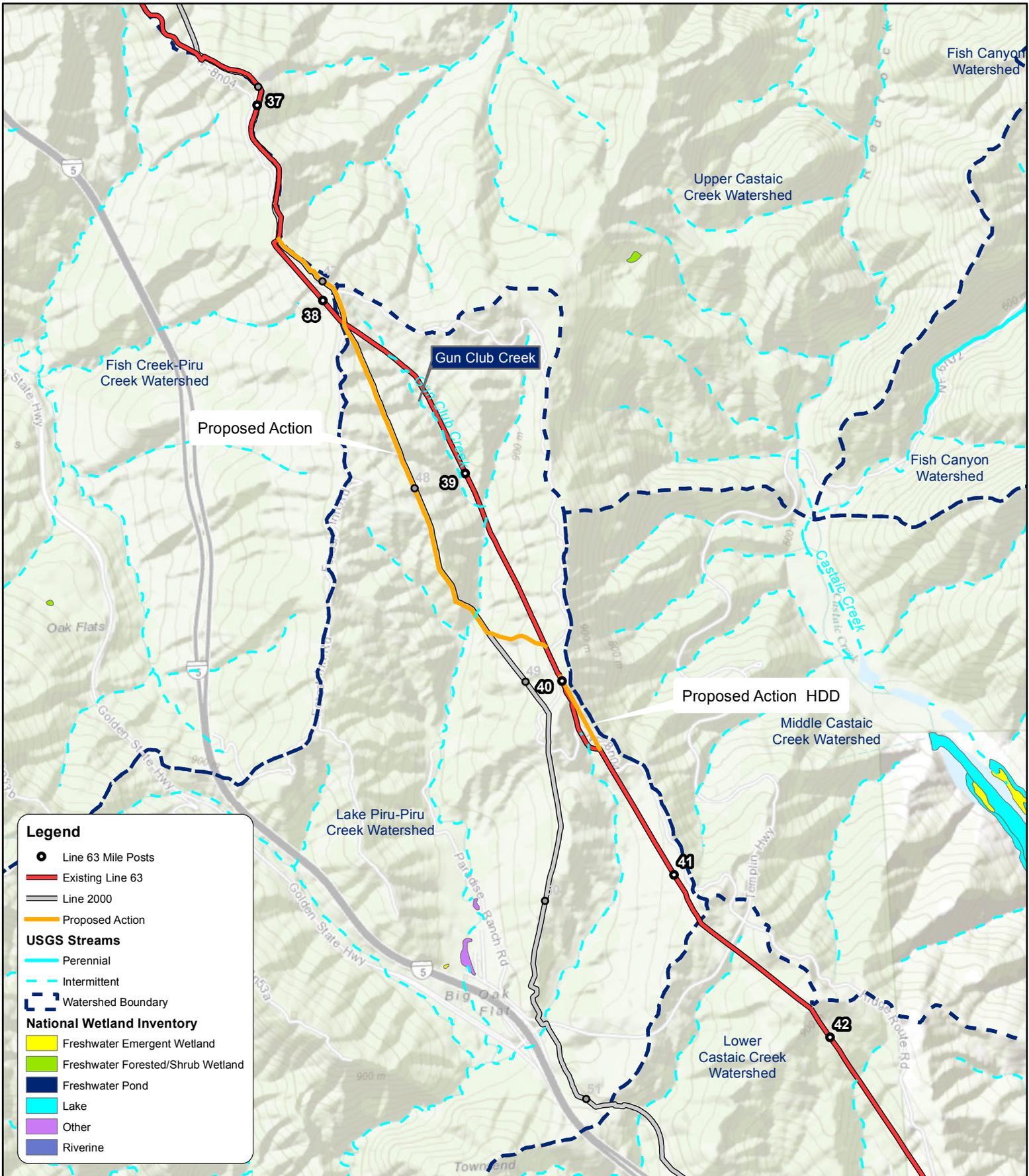


N

0 1 2 3 4
Miles

Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

PREPARED BY		PREPARED FOR	
DRAFT DATE	May 17, 2013	SCALE	1:164,000
REVISION DATE	Feb 22, 2014	PROJECT	185702504
DRAWN	CHECKED	APPROVED	FIGURE NO. 3.7-1
KG	SR	DR	



Legend

- Line 63 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action

USGS Streams

- Perennial
- Intermittent

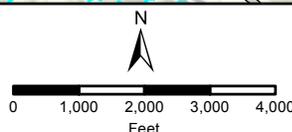
— Watershed Boundary

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

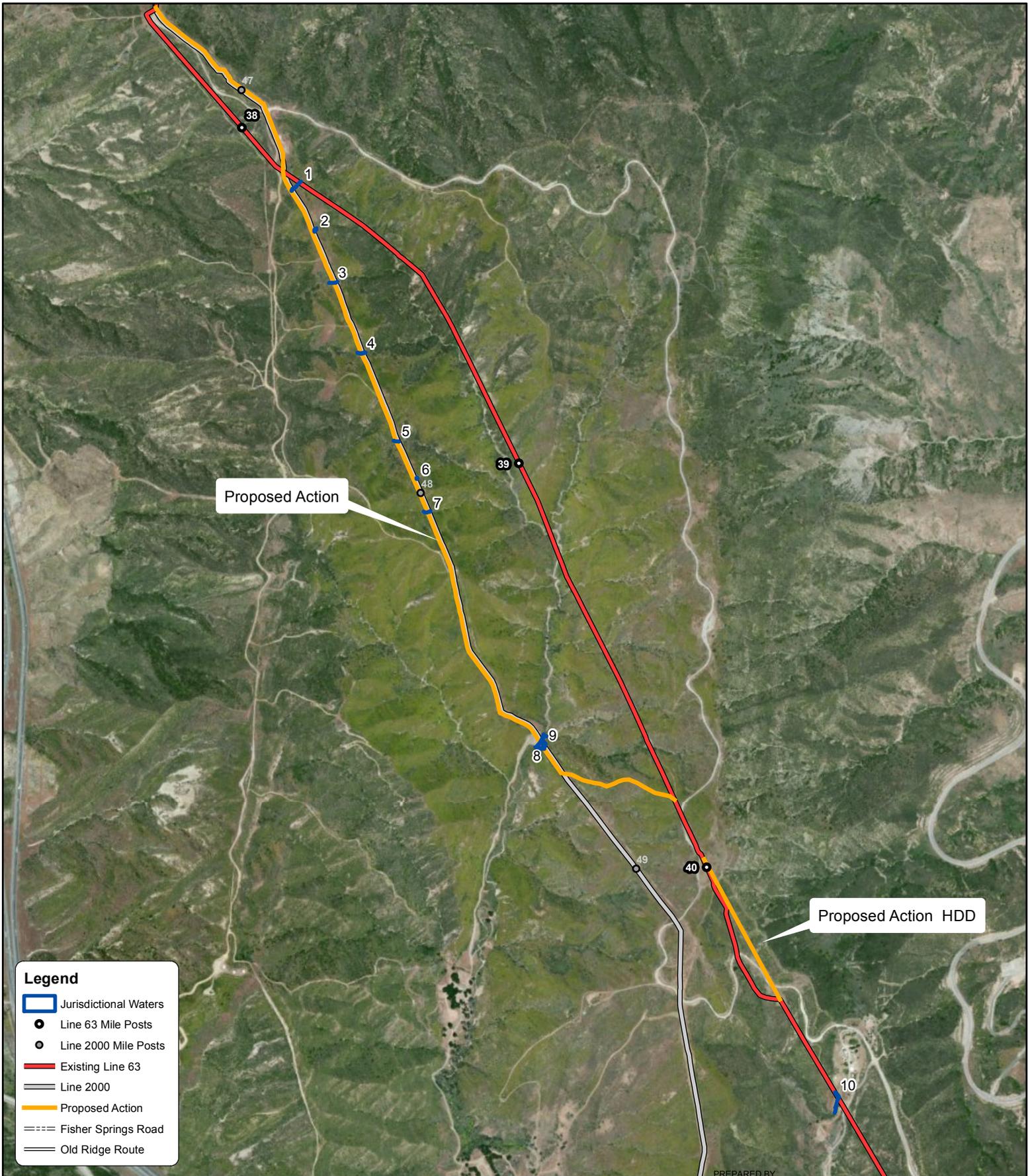
Line 63 - Plains Pipeline, LP

Line 63 Waterways and Watersheds



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

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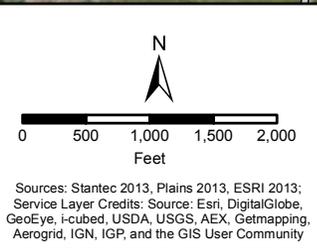
Legend

- Jurisdictional Waters
- Line 63 Mile Posts
- Line 2000 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action
- Fisher Springs Road
- Old Ridge Route

Line 63 - Plains Pipeline, LP

Line 63 Potential Waters of the US

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3.7.2 Regulatory Framework

The regulatory requirements applicable to the Proposed Action include regulations for surface water and groundwater quality, flood prevention, and dewatering operations during construction on the federal level.

Federal Standards and Regulations

Clean Water Act

The Clean Water Act (CWA) (33 USC § 1251-1376), as amended by the Water Quality Act of 1987, is the major Federal legislation governing water quality. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Important sections of the Act are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 (Water Quality Certification or waiver of Water Quality Certification) requires an applicant for any Federal permit that proposes an activity, which may result in a discharge to waters of the United States to obtain certification from the state that the discharge would comply with other provisions of the Act.
- Section 402 establishes the National Pollution Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the State Water Resources Control Board (SWRCB) and is discussed in detail below.
- Section 404 establishes a program to permit the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA).
- Section 305(b) of the Clean Water Act requires states to assess and report on the water quality status of waters within the states. Section 303(d) requires states to list waters that are not attaining water quality standards. This is also known as the list of impaired waters. This information is reported to Congress on a nationwide basis.

Federal Anti-Degradation Policy

The Federal Anti-degradation Policy is part of the CWA (Section 303(d)) and is designed to protect water quality and water resources. The policy directs states to adopt a statewide policy that includes the following primary provisions: (1) existing in-stream uses and the water quality

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necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Federal Emergency Management Agency

Los Angeles County participates in the NFIP, a Federal program administered by the FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 adopted a desired level of protection that would protect developments from floodwater damage associated with an Intermediate Regional Flood (IRF), a flood which is defined as a flood having an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year.

FEMA prohibits encroachment and construction activities within the adopted regulatory floodway including fill; new construction, substantial improvements, and other development; unless through hydrologic and hydraulic analyses (H&H), it can be shown the proposed encroachment would not result in any increase in flood levels (FEMA, 2010).

State Standards and Regulations

Porter Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (California Water Code, Sections 13000-13999.10) , “waters of the state” fall under the jurisdiction of the State Water Resource Control Board (SWRCB) and the Regional Water Resource Control Boards (RWQCBs). RWQCBs must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. In most cases, the RWQCBs seek to protect these beneficial uses by requiring the integration of water quality control measures into projects that will result in discharge into waters of the state. Projects that affect wetlands or waters of the state must meet waste discharge requirements (WDRs) of the RWQCBs, which may be issued in addition to a water quality certification (or waiver) under Section 401 of the CWA. This jurisdiction includes waters (including wetlands and isolated wetlands) that USACE deems to be isolated or non-jurisdictional with respect to the SWANCC decision (see discussion above under Sections 404 and 401 of the CWA). For waters of the state not subject to Section 404, the SWRCB and the RWQCB would authorize impacts by issuing a waste discharge requirement or in some cases, a waiver of waste discharge requirements.

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Local Regulations

County of Los Angeles

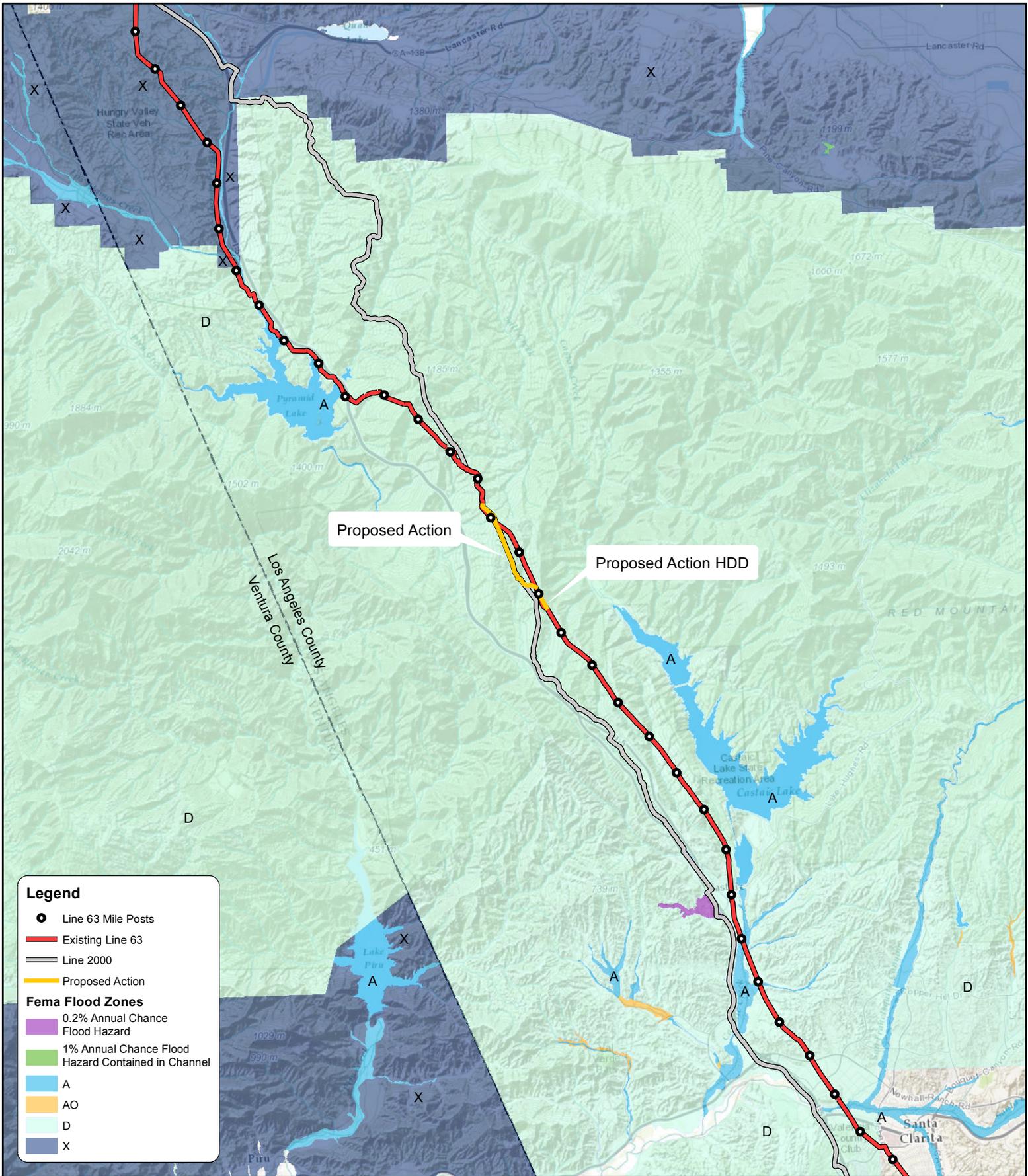
According to the LARWQCB Basin Plan (Basin Plan), the Castaic-related inland surface waters (Castaic Lagoon, Castaic Lake, and Elderberry Forebay) have the following listed existing beneficial uses: municipal (MUN); agricultural (AGR); industrial process supply (PROC, processes that depend on good water quality); industrial service supply (IND, water uses that do not depend so highly on water quality such as fire protection water, mining, or oil well re-pressurization); groundwater recharge (GWR); freshwater replenishment (FRSH); hydropower generation (POW); warm water habitat (WARM); wildlife habitat (WILD); rare-threatened-endangered species (RARE); and spawning-reproduction and/or early development (SPWN).

Also according to the Basin Plan, the Santa Clara River Valley East groundwater basin has the listed beneficial uses: MUN, AGR, PROC, IND, and GWR.

The study area does not have a waterway designated on the State of California Section 303(d) list of waters that are not attaining water quality standards. This is also known as the list of impaired waters: The nearby waters on the 303(d) list include:

- Pyramid Lake – Mercury (TMDL completion in 2021)
- Piru Creek – Chloride (completion in 2019); pH (completion in 2019)
- Castaic Lake – Mercury (completion in 2021)

However, these waterways are not in the study area. Gun Club Creek which is crossed by the project is tributary to Castaic Lake.



Proposed Action

Proposed Action HDD

Legend

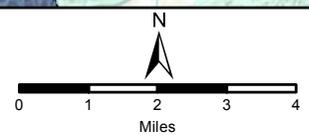
- Line 63 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action

Fema Flood Zones

- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard Contained in Channel
- A
- AO
- D
- X

Line 63 - Plains Pipeline, LP

Line 63 Fema Flood Zones



Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

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3.7.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Impacts to hydrology and water quality have been identified based on the predicted interaction between construction activities compared to existing (baseline) conditions.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce effect to hydrology and water quality as a result of the Project can be found in Section 2.3.1.

3.7.3.1 Preferred Re-Route (Proposed Action)

The Proposed Action entails the installation of a Line 63 re-route along the existing Line 2000 corridor and a horizontal direction drill connection. This Alternative runs along a ridge crossing tributaries to Gun Club Creek at or above their headwaters; thereby, minimizing drainage crossings. Thus the Proposed Action entails crossing narrow headwater ephemeral tributaries to Gun Club Creek a total of ten times in existing disturbed areas (Line 2000 ROW) (Table 3.2-1 in Section 3.2, Biological Resources).

3.7.3.1.1 Violate any water quality standards or waste discharge requirements, create any substantial new sources of polluted runoff, or otherwise degrade water quality.

Pipeline Replacement and Re-Route

During construction of the 2.27 mile pipeline Proposed Action, temporary surface water quality degradation could potentially occur as a result of soil erosion (removal at construction location) or sedimentation (deposition at a location separate from removal location), or due to the accidental spill or release of petroleum materials from the construction equipment, such as fuels or oils. Soil disturbance would occur along the proposed 2.27 mile re-route during excavation of the pipeline trench (prior to pipeline installation) and trench backfilling. Soil erosion could occur if precipitation were to take place while soils are disturbed. Surface water quality could be affected if eroded soils at the construction site or if inadvertent releases of petroleum hydrocarbons from construction equipment are carried downstream by precipitation during a rain event.

Erosion and sedimentation impacts, should they occur would likely be temporary pulses of sediment input if a rain event were to happen during construction. However, the proper implementation of a SWPPP and erosion control best management packages as described in

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GEO-1 would reduce the potential for substantial adverse effects to water quality from sedimentation. Post construction, proper site restoration (GEO-1), would also facilitate the avoidance of long term substantial adverse effects on water quality.

During construction, an unanticipated spill of hydraulic fluid or other contaminant could also potentially degrade water quality. The duration and severity of this potential environmental effect would depend on the type, location (dry land or flowing water), and duration of the spill prior to response. However, PAALP would implement of Environmental Commitments HYD-1, HYD-2 and HYD-3 to greatly reduce the risk and facilitate effective containment, should a spill occur. Therefore, with the implementation of HYD-1, HYD-2, and HYD-3, there would be no substantial adverse effects on water quality during construction.

Because the study area is outside of mapped groundwater basins, with groundwater recharge occurring over long-term degraded surface water absorption, degradation of groundwater quality is not anticipated.

Indirect effects to water quality would be caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR § 1508.8). Such effects, including downstream impacts to water quality are not anticipated due to the implementation of HYD-1, construction during the dry season, and GEO-1, HYD-2, and HYD-3. These protective measures would facilitate the avoidance of sedimentation or spills into running water thereby avoiding indirect adverse effects on water quality downstream of the project.

Thus, with the application of Environmental Commitments GEO-1, HYD-1, HYD-2 and HYD-3, the proposed construction activities would not cause a substantial adverse direct or indirect effect on water quality.

3.7.3.1.2 Substantially deplete groundwater supplies or interfere with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.

Pipeline Replacement and Re-Route

Local groundwater extraction to provide water during construction is not planned. If dewatering is needed during trenching activities, water would be pumped around construction areas and released downstream. Water for fire protection/suppression (several full 3,000-gallon water trucks would be brought daily to the site; unused water would remain in the trucks to be ready for the next work day) and water to be used for new pipeline hydrostatic integrity testing (estimated to be 148,000 gallons) and HDD operations (estimated to be 900,000 gallons) would be trucked into the study area from other out-of-area locations. Following hydrostatic testing, the water would be pumped through the pipeline to the final destination of the pipeline where the water would be processed at PAALP's terminal facility. It is not anticipated that pipeline installation would deplete groundwater supplies or interfere with groundwater recharge.

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Thus, the proposed construction activities will not result in a substantial adverse direct or indirect effect on groundwater recharge.

Thus, the proposed operation activities will not result in a substantial adverse direct or indirect effect on groundwater recharge.

- 3.7.3.1.3** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or other flood-related damage on- or off-site.

Pipeline Replacement and Re-Route

The Proposed Action cuts across the approximate 10- foot wide Gun Club Creek. Proposed construction across this ephemeral creek would extend past the width of the creek bed and past the creek banks (outside of the creek channel) for another 15 to 20 feet in both directions. Trench depth and pipeline burial at this location would be deeper than the typical three foot depth along the proposed re-route. For pipeline protection against scouring and abrasive stream flow, the trench across the creek would be up to six feet deep and that the pipeline wall thickness/gage would also double.

Construction across Gun Club Creek would temporarily alter the course of the creek bed; however, to minimize on- and off-site erosion, siltation, and other possible high-water damage, environmental commitment HYD-2 will be implemented and construction would be performed during the summer when the creek bed is dry. If construction were to occur during an exceptionally wet year, environmental commitment HYD-3, development of a dewatering management plan, would be implemented. Following pipeline installation and trench backfilling, the creek bed would be restored to its pre-construction condition in accordance with GEO-1. All other drainage crossings are ephemeral. Construction will occur during dry periods (HYD-1) and the site restored to pre-existing conditions (GEO-1). Therefore, with the implementation of GEO-1, HYD-1, and HYD-3, the Proposed Action will not have a substantial adverse direct effect on drainage patterns from construction.

In addition, indirect effects on drainage through altered flow rates or runoff is not anticipated. The Proposed Action would not increase impermeable surfaces in the area, nor would it cause differential natural flows within waterways in the area.

Thus, with the application of GEO-1, HYD-1, and HYD-3, the proposed construction activities would not result in a substantial adverse direct or indirect effect on drainage patterns.

- 3.7.3.1.4** Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or otherwise create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems.

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Pipeline Replacement and Re-Route

Most of the Proposed Action construction would occur along existing ROWs or along ridges with post-construction restoration back to pre-construction conditions. Substantial increases in the rate or amount of surface water runoff that would result in high-water flow damage or that would exceed capacity of stormwater drainages would not be anticipated. This is because new impervious surfaces would not be created and all of the piping material would be placed below ground.

As noted above, water used during new pipeline hydrostatic testing would not be discharged to the ground and would not increase surface runoff. It would be through the pipeline to the final destination of the pipeline where the water would be processed at PAALP's terminal facility. Therefore, the Proposed Action would not cause an adverse increase in flooding potential in the area.

Flooding could be caused indirectly through the alteration/elevation of a drainage contour. However Proposed Action includes restoration of drainages to pre-existing conditions (GEO-1).

Thus, with the application of GEO-1, including the restoration of stream channels to pre-existing contours and conditions, the proposed construction activities would not result in a substantial adverse direct or indirect effect on stormwater runoff or flooding.

3.7.3.2 No Action Alternative

Under the No Action Alternative, no pipeline re-route would be completed. Line 63 has been pigged and purged and does not currently represent a potential future source of substantial petroleum hydrocarbons that could degrade water quality. As such, the No Action Alternative would have no adverse effect on hydrology or water quality.

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3.8 LAND USE

3.8.1 Environmental Setting

The study area traverses Angeles National Forest (ANF) within unincorporated County of Los Angeles north of the Santa Clarita Valley, approximately one mile east of Interstate-5 (I-5) and approximately 1.5 miles northwest of Lake Castaic between existing Line 63 pipeline mile posts (MP) 37.6 to 40.3. The area is characterized by high mountains, steep canyons, and hills in a pine-oak woodland ecosystem. Land uses in the local vicinity include a mix of recreation and utility infrastructure developments largely under the management responsibility of the United States Forest Service.

3.8.2 Regulatory Framework

Conformance to 2005 ANF Land Management Plan (LMP)

Land Management Plan (LMP): Part 1 Southern California National Forests Vision and Part 2 Angeles National Forest (ANF) Strategy (September 2005), prepared by the United States Forest Service (USFS), is the long-term planning document that guides management of ANF lands and resources through approximately 2020, based on principles of adaptive land management and sustainable development practices. The Plan consists of six fundamental objectives: (1) establishment of forest-wide multiple-use goals and objectives; (2) determination of the suitability and capability of national forest land for resource production; (3) identification of, and recommendation to, Congress for areas as wilderness and wild and scenic rivers; (4) establishment of forest-wide and forest-specific standards; (5) identification of management area prescriptions; and (6) establishment of monitoring and evaluation requirements for plan implementation.

Part 2 of the LMP designates allowable uses and development opportunities in the ANF. The Plan identifies the study area as a “Developed Areas Interface (DAI)” land use zone. DAI (85,828 acres or 13 percent of the national forest) includes developed sites and community infrastructure. The level of human use and infrastructure is typically higher than in other zones. Permissible DAI activities includes recreational facilities and uses, oil and gas exploration and development areas, mineral resource exploration and development areas, road construction or reconstruction, major transportation corridors, and major utility corridors. The DAI zone is managed for motorized public access.

Part 2 of the LMP further subdivides the ANF into geographical “Places”, for which a desired condition and program emphasis is described. The study area is located within the “I-5 Corridor”, a designated “Place” that flanks both sides of Interstate 5 and is managed as a natural landscape that serves as a scenic transportation gateway for tourism in southern California as well as a major utility corridor (i.e., electricity, fiber optics, natural gas, crude oil, and water) for conveyance to the greater Los Angeles metropolitan area. Table 484 of the LMP identifies the I-5 (Tejon Pass) Corridor as an approximately 9,544-acre “Designated Utility

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Corridor” with two 500 KV (kilovolts) and three 220 KV overhead electrical corridors; four fiber optic lines; Interstate Highway 5; the California Aqueduct; and seven oil and gas pipelines, along a 27.1 mile stretch. Table 2.1.3 of the LMP indicates “Major Utility Corridors” is a suitable use within the “Developed Areas Interface.” The proposed re-route would be located within this major utility corridor and is therefore consistent with the LMP.

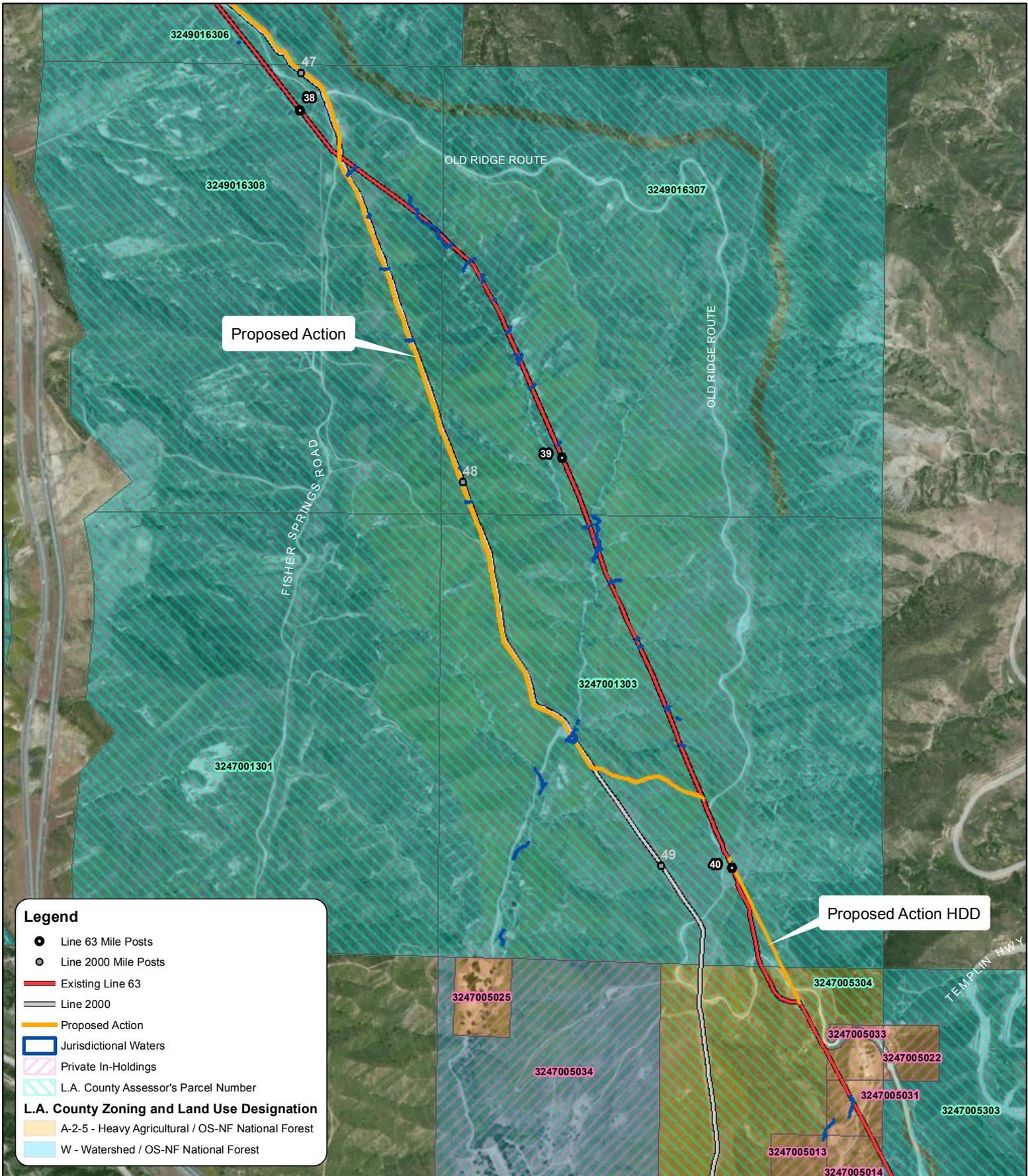
Conformance with the County of Los Angeles General Plan

The Los Angeles County Department of Regional Planning oversees development, use, and conservation of the unincorporated areas of Los Angeles, including the ANF. The study area is located within the governing boundary of the *County of Los Angeles General Plan* and is subject to the plans, policies, and procedures therein. The *County of Los Angeles General Plan* provides a strategy for long-term growth that sets a context to guide amendments of the County of Los Angeles community plans, zoning ordinances, and other pertinent programs. The study area is included in the *Santa Clarita Valley Area Plan* of the County’s General Plan.

Los Angeles County Land Use Designations

Pursuant to the *Santa Clarita Valley Area Plan*, the land use designation for the Angeles National Forest, including the study area, is OS-NF (Open Space/National Forest). For lands owned by the United States Forest Service (USFS), special allowable uses, maximum intensity standards, and development standards are determined by the underlying zoning designation. Most of the parcels in the study area are owned by the Forest Service and zoned W (Watershed) which allows: (1) any use owned and maintained by the Forest Service of the United States Department of Agriculture and any authorized leased use designated to be part of the Forest Service overall recreational plan of development; and (2) uses associated with petroleum pipelines and pumping stations; road construction and maintenance yards; electrical comfort stations; infrastructure, such as waters storage and distribution; recreation and amusement; and other uses. A-2-5 (Heavy Agricultural) zoned uses also occur in the study area allowing a variety of uses associated with agriculture activities and oil well development and oil product conveyance.

All study area Assessor Parcel Numbers (APNs) are designated for OS-NF (Open Space/National Forest) land uses. While W (Watershed) zoned uses represents the majority of APN’s in the study area (a total of 8 parcels), four of the APN’s are designated for A-2-5 (Heavy Agricultural). All study area land use and zoning designations are compatible with construction and operation of crude oil pipeline development. Table 3.8-1 illustrates the land use and zoning designations, as well as ownership, within the study area. Figure 3.8-1, Land Use Map, identifies the land use and zoning designations and APN’s of the study area pipeline alignments relative to the area plan boundaries.



Legend

- Line 63 Mile Posts
- Line 2000 Mile Posts
- Existing Line 63
- Line 2000
- Proposed Action
- ▭ Jurisdictional Waters
- ▭ Private In-Holdings
- ▭ L.A. County Assessor's Parcel Number

L.A. County Zoning and Land Use Designation

- ▭ A-2-5 - Heavy Agricultural / OS-NF National Forest
- ▭ W - Watershed / OS-NF National Forest

Line 63 - Plains Pipeline, LP

Line 63 Land Use Designations

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Sources: Stantec 2013, Plains 2013, ESRI 2013; Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

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Table 3.8-1: Study Area Parcel Land Uses

APN	Zone	Land Use	Ownership	Applicable Proposed Component
3249016306	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Proposed Action
3249016307	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Proposed Action
3249016308	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Proposed Action
3247001303	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Proposed Action pipeline reroute/repairs. HDD entry/exit for Proposed Action.
3247005304	A-2-5 / Heavy Agricultural	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	HDD Pipeline Installation, HDD entry/exit, and HDD Pipe Laydown Area for Proposed Action.
3247006300	W / Watershed	OS-NF National Forest / Santa Clarita Valley	Cal Trans/U.S. Forest Service	Equipment/materials staging (Proposed Action).
3247005033	A-2-5 / Heavy Agricultural	OS-NF National Forest / Santa Clarita Valley	Private in-holding	HDD Pipeline Laydown Area (Proposed Action).
3247005031	A-2-5 / Heavy Agricultural	OS-NF National Forest / Santa Clarita Valley	Private in-holding	HDD Pipeline Laydown Area (Proposed Action).
3247001301	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Equipment/materials staging (Proposed Action).
3247008003	A-2-5 / Heavy Agricultural	OS-NF National Forest / Santa Clarita Valley	Private in-holding	Equipment/materials staging (Proposed Action).
3247009301	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Equipment/materials staging (Proposed Action).
3247009300	W / Watershed	OS-NF National Forest / Santa Clarita Valley	U.S. Forest Service	Equipment/materials staging (Proposed Action).

3.8.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Land use impacts are evaluated based on the anticipated impacts associated with construction of the Proposed Project in relation to conformance with applicable land use plans or policies and impact on existing land uses in the study area, as well as compatibility with land uses adjacent

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to or in the vicinity of the study area. Application of Environmental Commitments would avoid or minimize effects to land use resources.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce substantial adverse environmental effects to land use as a result of the Project can be found in Section 2.3.1.

3.8.3.1 Preferred Re-Route (Proposed Action)

3.8.3.1.1 Inconsistency or non-conformance with applicable land use plans or policies.

Pipeline Replacement and Re-Route

As described in Section 3.8.2 above, the study area, including the Preferred Re-Route (Proposed Action), would be developed within the designated “Developed Areas Interface (DAI)” land use zone and “I-5 Corridor” of the 2005 LMP. Table 2.1.3 of the LMP indicates “Major Utility Corridors”, such as a crude oil pipeline project, is a suitable use within the Developed Areas Interface. The Proposed Action would be located within this major utility corridor and is therefore consistent with the LMP. In addition, the Proposed Action would comply with the strategic direction, objectives, goals, and policies of the *County of Los Angeles General Plan*, the *Santa Clarita Valley Area Plan*, and the County land use and zoning requirements for construction, operation, and maintenance of a crude oil pipeline in ANF. The Santa Clarita Valley Area Plan implements the land use policy of the County of Los Angeles General Plan, while the Los Angeles County Municipal Code, which includes the planning and zoning code, directly regulates land use and development of the project site through development and building standards. The Project proponent would coordinate with the USFS to ensure the Proposed Action is consistent with the LMP, General Plan, and land use and zoning requirements regarding construction of the Proposed Action on OS-NF designated lands. The Proposed Action, including private in-holdings within the ANF, would not require any land use or zoning designation changes. In addition, implementation of Environmental Commitment UNV-1 (Regulatory Compliance) would ensure adherence to applicable agencies and/or jurisdiction requirements prior to the start of construction. Therefore, the Proposed Action would be consistent with all applicable land use plans and policies, including the 2005 LMP. With implementation of Environmental Commitment UNV-1, impacts to land use plans or policies would be avoided or minimized. Therefore, implementation would not result in a substantial adverse environmental effect.

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3.8.3.1.2 Preclude the viability of existing land uses.

Pipeline Replacement and Re-Route

Implementation of the Proposed Action would not preclude the long-term viability of the existing land uses within or adjacent the study area, considering the Proposed Action is not growth inducing and no changes to existing land uses are anticipated. With the exception of three separate ORR crossings, the Proposed Action would not cross any other existing roads or active recreational trails or recreational use areas. Implementation of Environmental Commitment LU-1 (Advance Notification of Construction) as well as Environmental Commitments UNV-2 (Limit Work Areas), UNV-3 (Worker Environmental Awareness Program), UNV-4 (Equipment Fueling), UNV-5 (Trash Disposal), UNV-6 (Backfill/Borrow Limitations), and UNV-7 (Project Site Surveys, Mapping, Spatial Data Collection and As-Built Plans) would avoid or minimize the potential for adverse impacts to ANF land uses resulting from short-term construction activity. Since the existing and Proposed Action pipelines are underground, and finished grading would restore the ground surface to pre-existing conditions, installation of the Proposed Action would not preclude the viability of existing land uses, including recreation. With implementation of Environmental Commitments LU-1, UNV-2, UNV-3, UNV-4, UNV-5, UNV-6, and UNV-7 effects to the viability of existing land uses would be avoided or minimized. Therefore, implementation would not result in a substantial adverse environmental effect.

3.8.3.1.3 Be incompatible with land uses adjacent to or in the vicinity of the study area to the extent that public health or safety is threatened.

Pipeline Replacement and Re-Route

Actions included under the Proposed Action would be compatible with designated land uses adjacent to and within the vicinity of the study area. As described in Section 3.8.3.1.2 above, implementation of Environmental Commitments of LU-1 (Advance Notification of Construction) as well as UNV-2 (Limit Work Areas), UNV-3 (Worker Environmental Awareness Program), UNV-4 (Equipment Fueling), UNV-5 (Trash Disposal), UNV-6 (Backfill/Borrow Limitations), and UNV-7 (Project Site Surveys, Mapping, Spatial Data Collection and As-Built Plans) would provide further assurance that project development would not adversely impact existing land uses, public health or safety in land uses adjacent to the study area. (Note: Refer to Section 3.4 Environmental Contamination and Hazards for a discussion of how the Proposed Action would comply with federal and state environmental, public health and safety requirements, including DOT and OSHA regulations. Section 3.11 Traffic and Transportation includes Environmental Commitment T-1 (Traffic Control Plan for Construction), involving the use of traffic control measures to enable the safe passage of vehicular and pedestrian traffic. In addition to avoiding public access interruptions through the area, this effort would also protect public health and safety). With implementation of the Environmental Commitments described above, activities associated with the re-route component of the Proposed Action would be compatible with land uses adjacent to and within the study area, and would not introduce a threat to public health and/or safety. Therefore, there would be no substantial adverse effect to public safety.

3.8.3.2 No Action Alternative

Under the No Action Alternative, no pipeline re-route would be completed. The No Action Alternative would have no impact on land use and planning.

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3.9 NOISE

This section utilizes a Project-level noise study performed by Stantec in August 2013 and located in Appendix K of this EA.

3.9.1 Environmental Setting

Noise is defined as an unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Noise-sensitive land uses are typically defined as locations where people reside or where the presence of unwanted sound could adversely affect designated land uses. Noise-sensitive land uses generally include residence, hospitals, places of worship, libraries, schools, wildlife preserves and parks.

Within the study area, existing noise conditions are characterized by light traffic on the ORR, Fisher Springs Road, and Templin Highway including noise generated by vehicles used in ongoing maintenance and operation of various utilities. Sensitive noise receptors in the study area include recreational and residential land uses. A few single family residences exist in the southern portion of the study area, including a canine boarding facility and a gun club with a shooting range. Table 3.9-1 presents common noise-related terms and their definitions.

Table 3.9-1: Noise-Related Terms and Definitions

Term	Definition
dB, Decibel	Unit of measurement of sound level.
dBA, decibel A-Weighted	A unit of measurement of sound level corrected to the A-weighted scale.
A – Weighted Scale	A sound measurement scale, which corrects the pressures of individual frequencies according to human sensitivities. The scale is based upon the fact that the region of highest sensitivity for the average ear is between 2,000 and 4,000 Hz. Sound levels are measured on a logarithmic scale in decibels, dB. The universal measure for environmental sound is the A-weighted sound level, dBA.
Hz, Hertz	Unit of measurement of frequency, numerically equal to cycles per second.
Loudness	A listener's perception of sound pressure incident in his ear.
L01, L10, L50, L90	The A-weighted noise levels that are exceeded 1 %, 10 %, 50 %, and 90 % of the time during the measurement period.
Leq, Equivalent Noise Level	Also called the equivalent continuous noise level. It is the continuous sound level that is equivalent, in terms of noise energy content, to the actual fluctuating noise existing at the location over a given period, usually one hour. Leq is usually measured in hourly intervals over long periods in order to develop 24-hour noise levels.
CNEL, Community Noise Equivalent Level	The CNEL is a measure of the cumulative noise exposure in the community, with greater weights applied to evening and night time periods. This noise descriptor is the equivalent noise level over a 24-hour period mathematically weighted during the evening and night when residents are more sensitive to intrusive noise. The daytime period is from 7:00 a.m. to 7:00 p.m.; evening from 7:00 p.m. to 10:00 p.m.; and nighttime from 10:00 p.m. to 7:00 a.m. A weighting factor of 1 dB is added to the measured day levels defined as 7 a.m. to 7 p.m., evening levels (7 p.m. to 10 p.m.) have a weighting factor of three and 10 dB to the night time levels (10

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Term	Definition
	p.m. to 7 a.m.). The weighted levels over a 24-hour period are then averaged to produce the single number CNEL rating.
Ldn, Day/Night Noise Level	The same as CNEL except that the evening time period is not considered separately, but instead it is included as part of the daytime period. Measurements of both CNEL and Ldn in the same residential environments reveal that CNEL is usually slightly higher (by less than 1 dB) than Ldn due to the evening factor weighting.
Lmin, Lmax	The minimum and maximum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

There are several ways of measuring noise, depending on the source of the noise, the receiver, and the reason for the noise measurement. The decibel (dB) is the preferred unit used to measure sound levels utilizing a logarithmic scale to account for large ranges in audible sound intensities. A general rule for the decibel scale is that a ten dB increase in sound is perceived as a doubling of loudness by the human ear. Environmental noise levels are typically stated in terms of decibels on the A-weighted scale (dBA). The A-weighted decibel (dBA) is a method of sound measurement which assigns weighted values to selected frequency bands in an attempt to reflect how the human ear responds to sound. The range of human hearing is from zero dBA (the threshold of hearing) to about 140 dBA which is the threshold of pain.

3.9.2 Regulatory Framework

Federal Standards and Regulations

Federal regulations safeguard the hearing of workers exposed to occupational noise, enforced by OSHA (e.g. 29 CFR 1919.120). For example, it is unlawful for employees to be exposed to noise levels in excess of 115 dBA for more than 15 minutes during any working day. The USEPA has developed guidelines on recommended maximum noise levels to protect public health and welfare (USEPA, 1978). The USEPA identifies a 24-hour exposure level of 70 dBA as the level of environmental noise which will prevent any measurable hearing loss over a lifetime. Likewise, levels of 55 dBA outdoors and 45 dBA indoors are identified as activity interference and annoyance (USEPA, 1978).

2005 ANF Forest Plan

The governing 2005 Forest Plan for the ANF does not identify noise as an issue and does not suggest any specific noise strategies, standards, or regulations.

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State Standards and Regulations

California encourages each local government to perform noise studies and implement a noise element as part of their general plan. Standards and implementation are administered by the California Office of Noise Control. California Division of Occupational Safety and Health (Cal-OSHA) also has regulations, based on the USEPA occupational guidelines to protect the hearing of workers.

County Standards and Regulations

Legal limits in Los Angeles County for noise and vibration are established in County Ordinances 11778 and 11773, as codified in Volume 4, Title 12, Chapter 12.08 of the Los Angeles County Code. They are administered by the County's Hazardous Materials group in the Department of Health Services (DHS). The County noise control ordinance includes community noise criteria and places specific limits on construction noise. According to the ordinance, maximum noise levels for non-scheduled, intermittent, short-term operations of twenty (20) days or less for mobile construction equipment in single-family residential areas is 75 dBA during the daytime (7 a.m. to 8 p.m.) and 60 dBA during the nighttime (8 p.m. to 7 a.m.).

3.9.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Noise impacts are assessed through evaluation of the potential change to existing noise conditions. Potential changes could be considered adverse if they result in increased exposure to unacceptable noise levels. Noise impacts are discussed in this section and evaluated based on impacts and implementation of Environmental Commitments.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitment designed to specifically reduce effect to noise receptors and sensitive areas as a result of the Project can be found in Section 2.3.1.

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3.9.3.1 Preferred Re-Route (Proposed Action)

3.9.3.1.1 Result in a substantially temporary or periodic increase in ambient noise levels during construction in the vicinity of sensitive receptors above levels existing without the Project.

Pipeline Replacement and Re-Route

Construction activities associated with the Preferred Re-Route (Proposed Action) would generate noise through the use of vehicles and equipment, within proximity to sensitive receptors (i.e., two single family residences). Projected noise measurements were assessed for proposed construction activities expected to be performed at (1) the HDD entry location; (2) the HDD exit/ pullback location, and (3) the HDD pipeline laydown area, given proximity to a few near-by residences located south of the proposed HDD activity. A summary of the noise modeling results is presented below in Table 3.9-2. The complete noise modeling results, including assumptions, are included as Appendix K.

Table 3.9-2: Proposed Action Predicted Construction Noise Levels at Nearest Sensitive Receptor

Construction Activity	Distance to Receptor (Ft)	Predicted Noise Level at Sensitive Receptor		
		dBA	Ldn	CNEL
Horizontal Directional Drill Pipe Laydown	250	71.2	68.0	68.0
Horizontal Directional Drill Entry	840	65.1	63.2	63.2
Horizontal Directional Drill Exit	2,750	50.1	59.0	59.0

The construction noise modeling assumes that all construction equipment for an activity would operate simultaneously at the closest distance to the sensitive receptor. As such, noise modeling conducted for construction of the Proposed Action assumes a conservative, worst-case scenario. It was further assumed that ambient noise levels at the sensitive receptors are 60 dBA daytime and 45 dBA nighttime.

As shown in Table 3.9-2, construction of the Proposed Action is not predicted to exceed the established 75 dBA daytime threshold established in the Los Angeles County noise control ordinance. Construction activities are only proposed during daytime hours and would not impact nighttime hours. Although no noise thresholds are anticipated to be exceeded, PAALP will implement Environmental Commitment N-1 Best Management Practices for Construction Noise to ensure noise compliance. Construction activity would not result in an exceedance of any established noise standards in proximity to sensitive receptors and there would be no substantial adverse effect to noise levels or sensitive receptors.

Result in a substantial permanent increase in ambient noise levels in the Project vicinity above noise levels existing without the Project.

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Pipeline Replacement and Re-Route

Construction activities associated with pipeline replacement and re-route would be temporary in nature and would not result in a permanent increase in noise levels.

3.9.3.2 No Action Alternative

The No Action Alternative would not employ any construction and operation activities that would be conducted and/or mobilized for the existing pipeline to be returned to full-service for operation and maintenance within the study area. Additionally, the No Action Alternative would not require the use and transport of noise generating equipment, such as on-road vehicles and off-road equipment to be mobilized in the study area. Implementation of the No Action Alternative would not contribute to any impacts for noise-sensitive land uses within the study area, including existing noise conditions that are characterized by light traffic on the ORR and Fisher Springs Road, and/or including noise generated by vehicles used in ongoing maintenance and operation of various utilities.

Implementation of the No Action Alternative would not result in temporary or periodic increase in ambient noise levels during construction in the vicinity of sensitive receptors above levels existing without the Project. Additionally, implementation of the No Action Alternative would not result in an increase in ambient noise levels in the Project vicinity above noise levels existing without the Project.

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3.10 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

3.10.1 Environmental Setting

The study area is located within the ANF in Los Angeles County, California. The southernmost portion of the project would be located within a small cluster of privately owned parcels. These parcels are zoned as low density and consist of single-family residences. Paradise Ranch Mobile Home Park is located approximately one mile northwest of the study area. The nearest Census Designated Place is the unincorporated community of Castaic (U.S. Census Bureau 2010).

The community of Castaic is located approximately five miles southeast of the study area. As of 2010, there were 19,015 (Male: 9,564/Female: 9,451) people, with a home ownership rate of 84.2 percent and a poverty rate of 5.8 percent.

Castaic's and Los Angeles County's racial makeup consists of the following:

Table 3.10-1: Castaic Racial Makeup

Race	Percent	
	Castaic	Los Angeles County
White	71.6 %(a)	71.6 %(a)
Black or African American	3.3 %(a)	9.3 %(a)
Native American	0.6 %(a)	1.5 %(a)
Asian	11.4 %(a)	14.5 %(a)
Pacific Islander	0.1 %(a)	0.4 %(a)
Persons of Hispanic or Latino Origin	24.8 %(b)	48.2 %(b)
From two or more races	5.3 %	2.8 %

(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.
"From other race" was included in Census 2010 for respondents who were unable to identify with the five Office of Management and Budget race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, or a Hispanic origin (for example, Mexican, Puerto-Rican, or Cuban) are included in the From other race category.

Source: U.S. Census Bureau 2010
Source: <http://www.census.gov/prod/2001pubs/c2kbr01-1.pdf>

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The median household income breakdown for Castaic and Los Angeles County is as follows:

Table 3.10-2: Castaic Median Income

Median Income	Amount
Median household income 2006-2010 for Castaic	\$102,272
Median household income 2006-2010 for Los Angeles County	\$56,266
Source: U.S. Census Bureau 2010	
Source: http://www.census.gov/prod/2001pubs/c2kbr01-1	

The average per capita income between 2006 and 2010 for Castaic was \$36,340. The average per capita income between 2007 and 2011 for Los Angeles County was \$27,954.

3.10.2 Regulatory Framework

An Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations was issued by President Clinton on February 11, 1994 (Executive Order 12898). The executive order was designed to focus attention on environmental and human health conditions in areas of high minority populations and low-income communities, and promote non-discrimination in programs and projects substantially affecting human health and environment (Federal Register, 1994). Executive Order 12898 required all federal agencies, as well as state Federal funded agencies to develop strategies to address the issue. Each agency was required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

The 2005 ANF Land Management Plan does not specifically address socioeconomic and environmental justice. However, Forest Service Handbook 1909.17 (Economic and Social Analysis Handbook) provides guidance on the evaluation of economic and social effects of policies, plans, programs, and projects with the goal of promoting consistent use of social and economic analysis in Forest Service projects. In addition to providing guidance on using economic estimates and measures, the document also provides direction on selecting and analyzing social variables. Social variables discussed in the Forest Service Handbook include: lifestyles; attitudes; beliefs and values; population; housing characteristics; employment; social organization; and land use patterns.

Under current USEPA methodology, for potential environmental justice impacts to exist, an environmental justice population must be present within six miles of the project site and the project must result in "high and adverse" environmental impacts that affect the environmental justice populations disproportionately.

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3.10.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Impacts to socioeconomics are characterized by whether implementation of a project would result in substantial shifts in population trends, adversely affect regional spending and earning patterns, or introduce overwhelming demand for public services or utilities. In addition, environmental justice would be affected by a project if impacts would be predominantly borne by any segment of the population including a minority population and/or a low-income population, or if impacts would be suffered by a minority population and/or low-income population and is appreciably more severe than the impact suffered by a non-minority and/or non-low-income population.

Potential environmental justice populations are defined as areas where the minority or low income population percentage is meaningfully greater than the minority or low-income population percentage in the general population. For the purposes of this analysis, “meaningfully greater” is defined as approximately 10 percentage points greater than the county-wide average. This threshold figure with respect to the Proposed Action would be any minority population greater than 38.5 percent, which would be ten percentage points greater than the Los Angeles County minority population of 28.5 percent, and a low-income population of 26.3 percent, which would be ten percentage points greater than the Los Angeles County low-income population of 16.3 percent.

Table 3.10-3: Environmental Justice Community Screening

Geographic Area	% Racial Minority	% Individuals Living Below Poverty Level	Environmental Justice Community?
EJ Community Threshold (Los Angeles County Average + 10%)	38.5	26.3	Threshold Value
Castaic	20.7	5.7	NO
<i>% Racial Minority: Total sum of Black or African American, Native American, Asian, Pacific Islander, and From Two or More Races.</i>			

As shown in Table 3.10-3, Castaic does not meet the “definition” of an environmental justice community. Therefore, the Proposed Action do not have the potential to result in substantial adverse effects to environmental justice.

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3.10.3.1 Preferred Re-Route (Proposed Action)

3.10.3.1.1 Substantial shifts in population trends.

Pipeline Replacement and Re-Route

The Proposed Action would involve repairs to an existing intrastate pipeline that, after a brief construction period, would enable the continued transmission of crude oil from Kern County to Los Angeles County. Construction of the Proposed Action would not include any component that has the potential to result in population growth, relocation, or displacement that could lead to substantial shifts in population. Implementation of the Proposed Action would have no substantial adverse effect on regional population trends.

3.10.3.1.2 Adversely affect regional spending and earning patterns.

Pipeline Replacement and Re-Route

Construction of the Proposed Action would have no substantial adverse effect on regional spending and earning patterns.

3.10.3.1.3 Introduction of a new and overwhelming demand for public services and/or utilities.

Pipeline Replacement and Re-Route

The Proposed Action would involve repairs to an existing intrastate pipeline that, after a brief construction period, would enable the continued transmission of crude oil from Kern County to Los Angeles County. The Proposed Action would not include a component with the potential to introduce a new and overwhelming demand for public services and/or utilities. Implementation of the Proposed Action would have no substantial adverse effect on demand for public services and/or utilities.

3.10.3.1.4 Cause a disproportionately high and adverse effect on low-income or minority communities adjacent to or in the vicinity of the study area.

Pipeline Replacement and Re-Route

The Proposed Action would not be located adjacent to or in the vicinity of a low-income or minority community and would therefore have no substantial adverse effect on such communities.

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3.10.3.2 No Action Alternative

Under the No Action Alternative, no construction activities associated with pipeline re-routing and replacement would occur. Line 63 would remain idle and would not be used to convey crude oil. As Line 63 is classified as an active pipeline by the California State Fire Marshal, PAALP would continue routine inspections and maintenance activities in compliance with applicable pipeline safety standards.

The No Action Alternative would have no substantial adverse effect on local or regional socioeconomics or environmental justice, including substantial shifts in population trends, regional spending and earning patterns, or introduction of overwhelming demand for public services or utilities.

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3.11 TRAFFIC AND TRANSPORTATION

3.11.1 Environmental Setting

Site Access

Equipment and vehicles would access the study area via Old Ridge Road (ORR), Fisher Springs Road, Templin Highway, and the existing PAALP Line 2000 and Line 63 rights-of-way. Interstate 5 (I-5) would provide the direct point of access to these remote roads. The Line 2000 right of way (ROW), located west and upslope from the existing Line 63 alignment would be accessed primarily from the north-south oriented Fisher Springs Road, which has access spurs along the ridgelines at each east-west trending drainage with turnaround points directly over the existing ROW. These spur-roads will be used to access the existing Line 2000 / new Line 63 ROW as necessary during construction activities. The section of proposed re-route that diverges from the Line 2000 ROW would likely be accessed from the ORR.

Surrounding Street System

Interstate 5 (I-5)

Regional access to the study area would be provided by Interstate 5 (I-5), commonly identified as the “Golden State Freeway”, a major 1,381-mile north-south freeway that connects California (796 miles), Oregon (308 miles), and Washington (277 miles). I-5 in the vicinity of the Proposed Action has eight travel lanes and serves as a vital link for commuter traffic between Santa Clarita Valley communities and Los Angeles.

Templin Highway

Exit 183 Templin Highway is a single lane off-ramp from I-5. From the off-ramp, the un-signalized, two-way stop intersection is characterized by one left-hand turn access northwest onto Old Golden State Highway and one right-hand turn accessing the northeast end of Castaic Lake onto Templin Highway. Templin Highway connects with Old Ridge Route (ORR) approximately 1.2 miles east of I-5. Templin Highway contains two travel lanes (each lane per direction) and experiences infrequent operation and/or low vehicular usage.

Fisher Springs

Fisher Springs Road is an unpaved road within the study area. Fisher Springs Road is not open for public use; roadway access is controlled by a locked gate. This road would be used to gain access for equipment and materials deliveries to portions of the Line 2000 ROW during implementation of the Proposed Action.

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Old Ridge Road (ORR)

ORR is a historic two-lane highway that was the primary access route between Los Angeles and Kern counties prior to the construction of I-5, and other alternate routes, between approximately 1915 and the 1930's. The ORR is within the ANF lands and was added to the National Register of Historic Places in 1997 as a "scenic highway" (California Scenic Highway Program, Caltrans, 2012). It has limited access and is currently closed for public vehicular use.

The section of the ORR that would be used to access the study area is currently a utility access corridor utilized by other utility operators (i.e., fiber optic cables, natural gas pipelines, crude oil pipelines, and electric transmission lines). Equipment and personal vehicles would access the ORR at Templin Highway or Fisher Springs Road. The access routes that would be used for particular areas would depend on length of travel, road conditions, or type of vehicles, and location of the work area within the pipeline alignment.

3.11.2 Regulatory Framework

Conformance to 2005 ANF Land Management Plan

Part 2 of the governing *2005 Land Management Plan* includes Management Strategy TRANS 1 (Transportation System), which is intended to safely accommodate the anticipated levels and types of uses for designated areas through the ANF. The Proposed Action would involve obtainment of a Special Use Permit to allow PAALP to operate and maintain a crude oil pipeline on ANF land. As part of the Special Use Permit application process, PAALP would be required to obtain approval for any maintenance of Forest System roads or construction and/or maintenance on non-Forest System Roads on ANF lands. Through this application process, the Proposed Action would be in compliance with all Forest System regulations associated with traffic and transportation, including as described in the LMP.

Transportation Concept Report - District 7

The *I-5 Transportation Concept Report - District 7 (1998)*, is a CalTrans planning tool intended to provide an assessment of development within the I-5 Corridor over the next 20 years (no known updates to the plan exist). In preparing this plan, District 7 System Planning Staff considered federal, state and regional plans and documents. The basic intent of the plan is to suggest a configuration (i.e., various roads and transit modes) for I-5 that would meet forecasted projections over the next 20 years. The plan divides the District 7 portion of this interstate into segments. Segment 15 contains the interchange with Exit 183 - Templin Highway.

The I-5 Transportation Concept Report - District 7 (1998) utilizes the Highway Capacity Manual (Transportation Research Board, *Highway Capacity Manual*, 2000) procedures in describing and analyzing level of service. This method assigns a Level of Service (LOS) grade to an intersection based on the average delay. LOS is a qualitative measure used to describe the condition of traffic flow, ranging from uncongested conditions at LOS A to over-saturated

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conditions at LOS F. For un-signalized and signalized intersections that are within the County, the Intersection Capacity Utilization (ICU) method is consistent with County policy. The ICU method assigns a LOS grade to an intersection based on its volume-to-capacity (V/C) ratio. V/C ratio is the relationship between the number of vehicle trips operating on a transportation facility, versus the number of vehicle trips that can be accommodated by that facility.

LOS descriptions and the associated V/C ratio and delay ranges for signalized and un-signalized intersections are provided in Table 3.11-1, Level of Service Criteria – Roadways and Intersections.

Table 3.11-1: Level of Service Criteria – Roadways and Intersections

LOS	Signalized Intersections		Un-Signalized Intersections	Description
	V/C Ratio	Average Delay	Average Delay	
A	0.00-0.60	< 10.0 sec/veh	< 10.0 sec/veh	Vehicles are completely unimpeded in their ability to maneuver within the traffic system. Control delay at signalized intersections is normal.
B	0.61-0.70	> 10.0 and < 20.0 sec/veh	> 10 and < 15 sec/veh	Vehicles are completely unimpeded in their ability to maneuver within the traffic system. Control delay at signalized intersections is minimal.
C	0.71-0.80	> 20.1 and < 35.0 sec/veh	> 15.1 and < 25 sec/veh	Ability to maneuver and change lanes in midblock locations may be more restricted than at LOS "B", and longer queues, adverse signal coordination or both may contribute to lower average travel speeds.
D	0.81-0.90	> 35.1 and < 55.0 sec/veh	> 25.1 and < 35 sec/veh	LOS "D" borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS "D" may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors.
E	0.91-1.00	> 55.1 and < 80.0 sec/veh	> 35.1 and < 50 sec/veh	LOS "E" is characterized by significant delays. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.
F	Above 1.00	> 80.0 sec/veh	> 50 sec/veh	LOS "F" is characterized by urban street flow at extremely low speeds. This level, considered to be unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures.

Source: Highway Capacity Manual, Transportation Research Board, 2000.

The peak hour traffic is an estimate of the traffic that occurs during peak AM and PM commuting periods at all points on the State highway system. This value is useful to traffic engineers in estimating the amount of congestion experiences, and shows how near or far from capacity the highway is operating. Unless otherwise indicated, peak hour values indicate the volume in both directions.

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The annual average daily traffic (AADT) is the total traffic volume for the year divided by 365 days to obtain average daily traffic (ADT) volume. Traffic counting is generally performed by electronic counting instruments moved from location throughout the State in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of AADT by compensating for seasonal influence, weekly variation and other variables which may be present. AADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes (LA Almanac, 2013).

Surrounding Street System Level of Service

Interstate 5 (I-5)

According to the *I-5 Transportation Concept Report – District 7 (1998)*, the Average Daily Traffic (ADT) along Segment 15 is approximately 54,100 vehicles per day. This segment of the I-5 is located in a mountainous terrain, characterized by high traffic volumes, slow average travel speeds, and a designated Level of Service (LOS) “F”. LOS “F” describes a level of service characterized by considerable delays, speeds less than 20 miles per hour (mph), and a generally poor level of service. Speed and flow may drop to zero with high densities. Trucks consist of 29 percent of the ADT and the mountainous terrain, with significant grade changes, contribute to the designation of LOS “F” for this freeway. See Table 3.11-2, Project Roadway Characteristics, for traffic data based on 1998 projections.

Exit 183 Templin Highway

According to 2007 data collected by Los Angeles County Department of Public Works, ADT on Templin Highway west of Ridge Route Road is 286 (Los Angeles County Department of Public Works, 2007). LOS information for Templin Highway is not published by Los Angeles County Department of Public Works. See Table 3.11-2, Project Roadway Characteristics, for traffic data for Templin Highway west of Ridge Route Road.

Old Ridge Road (ORR) and Fisher Springs Road

No ADT or LOS has been designated for ORR or Fisher Springs Road, a National Forest System designated road.

Caltrans traffic counts and existing data collection for I-5 and Templin Highway is presented in Table 3.11-2 – Project Roadway Characteristics below. Please note this data is based on 1998 traffic volume counts. It may be assumed that these numbers have increased since 1998 as a result of population and urban growth within the State and along the I-5 corridor.

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Table 3.11-2: Project Roadway Characteristics

Interstate 5 – SEGMENT 15		Templin Highway	
Physical Characteristics		Physical Characteristics	
Terrain	Mountainous	Terrain	Mountainous
Design Speed	70	Design Speed	55
Trucks (% of ADT)	29%	Trucks (% of ADT)	> 33%
Traffic Data		Traffic Data	
Average Daily Traffic (ADT)	54,100	Average Daily Traffic (ADT)	268
Lanes Configuration (ea. direction)	4	Lane Configuration (ea. direction)	1
Volume		Volume	
AM Peak Hour (N)	7,100	AM Peak Hour (E)	37
AM Peak Hour (S)	4200	AM Peak Hour (W)	9
PM Peak Hour (N)	4800	PM Peak Hour (E)	9
PM Peak Hour (S)	7000	PM Peak Hour (W)	61
Service Characteristics		Service Characteristics	
Level Of Service, AM (N)	F3	AM/ PM Level Of Service (N), (S)	N/A
Level Of Service, AM (S)	F0		
Level Of Service, PM (N)	F2		
Level Of Service, PM (S)	F3		

Congestion Management Plan (CMP)

The *2010 Congestion Management Plan* for Los Angeles County, a plan developed to meet a State-mandated program enacted by the California legislature requiring every County to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities (California Government Code Section 65088-65089.10), describes half of the Los Angeles County freeway system as operating at LOS E and F both for AM and PM rush hour. In addition, 20 percent of the arterial intersections operate at LOS E and F in the morning rush hours, and just over 20 percent of the intersections operate at LOS E and F in the afternoon.

According to the *2010 Congestion Management Plan* developed by the Los Angeles County Metropolitan Transportation Authority, 1-5 in the vicinity of the study area operates at a LOS “D” or better for both AM and PM peak hours, indicating improvement of this area since preparation of the *I-5 Transportation Concept Report - District 7 (1998)*. LOS D encompasses a zone approaching instability, involving short-term delays within the peak period but enough cycles to enable clearance preventing excessive back-up.

3.11.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

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Impacts to transportation and circulation are assessed with respect to the potential for disruption or improvement of current transportation patterns and systems, deterioration or improvement to existing LOS, and changes in existing levels of transportation safety that would be experienced during construction or operation of a project. Impacts may arise from physical changes to circulation (e.g., closing, rerouting, or establishing roads), or changes in daily or peak hour traffic volumes created by either direct or indirect workforce and population changes relative to project activities.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. In addition to applicable regulations, Environmental Commitment designed to specifically reduce potential effects associated with Project-related traffic impacts can be found in Section 2.3.1.

3.11.3.1 Preferred Re-Route (Proposed Action)

3.11.3.1.1 Cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).

Pipeline Replacement and Re-Route

The Proposed Action would result in an average of 41 vehicles trips per day over the course of the proposed approximately 60-day construction duration. An increase of an average of 41 vehicle trips at the I-5/Templin on-off ramp over an approximately 60-day period would represent a 0.08 increase from the existing ADT for I-5 at that location (54,100 vehicles per day) and 15.3 percent increase from the existing ADT for Templin Highway (268 vehicles per day). Based on this numeric value, Templin Highway would anticipate higher daily traffic flow contribution percentages over the construction activity duration. Please refer to Table 3.11-2 – Project Roadway Characteristics above for existing traffic data at these locations and Table 3.11-3 – Daily Traffic Impact Analysis below for an assessment of impacts.

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Table 3.11-3: Daily Traffic Impact Analysis

Daily Traffic Impacts	
Total Peak Proposed Action Vehicles ¹	41
Interstate 5 (ADT) ²	54,100
Templin Highway (ADT) ²	268
Percent (%) Daily Traffic Impact for Study Area	
I-5 (ADT) Traffic Flow	0.08
Templin Highway (ADT) Traffic Flow	15.3
Notes:	
¹ Average daily vehicle count is derived from project description.	
² Roadway numeric values derived from LA Almanac or Caltrans.	

These short-term impacts would represent a minimal increase from existing ADT on the I-5 at Templin Highway. Because Templin Highway west of Ridge Route Road does not have substantial baseline traffic volumes, the addition of 41 vehicles per day during Project construction is not anticipated to result in a substantial degradation of existing LOS. Temporary increases in traffic at these two locations would be considered insignificant with application of Environmental Commitment T-1 (Transportation Plan for Construction). In addition, project-related trips would be scheduled to the extent possible to occur outside of AM/PM peak hours to avoid and/or minimize traffic congestion and frequent queuing on the I-5 and at the intersection that connects to Templin Highway.

Use of Fisher Springs Road and ORR would require obtainment of a special use permit from Forest Service, including agreement to follow Forest Service prescriptive measures. While it is not anticipated that heavy equipment would be driven directly on the ORR, on the occasion that it is unavoidable, the ORR surface would be protected from damage from heavy equipment with a layer of dirt, steel plates, rubber pads, or other Forest Service-approved methods. In addition, per agreement with the Forest Service, pre-project asphalt patching would be completed at specifically identified sections of the ORR prior to start of construction. In addition, in order to prevent adverse effects to the historically significant ORR, vehicle traffic on the ORR would be subject to the protection measures set forth in Section 3.3, Cultural and Paleontological Resources.

While traffic load and capacity impacts associated with Proposed Action-generated vehicle trips during the approximately 60-day construction period would contribute to slightly higher traffic flow for roadways near the study area, the incremental volume increase would not result in a substantial adverse effect.

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3.11.3.1.2 Exceed, either individually or cumulatively, a level of service standard established for roads and highways that would be affected by the Project for designated roads or highways.

Pipeline Replacement and Re-Route

Construction activities associated with the Proposed Action would require vehicles, equipment, and crews to be transported to and from the study area using I-5 and Templin Highway. There is no LOS or standard designated for Templin Highway (i.e., Segment 15, according to the *I-5 Transportation Concept Report - District 7*, published in 1998). According to this plan, Segment 15 of the I-5 is designated as LOS "F" due to a number of factors, including high truck volume, grade changes due to the mountainous terrain (specifically trucks trying to control uphill and downhill speed), unstable traffic volumes, daily flows, and extensive queuing. According to the *2010 Congestion Management Plan* developed by the Los Angeles County Metropolitan Transportation Authority describes that segment of the 1-5 as operating at a LOS "D" or better, indicating improvement of this segment over the past decade and a half.

As illustrated in Table 3.11-3, the small percentage and short-term duration of vehicle trips associated with construction of the Proposed Action would result in a nominal short-term increase relative to existing traffic volumes, which have likely gone up since 1998, when the plan was developed. In addition, these short-term impacts would represent a minimal increase from existing ADT at these two locations and would not be considered significant with application of Environmental Commitment T-1 (Transportation Plan for Construction), as described in 3.11.3.1.2. The Proposed Action would not exceed the level of service for roads and highways surrounding the study area. Therefore, the Proposed Action would not result in substantial adverse effects to traffic.

3.11.3.1.3 An increase in roadway wear in the vicinity of the construction zone could occur as a result of heavy truck or construction equipment movements; resulting in noticeable deterioration of a roadway surface or other features in the road right-of-way.

Pipeline Replacement and Re-Route

The ORR was listed on the National Register of Historic Places in 1997 and as such has been deemed an object worthy of preservation. PAALP would implement impact-reducing measures required by the ANF, such as armoring portions of the ORR that appear to be in poor condition, and preparing a Transportation Plan for construction (Environmental Commitment T-1) with specific speed limits, access, etc., in order to avoid all project-related impacts to the ORR. In addition, all work activity, including use and maintenance of all Forest Service roads (i.e., Fisher Springs Road) would be subject to a Special Use Permit, controlled by the Forest Service. Consequently, construction activities associated with the Proposed Action would have no substantial adverse effect as it would not result in an increase in roadway wear or in noticeable deterioration of a roadway surface.

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3.11.3.2 No Action Alternative

The No Action Alternative would not employ any construction activities related to the returning Line 63 to active service. Implementation of the No Action Alternative would not cause an increase in traffic in relation to the existing traffic load and capacity of the street system serving the study area. Considering the above, the No Action Alternative would not have the potential to exceed either individually or cumulatively, a LOS standard established for roads and highways serving the study area. Implementation of the No Action Alternative would not result in inadequate emergency access or need for alternative access routes. Additionally, the No Action Alternative would not result in an increase in roadway wear compared to the Proposed Action. Therefore, implementation of the No Action Alternative would have no effect on regional traffic levels.

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3.12 VISUAL RESOURCES

The analysis in this section is derived from the Visual Assessment performed by Stantec in July 2013 and located in Appendix L of this EA.

3.12.1 Environmental Setting

The environmental setting section of this document describes the existing visual resources in the vicinity of the study area. The character and quality of these existing visual resources identified in the ANF study area establish a baseline against which potential impacts of the Proposed Action (Preferred Re-Route) and No Action Alternative are analyzed in Section 3.12.3. This assessment is derived from the *Visual Assessment: Plains All American Pipeline Line 63 Re-Route Project* prepared by Stantec in July 2013, as presented in Appendix L.

The study area is located one mile east of I-5 and approximately 1.5 miles west of Lake Castaic. It is designated as a National Forest and is surrounded by diverse topography, including mountain backdrops, hillsides and ridgelines, canyons and some streams. The study area consists of primarily chaparral with various linear infrastructures running through the site. There are a few residential properties on the southern portions of the study area. There are no scenic highways located in close proximity to the study area.

3.12.2 Regulatory Framework

2005 ANF Land Management Plan

The 2005 ANF Land Management Plan (LMP) establishes scenery management objectives for all ANF lands. The objectives within the LMP were developed using the Forest Service's Scenery Management System (SMS), which presents a vernacular for managing scenery and entails a systematic approach for determining the relative value and importance of scenery on National Forest lands. The SMS provides distilled guidance on integrating the benefits, values, desires and preferences regarding aesthetics and scenery for all levels of land and resource management planning. Scenic integrity objectives have been designated for all areas of the ANF. At the project level, all national forest activities are subject to review of the scenic integrity objectives. The study area is located primarily within an area designated with high scenic integrity objectives. Consistency Analysis with this document can be found in Appendix L.

High Scenic Integrity: This classification provides for conditions where human activities are not visually evident. This refers to landscapes where the valued (desired) landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, pattern and scale common to the landscape character. The landscape appears unaltered. This is synonymous with the Retention Visual Quality Objective under the original Visual Management System.

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Aesthetic Management Standards

S9: Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.

S10: Scenic Integrity Objectives will be met with the following exceptions:

- Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.
- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

National Scenic Trail Program

The National Scenic Trail Program consists of a series of 11 trails located throughout the United States, as designated by the National Trails System Act of 1968. The Pacific Crest Trail is one of three north-south trails that run from Mexico to Canada. It is located in excess of five miles northeast of the study area and would not be impacted by the construction or operation of the underground crude oil pipeline (Caltrans, 2012).

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 and is managed by the Landscape Architecture Division of Caltrans. The purpose of the California Scenic Highway Program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. According to California's Scenic Highway Program there are no designated scenic highway viewsheds or scenic viewsheds in the vicinity of the study area; however, there is current direction from the Regional Office to open the ORR and pursue designation.

National Scenic Trail Program

The Pacific Crest Trail (a national scenic trail) is located in excess of five miles northeast of the study area and would not be impacted by the construction or operation of the underground crude oil pipeline (Caltrans, 2012).

Los Angeles County General Plan

The Los Angeles County Department of Regional Planning oversees development, use, and conservation of the unincorporated areas of Los Angeles, including the ANF. The study area is located within the governing boundary of the Los Angeles County General Plan and is subject to

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the plans, policies, and procedures therein. The Los Angeles County General Plan provides a strategy for long-term growth that sets a context to guide amendments of the County of Los Angeles community plans, zoning ordinances, and other pertinent programs. The Conservation and Open Space Element of the Los Angeles County General Plan provides policy direction for the open space related resources of Los Angeles County. Included in the resources related to open space are scenic beauty and conservation and use of natural resources (Conservation and Open Space Element, Nov. 1980).

The Conservation and Open Space Element of the General Plan discusses the importance of scenic quality and emphasizes a need to protect scenic resources. As one of the objectives of this Conservation and Open Space Element, scenic resources must be preserved; therefore, stronger controls are needed to protect scenic resources from unsightly development and urban sprawl. In order to comply with the Los Angeles County General Plan, the Study Area must conform to each of the policy statements outlined in the General Plan.

Scenic Highway Element

The Los Angeles County General Plan contains a *Scenic Highway Element* (adopted October 1974). The purpose of this Element is to establish and protect scenic highways in Los Angeles County by identifying and evaluating a system of existing roads that traverse areas of scenic beauty and interest. The California Government Code Section 65302 (h) requires all city/county general plans to include a scenic highway element for the development, establishment, and protection of scenic highways pursuant to the provisions of Article 2.5 (commencing with Section 260) of Chapter 2 of Division 1 of the Streets and Highways Code. The Scenic Highway Element provides goals established to follow a scenic highway system serving the public through a variety of transportation modes, enhanced recreational opportunities served by a system of scenic highways, and preservation and enhancement of aesthetic resources within scenic corridors.

In order to implement these goals, a list of policies has been created to direct the conformance of Los Angeles County, which includes:

1. Establish a countywide scenic highway system in urban and rural areas.
2. Encourage utilization of appropriate existing roads as scenic highways rather than the construction of new routes.
3. Protect and enhance aesthetic resources within corridors of designated scenic highways.
4. Establish and maintain rural scenic highways to provide access to scenic resources and serve recreational users.

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5. Establish and maintain urban scenic highways to provide access to interesting and aesthetic manmade features, historical and cultural sites, and urban open space area.
6. Provide a comprehensive scenic highway system which safety accommodates various forms of transportation compatible with scenic highway criteria and standards.
7. Develop and apply standards to regulate the quality of development within corridors of designated scenic highways.
8. Remove visual pollution from designated scenic highway corridors.
9. Require the development and use of aesthetic design considerations for road construction, reconstruction or maintenance for all designated scenic highways.
10. Increase governmental commitment to the designation of scenic highways and protection of scenic corridors.
11. Encourage the fair distribution of social and economic costs and benefits associated with scenic highways.
12. Promote the use and awareness of scenic highway amenities for all segments of the population.
13. Improve scenic highway coordination and implementation procedures between all levels of government.
14. Encourage increased citizen participation in the scenic highway programs at all government levels.

In addition to the above statement of policies, the Scenic Highway Element provides scenic highway criteria and standards as a means by which potential routes are evaluated and the suitability of specific implementation programs determined (Scenic Highway Element, Oct. 1974). Interstate 5 adjacent to the study area, is an adopted route within the Scenic Highway system.

Santa Clarita Valley Area Plan

The *Santa Clarita Valley Area Plan* (Area Plan) was adopted by the Los Angeles County Board of Supervisors on November 27, 2012. The Area Plan is a component of the *County of Los Angeles General Plan*, which provides goals, objectives, policies, and implementation actions to help guide the regulation of development within the unincorporated portions of the Santa Clarita Valley. The Conservation and Open Space Element of this Area Plan discusses aesthetics and scenic resources; in addition, it provides goals, policies and objectives necessary to protect the scenic resources within the planning area.

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3.12.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce adverse effects to visual resources as a result of the Project can be found in Section 2.3.1.

3.12.3.1 Preferred Re-Route (Proposed Action)

3.12.3.1.1 Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings.

Pipeline Replacement and Re-Route

The Proposed Action would consist of 2.27 miles of pipeline alignment between Line 63 MPs 37.4 and 40.3. The first approximately 0.5 mile of the Proposed Action alignment would be located parallel and within the existing previously-disturbed Line 2000 ROW near the south end of the Osito Canyon side. For purposes of this assessment, it is assumed that no widening of the ROW would be required and no additional cut slopes would be necessary in this section of the Line 2000 ROW. Construction traffic will utilize existing Forest Service roads and corridor access roads, eliminating the need for new roads. Existing vegetation within the Line 2000 ROW consists of a high density of non-native plant communities that would be cleared during construction, resulting in exposure of soil and rock fill. Potential impacts include an increase in the extent and uniformity of the color contrast. The proposed spreading of rocky fill within the ROW (See Section 2.1.1.4.10) has the potential to limit the effectiveness of restoration efforts and should be performed consistent with the goals and objectives of the HRP so as not to be counterproductive to restoration efforts (Environmental Commitment VR-10). Visibility from the ORR includes immediate foreground, foreground and middle ground. The majority of this segment is visible from the ORR. Variations in topography help to mask the linearity of the alignment from many near-axial viewing angles and where the ORR runs parallel, the scar from the cut slopes of the alignment tends to blend with the existing exposed geologic strata. Long-term impacts from construction include a potential for improvement in the landscape character and visual quality of the ROW from restoration and revegetation efforts.

The remaining two miles would be comprised of approximately 0.27 miles located in previously-undisturbed terrain and 1.50 miles located on previously disturbed terrain along the Line 63 and Line 2000 ROWs. The HDD Entry/Exit Point North near MP 40 of the existing Line 63 alignment would visually disturb approximately ¼ acre of land. These impacts are anticipated to include

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grading, clearing and restoration immediately adjacent the ORR. The HDD Entry/Exit Point South has the potential to create significant visual disturbances from multiple high concern observation points including: the ORR, Castaic Canine Camp, and the few residential properties in the immediate vicinity. Although the HDD pipe segment would be hidden within the mountain a significant laydown area is required for installation. The 200' wide by ¼ mile long entry/exit point and laydown area has considerable topographic variance, fairly contiguous vegetative cover, and includes some natural rock outcroppings of considerable mass and moderate scenic value due to their rarity. Impacts associated with this area of work would be visible from the immediate foreground and foreground distance zones of the ORR. The viewer position is superior. This alignment would involve clearing and grading of a visually contiguous plant community which currently appears largely unaltered. It would introduce a new visual disturbance to the viewshed during construction and for a number of years following installation. The area is proposed to be regraded to match existing grade and revegetated per ANF requirements. With restoration, the linear signature of the alignment is expected to heal over time; however, success of revegetation is known to be variable.

Indirect visual impacts during operation include the potential for unauthorized vehicle, motorcycle and mountain bike use on these corridors. This condition was observed in the field on a portion of the Line 2000 corridor (See Appendix L, Photo 5). If allowed to occur and continue, these areas struggle to revegetate and can remain visible for many years.

Redisturbance of landscape areas along the pipeline alignment is possible during the life of the pipeline. These activities may include clearing, excavation, and other activities which produce visual impacts by disturbing the landscape. Evidence of these activities on existing pipelines was observed during the field visit. Several existing pipelines share this ROW, so cumulative impacts include an increased potential for disturbance of a ROW which is already likely to be disturbed by maintenance activities on other pipelines.

Construction activities would require multiple equipment and material staging areas, strategically placed within the study area to maximize operational efficiencies and reduce vehicle trips. With the exception of a portion of the HDD Pipe Laydown Area, all areas have been previously disturbed and would not require any grading or surface disturbance. Due to the highly variable mountainous terrain and the fact that there are few private residences within the study area, only a few houses in the distance would have a view of construction activities associated with the Proposed Action. To minimize impacts to the existing visual character of the area, construction vehicles would utilize existing roads to the extent feasible. Adverse effects to the visual character of the landscape would occur during clearing, grading, trenching, welding, backfilling and ROW cleanup and restoration activities. In addition, in order to minimize potential environmental effects, construction activity would comply with all staging, construction, and restoration Environmental Commitments VR-1 through 18 as listed below and located in the *Visual Assessment: Plains All American Pipeline Line 63 Re-Route Project* (Appendix L). Potential effects would be further minimized because the majority of the pipeline re-route follows an existing utility corridor alignment. Construction activities are short term and would not

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permanently alter the existing landscape due to post-construction restoration. With successful restoration efforts and implementation of the Environmental Commitments, the Proposed Action would achieve a Moderate scenic integrity level within three years of project completion. Because the SIO for the project area is High, the proposed action would be one SIO level short of meeting Aesthetic Management Standard S9. However with the Forest Supervisor's approval, it would comply with the first exception of Standard S10, which would allow for a drop of one SIO level. If the Forest Supervisor approves the one level SIO drop, then the successful implementation of the Proposed Action would comply with the Aesthetic Management Standards of the LMP

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3.12.3.1.2 Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Pipeline Replacement and Re-Route

Construction activities associated with the Proposed Action are anticipated to occur within daylight hours. It is not anticipated that any work would occur after dark. The Proposed Action would not create or introduce a new source of light or glare for the study area; therefore, the Proposed Action is not expected to have a substantial adverse effect on day or nighttime views in the area.

3.12.3.1.3 Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings and historic buildings).

Pipeline Replacement and Re-Route

According to California's Scenic Highway Program there are no scenic highway viewsheds or scenic viewsheds in the vicinity of the study area (Caltrans, 2012) although there is current direction from the Regional Office to open the ORR and push to make it a Scenic Highway. Within the study area there is one Cultural Heritage Site: the ORR and associated structures (Los Angeles County, Department of Regional Planning, 2012). The ORR is the main access road to the study area and would be utilized by construction vehicles accessing the study area. Potential impacts to the ORR and Environmental Commitments are discussed further in Section 3.3 Cultural and Paleontological Resources Section. The nearest highway is I-5, which is located one mile west of the study area. Some select portions of the proposed 2.27 mile pipeline re-route can be seen from I-5 (see Figure 4.6c in Appendix L). No construction activities associated with the Proposed Action would be visible from a scenic highway viewshed or a national scenic trail viewshed. There is current direction from the Regional Office to open the ORR and pursue Scenic Highway designation. The majority of the pipeline alignment would be visible from the ORR (See Figure 4.6a, Appendix L). Visual impacts of the Proposed Action from the ORR were evaluated in section 5.0 of the Visual Analysis in Appendix L.

As discussed in Section 3.12.3.1.1, impacts associated with this area of work would be visible from the immediate foreground and foreground distance zones of the ORR. The viewer position is superior. This alignment would involve clearing and grading of a visually contiguous plant community which currently appears largely unaltered. It would introduce a new visual disturbance to the viewshed during construction and for a number of years following installation. The area is proposed to be regraded to match existing grade and revegetated per ANF requirements. With restoration, the linear signature of the alignment is expected to heal over time; however, success of revegetation is known to be variable. Environmental Commitments VR-1 through VR-18 have been provided to reduce the visual impacts that viewers from the ORR would have should the roadway be reopened and/or become officially designated as a Scenic Highway. Following the implementation of these Environmental Commitments, including

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a Project-specific Plan amendment and compensatory compensation (Environmental Commitment VR-18) if the area disturbed from Proposed Action implementation does not meet LMP Standards S9 and S10 three years after completing construction would mitigate impacts to visual resources to a level consistent with the policy directives in the ANF Land Management Plan.

3.12.3.2 No Action Alternative

Implementation of the No Action Alternative would result in no pipeline re-route along the proposed alignment. The No Action Alternative would have no adverse effect on the existing landscape character and visual quality of the site and its surroundings, and would not create a new source of light or glare that would adversely affect day or nighttime views in the area. Considering there are no nationally identified or recognized scenic highways or trails within the study area, implementation of the No Action Alternative would not damage scenic resources within a scenic highway viewshed or national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings). While the No Action Alternative would not result in a direct or indirect adverse effect on aesthetics or visual resources for the study area, it would not meet the Purpose and Need of the project.

3.13 WILDERNESS AND RECREATION

3.13.1 Environmental Setting

Management of recreation uses on the national forests of southern California has traditionally been low-key with minimal regulation of use patterns. As surrounding populations have soared, national forests have become a primary source of natural open-space based recreation activities. Limited access (due to steep topography and dense chaparral) has led to a pattern of generally low levels of use across most of the landscape. Recreation is highly concentrated in areas that are relatively flat with roaded access (e.g., valley bottoms and forested mountain valleys and plateaus). In addition, water is an attraction that draws large crowds in many areas.

The ANF encompasses approximately 1,000 square miles of open space and offers natural environments, scenic vistas, developed campgrounds and picnic areas, swimming, fishing, skiing and natural wilderness areas. Trails winding throughout the forest accommodate hikers, equestrians, mountain bikers and off-highway vehicle enthusiasts. The ANF manages approximately 500 recreation special-use authorizations, including four concession campground complexes, two concession target shooting areas, five ski areas, a marina, 26 organization camps, and over 450 summer homes. The ANF operates 63 campgrounds with over 1,100 individual campsites and an additional 36 picnic areas.

Hiking, backpacking, equestrian use, bicycling, mountain biking, hunting, OHV use, and water-based recreation are the most popular recreation activities occurring within the ANF. Pyramid Lake, located west of the I-5 corridor, offers year-round access to water-based recreation and also creates a downstream area for catch and release fishing. OHV opportunities exist within the Back Country Discovery Trail and a portal to the Hungry Valley State OHV Area. The demand for low elevation recreation along nearby riparian areas (especially Frenchman's Flat) is reaching or exceeding capacity (ANF, 2005).

The study area has restricted access for recreational activities as all roads serving the study area are closed to the general public. Locked steel gates are positioned at or near the intersections of Fisher Springs Road, Templin Highway, Paradise Ranch Road and the ORR, and I-5. Access through these gates into the study area can only be gained by permission of the ANF, PAALP or other authorized utility companies. Public vehicle access to the study area is not permitted.

3.13.2 Regulatory Framework

2005 ANF Land Management Plan

The ANF is divided into a series of geographical units called 'Places'. According to the governing 2005 ANF Land Management Plan (LMP), each Place has its own defined landscape character. The Project occurs near the boundary of two of these Places: 'I-5 Corridor' and the 'The Santa Clara Canyons'; however, the alignment is located on the I-5 Corridor Place side of

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the boundary and is within the “Developed Areas Interface” Land Use Zone. The I-5 Corridor Place is a major utility corridor for electricity, fiber optics, natural gas, and crude oil. Many of the utility service infrastructures that support the greater Los Angeles urban area are present within the Place, and have been constructed to conform to the natural integrity of the landscape. Existing uses according to the LMP include two 500 KV and three 220 KV overhead electrical corridors, four fiber optic lines, Interstate Highway 5, the California Aqueduct, and seven oil and gas pipelines.

The Santa Clara Canyons Place is identified as a "Key Place" for its natural appearing and pastoral landscape that functions as a remote Back Country open space. The valued landscape attributes to be preserved over time are the dramatic canyon panoramas and rugged mountain background views, oak woodlands, a well-defined age class mosaic in chaparral, and the pastoral qualities of grazing activities, which is important to the interpretation to the examples of important Native American history and historic mining. Habitat conditions for threatened, endangered, proposed, candidate and sensitive species are improving over time. Exotic species are reduced and controlled over time.

The LMP includes Goals, Objectives, and Management Strategies relevant to wilderness and recreation. Part 2 of the LMP describes the Management Strategies, or the trends and expectations as well as anticipated resource improvements planned over the next three to five years in the ANF. The program emphasis and objectives for non-recreation special uses is to manage infrastructure needs to support communities while preserving open space and natural settings. Special uses are authorized only when they cannot be reasonably accommodated on non-Forest Service lands. Maintaining open space is given priority over accommodating urban needs.

The ANF has designated land use zones for the purpose of identifying appropriate management types of “uses” that are consistent with the achievement of desired conditions. These land use zones are similar in concept to zoning models used by municipalities to determine the suitability of specific uses by land use zone. According to the LMP, specific uses are allowed on national forests except when identified as not suitable.

Los Angeles County Land Use Designations

Pursuant with the Santa Clarita Valley Area Plan, the land use designation for the study area is OS-NF – National Forest/Santa Clarita Valley. The SCVAP, adopted November 27, 2012, is a component of the Los Angeles County General Plan which provides goals, objectives, policies, and implementation actions that apply only to the unincorporated portions of the Santa Clarita Valley. The National Forest designation identifies lands in the planning area within the Angeles and Los Padres National Forests. For lands owned by the United States Forest Service (USFS), special allowable uses, maximum intensity standards, and development standards are determined by the underlying zoning designation. For privately owned lands within the National Forest (in-holdings), allowable uses in this designation include single-family homes at a maximum density of one dwelling unit per five acres, agriculture, equestrian uses, private

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recreation, and public and institutional facilities serving the local area. Special allowable uses and development standards are determined by the underlying zoning designation. Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. .

All parcels within the study area have the same land use designation: OS-NF National Forest/Santa Clarita Valley.

3.13.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

3.13.3.1 Preferred Re-Route (Proposed Action)

3.13.3.1.1 Directly and/or indirectly disrupt or preclude activities in an established recreation area or wilderness area, including through substantially contributing to the long-term degradation of the “outdoor experience” for recreationists.

Pipeline Replacement and Re-Route

The study area is primarily located within the “Developed Areas Interface” Land Use Zone and the “I-5 Corridor” within the 2005 LMP and is not located in an established recreation or wilderness area. Vehicle access to the study area is also prohibited to the general public. The Proposed Action is compatible with current land uses for the study area. Implementation of the Proposed Action would not directly and/or indirectly disrupt or preclude activities in an established recreation area or wilderness area. Therefore, the Proposed Action would not result in a substantial adverse effect to recreation or wilderness uses.

3.13.3.2 No Action Alternative

Implementation of the No Action Alternative would result in no construction activities associated with pipeline re-routing along the proposed alignment. Line 63 would remain idle and would not be used to convey crude oil. As Line 63 is classified as an active pipeline by the California State Fire Marshal, PAALP would continue routine O&M activities in compliance with applicable pipeline safety standards. Similar to the Proposed Action, the No Action Alternative would be compatible with current land uses for the study area. Implementation of the No Action Alternative would not directly and/or indirectly disrupt or preclude activities in an established recreation area or wilderness area, including through substantially contributing to the long-term degradation of the “outdoor experience” for recreationalists. Therefore, the No Action Alternative would have no effect on existing wilderness and recreation opportunities within the study area.

3.14 WILDFIRE SUPPRESSION AND PREVENTION

3.14.1 Environmental Setting

The study area is located entirely on NFS lands and fire protection for this area is provided by the Forest Service, which has primary wildland fire suppression responsibility on NFS lands. The Southern California Geographic Coordination Center (GACC) has responsibility for the mobilization of federal resources within the sphere of influence of the ANF. The Forest Service also has a Mutual Aid agreement with the Los Angeles County Fire Department (LACFD) to provide fire services and the California Department of Forestry has contracts with the LACFD to protect privately owned state responsibility areas (SRA's), including forestlands, watersheds, and rangelands (*County of Los Angeles Fire Department 2013 Strategic Fire Plan*). Wildland fire suppression encompasses all activities included in containing and mitigating the damages of wildland fires caused by either natural or human means. Fire Management includes all activities involved with pre-fire preparation, fire hazard reduction such as brush removal, and public education concerning fire prevention and safety. This section is derived from the technical study, *Fire Prevention Plan for the Line 63 Re-Route Project*, prepared by Stantec in August 2013 and located in Appendix L of this EA.

Numerous fire starts originate from I-5, approximately one mile to the west. Fire safe conditions along the interface are inconsistent and private landowners look to the national forest to create community defense zones. In this area, major wildfire events that do the most damage typically occur between October and January during severe weather conditions involving Santa Ana winds. Another peak in Santa Ana winds can occur in late February through early April. Wind-driven major events typically run their course until weather conditions change as they are difficult to contain regardless of firefighting resources. Fire suppression in the wildland-urban interface typically involves a multi-agency firefighting response with hundreds of firefighters participating in coordinated air and ground operations.

3.14.2 Regulatory Framework

2005 ANF Land Management Plan

The ANF Fire Management Plan provides a framework for the management of wildland fire, prescribed fire and hazard fuel reduction, and tools to safely accomplish the resource protection and management objectives of the ANF in accordance with the 2005 Land Management Plan. It includes tactics to manage and reduce the number of human-caused wildland fires and associated human and environmental impacts and improve the safety of the surrounding area. The prevention techniques include: implementation of the *Forest Fire Restrictions and Closure Plan*, which contains an internal/external public education plan; increasing fire clearance zones from 30 to 100 feet, and removal of mature and dead trees adjacent to structures.

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National Goals – Reduction of Wildland Fires

Part 1 Southern California National Forests Vision of the 2005 Land Management Plan (LMP) concludes that a fire started in the ANF poses a threat to adjacent communities because of dry conditions and decades of fire suppression practices that have resulted in the development of unnaturally dense stands of trees and the accumulation of brush and other flammable fuels in many areas. The priority goals for the Forest Service are provided in the Forest Service National Strategic Plan (2003 Revision). National Strategic Plan Goal 1 is to reduce the risk from catastrophic wildland fire.

Program Strategies and Tactics

The following strategies have been identified to progress toward achieving the desired fire-related conditions and goals in the 2005 LMP:

Fire 1 - Fire Prevention

Reduce the number of human-caused wildland fires and associated human and environmental impacts. Focus fire prevention programs on the urban interface, threatened, endangered, proposed, candidate and sensitive species habitat, vegetative areas threatened with type conversion and areas of major recreation use:

- Implement Forest Fire Restrictions and Closure Plan as appropriate, including an internal/external public communication plan.
- Continue to refine the process of implementing partial or full national forest closure as appropriate in order to increase the margin of public and firefighter safety.

Restoration of Forest Health

The long-term goal of vegetation management is to perpetuate plant communities by maintaining or re-introducing fire regimes appropriate to each type while at the same time protect human communities from destructive wildland fires. To accomplish this goal, the Forest Service has developed desired conditions within the framework of five major fire regimes. In this classification, fire regimes are defined primarily by the frequency (average interval between fires) and fire severity (related to intensity). Generally, other elements of fire regimes such as season of burning, landscape pattern and size are not so heavily weighted in this classification. A national Condition Rating System has also been developed that links fire regime to existing vegetation by evaluating the degree to which a vegetation type has departed from its ideal regime. The greater the departure the greater the risk fire poses to the functioning of the ecosystem.

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Project Activity Level

ANF sets Fire Use Restrictions, determined by a graduated system that becomes more restrictive as fire danger levels increase.

Restrictions and fire prevention measures required are largely based on the Project Activity Level (PAL) system. The PAL is a scientifically based system to regulate all industrial and contractual activities on National Forest lands in California. The PAL is designed to reduce the risk of large damaging wildlife and the legal vulnerability of the agency, contractors, or permittees. The system is fire danger and climatology based, using Energy Release Components (ERC) on Ignition Components (IC) to determine ratings. It provides a single decision support matrix for regulating industrial and service activities on the ANF. Table 4-1 in the *Fire Prevention Plan for the Line 63 Re-Route Project* outlines project activity requirements based on level of activity (i.e., level A-E). An example of a PAL requirement is to furnish a fire patrol person for activity levels B-E.

3.14.3 Direct and Indirect Effects

The potential for the Proposed Action to contribute to cumulative effects when combined with other projects having a spatial (geographic) and temporal (how long the effects will last) nexus is discussed in Section 4.0. Direct and indirect effects are discussed below.

Environmental Commitments

A variety of Environmental Commitments have been incorporated into the Project in order to avoid and/or minimize Project-related adverse effects to sensitive resources. Environmental Commitments designed to specifically reduce the potential for wildfire as a result of the Project can be found in Section 2.3.1.

3.14.3.1 Preferred Re-Route (Proposed Action)

3.14.3.1.1 Activities associated with the Project could adversely affect fire prevention and suppression activities.

Pipeline Replacement and Re-Route

Numerous fire starts originate from the I-5 corridor. Fire safe conditions along the interface are inconsistent due to a number of variables, such as dry vegetation (e.g., potential flashy fuel, fire barrier or fire enhancement areas) and human encroachment (e.g., arsonists) and unauthorized activities (e.g., unpermitted campfires). As a result, the Forest Service dedicates focused effort to fire prevention, consistent with the *Forest Fire Restriction and Closure Plan*. PAALP would obtain a special use permit from the Forest Service to conduct construction and operation of the Proposed Action on ANF land. This would ensure that PAALP development activity would have

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no effect and would not conflict with Forest Service operations, including fire prevention and suppression activities.

Activities associated with the Proposed Action would involve the operation of vehicles and construction equipment to transport crew and equipment during the approximately 60 day construction period. Work activity would involve trench excavation and soil removal with a backhoe. Once the pipeline is in place, the trench would be backfilled, compacted, and covered. With the implementation of Environmental Commitments WF-1 through W-20 and BIO-1, impacts to forest resources associated with wildfire would be avoided or minimized. Therefore, the Proposed Action would not result in a substantial adverse environmental effect.

3.14.3.1.2 Project-related activities or the presence of the Project could expose communities, firefighters, personnel, and/or natural resources to an increased risk of wildfires.

Pipeline Replacement and Re-Route

As described in Section 3.15.3.1.2 above, construction activities associated with the Proposed Action would occur over an approximately 60-day construction period. To comply with Forest Service fire prevention objectives, PAALP would implement Environmental Commitments WF-1 through WF- 20 and BIO-1. As such, construction activities would not expose communities, firefighters, personnel, and/or natural resources to an increased risk of wildfires. Therefore, the Proposed Action would not result in a substantial adverse environmental effect.

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3.14.3.2 No Action Alternative

Implementation of the No Action Alternative would result in not completing the pipeline re-route along the proposed alignment. There would be no construction activities that would pose an inherent risk or sparks and hence fire ignition, thereby increasing the risks of wildfire.

Implementation of the No Action Alternative would not include any activity that would adversely affect fire prevention and suppression and would not include any activities that have the potential to expose communities, firefighters, personnel, and/or natural resources to an increased risk of wildfires.

4.0 CUMULATIVE EFFECTS

Cumulative effects of the Proposed Action are analyzed within this section in accordance with 40 CFR 1508.7 and in accordance with The Council on Environmental Quality Guidance Memorandum on Consideration of Past Actions in Cumulative Effects Analysis dated June 24, 2005, which analyze present effects of past actions that are, in the judgment of the agency, relevant and useful because they have a significant cause-and-effect relationship with the direct and indirect effects of the proposal for agency action and its alternatives.

Spatial (distance) and temporal (time) boundaries are the two critical elements to consider when deciding which actions to include in a cumulative effects analysis. Spatial and temporal boundaries set the limits for selecting those actions that are most likely to contribute to a cumulative effect. The effects of those actions must overlap in space and time for there to be potential cumulative effects. The following framework was used as a screening tool for the cumulative effects analysis:

1. Definition of the affected spatial (geographic) area for each resource where effects (direct and indirect) may be caused by the proposed activities;
2. Definition of the temporal boundaries for each resource from the proposed activities (how long will the effects last?);
3. Documentation of the rationale and sources for the spatial and temporal boundaries of the affected area for each resource;
4. Description of the effects that overlap in time and space for past, present, and reasonably foreseeable actions, regardless of ownership, that may combine with effects of the Proposed Action and result in cumulative effects; and
5. Description of key assumptions made in the analysis and any information gaps that may exist.

4.1 PROPOSED ACTION AFFECTED TEMPORAL BOUNDARIES

The Proposed Action involves re-routing/replacing approximately 14,000 linear feet (2.65 miles) of an existing crude oil pipeline that PAALP operates between Bakersfield and Long Beach. Line 63 is not currently being used to flow oil. However, Line 63 remains to be an active pipeline by applicable regulatory definition and is subject to compliance with the operational and maintenance requirements of federal pipeline safety standards (49 CFR 195). These standards require periodic integrity testing of the pipeline as well as investigation and repair of detected anomalies.

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Whether the Proposed Action or No Action Alternative is implemented, O&M activities of Line 63, including anomaly investigations and repairs will continue for the foreseeable future. If the Proposed Action is implemented, the re-routed segment of Line 63 would be integrated into PAALP's Integrity Management Plan and O&M program. The Proposed Action would not be expected to increase the frequency or magnitude of O&M activities beyond those that already occur for Line 63.

As a result, implementation of the Proposed Action only has the potential to contribute to cumulative effects during and as a result of the construction phase. The Proposed Action is expected to have an approximate 60-day duration between Fall 2014 and Winter 2015. A majority of potential adverse effects from implementation of the Proposed Action would be limited to the approximately 60-day construction term of the Project. Therefore, the temporal boundary for potential cumulative effects of the Proposed Action for most resource areas is between Fall 2014 and Winter 2015. Soil and vegetation disturbances resulting from the Proposed Action would have potential effects with a duration extending beyond the completion of pipeline re-route activities. Resource areas in which the Proposed Action could contribute to cumulative effects beyond the construction term are limited to biological resources, hydrology and water quality, and visual resources. The temporal boundary for these resource areas was defined to extend ten years beyond construction when it is anticipated performance criteria related to restoration efforts shall be met.

4.2 PROPOSED ACTION AFFECTED SPATIAL BOUNDARIES

Pursuant with 40 CFR 1508.7, the criteria for spatial and temporal boundaries can be different for each issue area. The Proposed Action's potential adverse effects were reviewed to determine the temporal and spatial boundaries for which the Proposed Action could, in addition to the adverse effects of other projects, have the potential to contribute to cumulative effects. Table 4.1-1, below presents the resource-specific temporal and spatial boundaries used for this cumulative effects analysis as well as the justification for its use.

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Table 4.1-1 Temporal and Spatial Boundaries for Cumulative Effects Analysis

Issue Area	Temporal Boundary	Spatial Boundary	Justification
Air Quality	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Within one mile of the Proposed Action	Threshold for cumulative air quality impacts used in recent South Coast Air Quality Management District environmental analyses.
Biological Resources	Construction period of Proposed Action (Fall 2014 – Winter 2015) through completion of restoration activities (assumed 2025 after ten year effort to meet success criteria)	Distribution of effected species and habitats	Other actions affecting the same species or habitats could result in cumulative biological resources effects.
Cultural and Paleontological Resources	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Areas with Proposed Action soil disturbances along the pipeline re-route alignment and the Old Ridge Route (Including the Forest Inn)	Other actions occurring in the same areas disturbed by the Proposed Action and along the Old Ridge Route could result in cumulative cultural and paleontological effects.
Environmental Contamination and Hazards	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Angeles National Forest	Other actions occurring in Angeles National Forest or those that could impact the same environmental resource as a result of environmental contamination and hazards are considered to have the potential to contribute to cumulative effects.
Geology / Soil Resources	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Areas with Proposed Action soil disturbances along the pipeline re-route alignment	The potential for cumulative geology and soil resources effects from the Proposed Action would be localized to areas disturbed during implementation.
Greenhouse Gas Emissions	Construction period of Proposed Action (Fall 2014 – Winter 2015)	California	Greenhouse gas emissions are a potential global climate change issue. The Proposed Action is located in California that has regulations applicable to such emissions occurring in the state to meet mandated greenhouse gas emissions reduction levels.
Hydrology and Water Quality	Construction period of Proposed Action (Fall 2014 – Winter 2015) through completion of restoration activities (assumed 2025 after ten year effort to meet success criteria)	Lake Piru Subwatershed of the Santa Clara Watershed	The Proposed Action has the potential to affect ten tributaries to (and including) Gun Club Creek. These areas are located in the Lake Piru Subwatershed of the Santa Clara Watershed. Other actions occurring in the same subwatershed could result in cumulative hydrology and water quality effects.
Land Use	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Angeles National Forest and Los Angeles County	Proposed Action components located on lands administered by the Angeles National Forest and Los Angeles County.
Noise	Construction period of Proposed Action (Fall 2014 – Winter 2015)	One mile from Proposed Action	Noise associated with the Proposed Action will primarily be limited to the operation of conventional construction along the pipeline re-route alignment. Because noise substantially

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Issue Area	Temporal Boundary	Spatial Boundary	Justification
			attenuates with distance, a one mile spatial boundary is sufficient to consider cumulative noise effects of the Proposed Action.
Socioeconomics and Environmental Justice	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Community of Castaic	Nearest Census Designated Place that could be affected.
Traffic and Transportation	Construction period of Proposed Action (Fall 2014 – Winter 2015)	I-5 Corridor between Templin Highway and Fisher Springs Road, Templin Highway, Fisher Springs Road, and Old Ridge Route	The Proposed Action has the potential to affect these roadways. Other actions occurring along the same roadways could result in cumulative traffic and transportation effects.
Visual Resources	Construction period of Proposed Action (Fall 2014 – Winter 2015) through completion of restoration activities (assumed 2025 after ten year effort to meet success criteria)	Proposed Action viewshed (See Visual Assessment appendix)	Other actions occurring in the same viewshed as the Proposed Action could result in cumulative visual resources effects. Visual effects of the Proposed Action may occur until restoration performance criteria are achieved. Until restoration is complete, the Proposed Action has the potential to contribute to cumulative visual effects in the Proposed Action viewshed.
Wilderness and Recreation	Construction period of Proposed Action (Fall 2014 – Winter 2015)	Angeles National Forest	The Proposed Action is located within the Angeles National Forest and does not have the potential to contribute to cumulative wilderness and recreation effects on other lands.
Wildfire Suppression and Prevention	Construction period of Proposed Action (Fall 2014 – Winter 2015) through completion of restoration activities (assumed 2025 after ten year effort to meet success criteria).	Angeles National Forest	The Proposed Action is located within the Angeles National Forest; however, it may have the potential to contribute to cumulative wildfire suppression and prevention effects on other lands if the project area either acts as a fire barrier or fire enhancement area.

4.3 PROJECTS SCREENED FOR CUMULATIVE EFFECTS ANALYSIS

The Proposed Action is located in a remote, mountainous area of the ANF that does not experience considerable development. Projects in the vicinity of the Proposed Action primarily consist of Forest Service management decisions and actions as well as public utility operations and maintenance for facilities located on ANF lands. ANF actions/projects generally consist of fire remediation of recent forest fires, fuel management activities, storm-related road repairs, and slope stabilization activities. The Forest Service Schedule of Proposed Actions (SOPA) was reviewed for potential upcoming projects within the ANF. Two projects on Forest Service administered lands meeting the spatial and temporal criteria for Proposed Action potential effects were identified and considered in this cumulative effects analysis. In addition, past, present and reasonably foreseeable utility operations and maintenance activities within the

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spatial and temporal boundaries of the Proposed Action potential effects with the potential to contribute to cumulative effects were considered for each resource area.

The projects listed in Table 4.1-2, below, were identified through the above cumulative projects screening process and are considered for purposes of this cumulative effects analysis. Ongoing and future operation and maintenance activities associated with Line 63, Line 2000, and other utilities are generally limited to routine inspections and minor maintenance activities limited in duration and effect. The need for more substantial maintenance activities is dependent upon numerous factors that are difficult to predict in terms of spatial and temporary boundaries as well as potential adverse environmental effects. As such, this cumulative effect analysis is based on the Proposed Action's potential to contribute to cumulative effects when considered with routine reasonably foreseeable maintenance of utilities within the Proposed Action spatial and temporal boundaries.

Table 4.1-2: Cumulative Projects Considered in Cumulative Effects Analysis

Potential Cumulative Project	Description	Location
Angeles National Forest Defensible Space Project	This proposal is to allow private landowners adjacent to Nat. Forest System (NFS) lands to clear vegetation in accordance with County codes. The purpose is to reduce the risk of losing structures in a wildfire. An EA is being drafted and is expected to be available by May 2014 for a 30-day public comment period.	Private in-holdings (HDD Laydown Area)
Santa Clara River Watershed Invasive Plant Treatment Project	Approved in August 2013, this project allows several methods, including herbicides, to control, contain, or eradicate plant species that are undesirable or that harm, noxious, harmful, or injurious. The project will occur for the next 15 years on National Forest System lands, within the Santa Clara River Watershed.	Within the Proposed Action Watershed
Osito Canyon Retaining Structure Installation	Install retaining structure to protect utility pipelines and the Old Ridge Route.	Adjacent to northern end of Proposed Action
Line 63 San Andreas North Fault Zone Valve Installation	Installation of a mechanically operated valve on the north side of the San Andreas Fault to provide isolation of the pipeline in the event of pipeline failure resulting from a nearby fault rupture.	~13.8 miles northwest of the Proposed Action
Line 63 San Andreas South Fault Zone Valve Installation	Installation of a check valve on the south side of the San Andreas Fault to provide isolation of the pipeline in the event of pipeline failure resulting from a nearby fault rupture.	~13.2 miles northwest of the Proposed Action
Line 63 Garlock Fault Zone Valve Installation	Installation of a check valve adjacent to the Garlock Fault to provide isolation of the pipeline in the event of pipeline failure resulting from a nearby fault rupture.	~15.8 miles northwest of the Proposed Action
Line 63 Posey Canyon South Geotechnical Borings	Collection of geotechnical data along Line 63 pipeline alignment at Posey Canyon South. The project would not utilize the Old Ridge Route for access.	3 miles northwest of Proposed Action
Line 63 Operations and Maintenance	Routine pipeline inspections, maintenance and anomaly repairs in accordance with federal pipeline safety standards (49 CFR 195). Removal of exposed pipeline segments no longer necessary as a result of the Proposed Action reroute would be removed as a separate operations and maintenance activity and under separate	Existing Line 63 alignment including Proposed Action re-route

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Potential Cumulative Project	Description	Location
	review/authorization.	
Line 2000 Operations and Maintenance	Routine pipeline inspections, maintenance and anomaly repairs in accordance with federal pipeline safety standards (49 CFR 195).	Existing Line 2000 alignment. Portions parallel Line 63 including a majority of the Proposed Action re-route of Line 63
Other Utility Operations and Maintenance	Routine inspections, operations and maintenance of non-PAALP utility lines/pipelines (electricity, natural gas, water, and crude oil).	Within designated utility corridors and right of ways located in the ANF and in the vicinity of the Proposed Action
Recreation / OHV Use	Use of unpaved roads within the vicinity of the Proposed Action by recreationists, including OHV users, to gain access to more remote ANF locations.	Within the vicinity of the Proposed Action
Opening of Old Ridge Route	Sightseeing and general use by the public.	Within the vicinity of the Proposed Action

4.4 PROPOSED ACTION CUMULATIVE EFFECTS ANALYSIS

Table 4.1-3, below provides a summary of the projects considered in the cumulative effects analysis for each resource area evaluated in this EA. The potential for the Proposed Action to contribute to cumulative effects within the temporal and spatial boundaries described above are also presented.

Table 4.1-3 Cumulative Projects Analyzed by Resource Area-Specific Temporal and Spatial Boundaries

Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
Air Quality	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	Emissions resulting from implementation of the Proposed Action would be below the general conformity de minimis threshold emission rates established by the USEPA and would occur over a short duration. None of the projects within the cumulative effects boundaries are substantial sources of air pollutants. <i>The Proposed Action would not have a substantial adverse cumulative effect.</i>
Biological Resources	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Line 63 San Andreas North Fault Zone Valve Installation	The Proposed Action may impact, but not adversely affect six TEPCS wildlife species and four Forest Service sensitive plant species, and result in no effect to one TEPCS wildlife species and three sensitive plant species. While the overall cumulative decline (degradation or loss of) of some habitats for these species as a result of past, present, and reasonably anticipated future projects

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Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
	<p>Line 63 San Andreas South Fault Zone Valve Installation Line 63 Garlock Fault Zone Valve Installation Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance Recreation/OHV Use Wildfire</p>	<p>may occur as the result of invasive plant proliferation, modification of vegetation composition, and displacement of wildlife, the Los Angeles Draft General Plan (2012) and ANF Land Management Plan (2005abc) provide guidelines for the long-range protection and enhancement of ecological diversity and function in the County and National Forest. The cumulative effect of direct impacts to these species would be minimal, as mitigation measures for each project are implemented to reduce and/or eliminate direct effects to individuals. The relatively small spatial and short temporal boundaries of these projects would not likely effect the aforementioned species. Furthermore, for some biological resources, such as wetlands and riparian habitats, a no-net loss policy exists and therefore, these habitat types would not be anticipated to decline in the long term. Furthermore, all habitats impacted by the proposed project and other projects, would be restored in accordance with USFS project specific guidelines. As the Proposed Action would disturb only 0.003% of MIS species habitat and requires the restoration of disturbed areas in accordance with an ANF-approved Restoration Plan, the Proposed Action would only contribute to short-term cumulative effects,</p> <p>Post-construction restoration would improve existing poor quality habitats, reduce weed presence, and replace native habitat. Effects from the Proposed Action and other projects within the cumulative effects boundaries are short term in duration, are localized within an established utility corridor, and would involve little to no expansion of existing disturbed areas.</p> <p>The Proposed Action and other projects within the cumulative effects analysis are unlikely to affect wildlife movement corridors due to the small spatial and short temporal boundaries. These effects would not represent a substantial barrier to wildlife movement, as sufficient lands would still remain in the surrounding areas, and disturbed lands would be restored to native communities.</p> <p><u><i>The Proposed Action would have short term adverse cumulative effects, but restoration requirements would mitigate long term cumulative impacts.</i></u></p>
<p>Cultural and Paleontological Resources</p>	<p>Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance</p>	<p>The Proposed Action re-route could potentially have a direct impact on a previously documented historic resource (CA-LAN-990H/FS No. 05-01-53-032/Old Ridge Route), which is a historic property listed on the NRHP (NR No.97-001113). The Proposed Action could also result in direct or indirect impacts to other previously documented historic period resources, CA-LAN-991H (National Forest Inn/FS No. 05-01-53-033) and the "View Service Station Site" (Trinomial No. CA-LAN-2463H, USFS No. 01-01-53-165), located along the shoulder of the ORR . Archaeological monitoring shall be</p>

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Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
		<p>conducted along CA-LAN-990H (Old Ridge Route), during disturbances to previously undisturbed areas, and during disturbances within 30 feet of known cultural resources (including, but not limited to the National Forest Inn, the View Service Station Site, or the Gun Club BRM Site). Impacts to these documented historic resources would be project-specific and would not result in cumulatively substantial effects as the sites will be protected from disturbance and monitored during construction operations. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u></p> <p>Utility operators in the Proposed Action area utilize Old Ridge Route for access, a historic resource. Portions of the affected Old Ridge Route are in a deteriorated condition where further degradation would constitute a substantial environmental effect. PAALP has committed to restoring portions of the Old Ridge affected by the Proposed Action which will provide a cumulatively beneficial effect to the Old Ridge Route. <u>The Proposed Action would have a beneficial cumulative effect.</u></p>
Environmental Contamination and Hazards	Santa Clara River Watershed Invasive Plant Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	<p>The Proposed Action would involve conventional construction activities for an approximately 60-day duration and does not include a component that would contribute to a substantial cumulative environmental contamination effect. Line 63 has been purged of petroleum hydrocarbons and does not represent a substantial source of contamination or hazards during construction. The use of conventional construction equipment including fuels and lubricants for a short duration does not have the potential to contribute to substantial cumulative effects in consideration of other projects and use of hazardous materials in the ANF. The Proposed Action would provide a beneficial cumulative effect by reducing the operation risks of upset to Line 63 and would minimize the potential for environmental contamination and hazards compared to operation and maintenance of the existing Line 63 alignment. <u>The Proposed Action would have a beneficial cumulative effect.</u></p>
Geology / Soil Resources	Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	<p>There are no known planned or reasonably foreseeable utility operation and maintenance activities occurring in the same areas disturbed as a result of the Project. Projects would be subject to compliance with standard stormwater discharge and dust control requirements that are designed, in part, to prevent cumulative effects of soil erosion. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u></p>
Greenhouse Gas Emissions	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 San Andreas North Fault Zone Valve Installation Line 63 San Andreas South Fault Zone	<p>The Proposed Action's emissions of GHG emissions are below the applicable SCAQMD threshold of significance. This threshold value was developed on a per-project basis to ensure any one projects contribution to potential global change is not substantial. GHG emissions from project's, such as the Proposed Action, that are below the significance criteria are presumed to have a less than substantial project and cumulative effect on global climate change.</p>

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CUMULATIVE EFFECTS**

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Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
	Valve Installation Line 63 Garlock Fault Zone Valve Installation Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	<p><u>The Proposed Action would not have a substantial adverse cumulative effect.</u></p>
Hydrology and Water Quality	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	<p>The Proposed Action entails the crossing of ten drainages and soil disturbing activities within the Lake Piru Subwatershed. Fire and fire response activities have the potential for the greatest negative effect on hydrology and water quality (via vegetation removal and increased runoff). It is impossible to predict if or where fire will occur and cumulatively add to the potential effects of the Proposed Action on hydrology. However, the Proposed Action was selected to minimize stream crossings and for its limited effect on local hydrology and water quality. As such, should a fire occur, the limited relative size and duration of the Proposed Action's impact to hydrology and water quality are considered extremely incremental and would not likely contribute to a considerable cumulative effect. The same is true for the cumulative effect of the Proposed Action in conjunction with the utility operation and maintenance projects occurring in the same subwatershed. The cumulative effect of such ongoing O&M is repeated disruption to an already disturbed corridor. Therefore, due to the small area of impact, short duration, and location primarily in a previously disturbed corridor, <u>the Proposed Action would not have a substantial adverse cumulative effect.</u></p>
Land Use	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 San Andreas North Fault Zone Valve Installation Line 63 San Andreas South Fault Zone Valve Installation Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	<p>The Proposed Action represents a continuation of an existing land use that would not result in an increase over currently permitted crude oil transmission volumes or capacities. The Proposed Action would be consistent with the ANF Land Management Plan. The Proposed Action would be limited to an approximately 60-day duration and does not have a component with the potential to contribute to substantial cumulative effects. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u></p>
Noise	Angeles National Forest Defensible Space Project Line 63 Operations &	<p>Noise generating (construction) activities associated with the Proposed Action could contribute to cumulative noise effects if they occur in close proximity to and concurrently with other utility</p>

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Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
	Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	operation and maintenance activities as well as brush clearing by private landowners. However, the Proposed Action would occur in close proximity to sensitive receptors for a very short duration and would occur in compliance with Los Angeles County's Noise Ordinance related to permitted noise levels and construction times. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u>
Socioeconomics and Environmental Justice	The Proposed Action would have no adverse effect on Socioeconomics and Environmental Justice and therefore would not contribute to a potential cumulative effect. Potential cumulative effects are not considered further in this analysis	
Traffic and Transportation	Santa Clara River Watershed Invasive Plant Treatment Project Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	The Proposed Action and other considered projects would generate a combined 60 vehicle trips per day all utilizing the I-5 corridor between Templin Highway and Fisher Springs Road for access to the study area. Each project uses separate local, private, or dirt roads for project site access from I-5. The AADT for the access segments of the projects along the I-5 range from 54,100 to 75,000 vehicles per day with the LOS ranging from 'A' to 'D'. Templin Highway, Fisher Springs Road, and the Old Ridge Route have acceptable levels of service and the Proposed Action would occur over a short-term approximately 60-day duration. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u>
Visual Resources	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	The Proposed Action would result in soil disturbances and removal of vegetation that can contribute to cumulative visual effects when considered with visual effects of other projects in same viewshed. Disturbances as a result of the Proposed Action would primarily occur along previously disturbed utility corridors and areas disturbed would be restored in accordance with an ANF-approved restoration plan. <i>With the successful implementation of proposed restoration, Environmental Commitments, and future removal of exposed pipeline segments no longer necessary after completing the pipeline reroute, the Proposed Action would not have a substantial adverse cumulative effect.</i>
Wilderness and Recreation	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	The incremental effect associated with the Proposed Action combined with these other projects would not disrupt or preclude any outdoor activities or contribute to the degradation of the outdoor experience to recreationalists. <u>The Proposed Action would not have a substantial adverse cumulative effect.</u>
Wildfire Suppression and Prevention	Angeles National Forest Defensible Space Project Santa Clara River Watershed Invasive Plant Treatment Project	Wildfire prevention measures are a requirement for all work conducted outside and within the ANF boundary. These measures would ensure that the Proposed Action and other projects within the study area do not result in an incremental contribution to any

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Issue Areas	Projects Analyzed (Overlap in Spatial and Temporal Boundaries of Proposed Action Effects)	Proposed Action Cumulative Effects Analysis
	Line 63 Posey Canyon South Geotechnical Borings Line 63 Operations & Maintenance Line 2000 Operations & Maintenance Other Utility Operations and Maintenance	cumulative adverse effects to fire prevention and suppression activities or expose communities, firefighters, personnel, and or/natural resources to an increased risk of wildfire. <u>The Proposed Action would not have a substantial adverse cumulative effect as long as proposed restoration and Environmental Commitments are successfully implemented.</u>
<p>Note: The Osito Canyon Retaining Structure Installation is anticipated to be completed prior to the Proposed Action implementation. No substantial maintenance/operation activities that could contribute to Proposed Action cumulative effects would occur. Therefore the Osito Canyon Retaining Structure Installation project does not overlap with the temporal boundary of the Proposed Action effects and would not contribute to cumulative effects.</p>		

4.5 NO ACTION ALTERNATIVE CUMULATIVE EFFECTS ANALYSIS

The No Action Alternative does not propose any activities and would have no cumulative effects.

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5.0 COMPARISON OF ALTERNATIVES

This section provides a comparative summary of the potential impacts of the Proposed Action and the No Action Alternative discussed in Section 3.

Issue Area	Proposed Action	No Action
Project Description		
Total Length of Pipeline Re-Route/Replacement	14,000 feet	0
Total Length of Pipeline to be Installed by Conventional Trenching	12,000 feet	0
Width of Disturbance for Conventional Pipeline Installation	60 feet	No disturbance would occur.
Total Length to be Installed by Horizontal Directional Drill	2,000 feet	0
Total Estimated Surface Disturbance	18.5 acres	No disturbance would occur.
% Re-Route/Replacement Within Existing ROWs	93.6%	Not applicable.
Number of Stream Crossings	10	0
Estimated Number of Construction Days	60	0
Air Quality		
	<p><u>Peak Daily (lbs/day) and Total Construction Emissions (tons)</u> NO_x = 93.68 lbs/day, 1.90 tons VOC = 6.65 lbs/day, 0.14 tons CO = 59.35 lbs/day, 1.21 tons PM₁₀ = 78.86 lbs/day, 0.83 tons PM_{2.5} = 12.66 lbs/day, 0.15 tons SO_x = 0.14 lbs/day, 0.00 tons</p> <p>Emissions will be reduced by adhering to Environmental Commitments AQ-1 through AQ-7. Emissions of criteria pollutants are below the SCAQMD regional thresholds of significance.</p>	No emissions would occur.

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Issue Area	Proposed Action	No Action
	<p>Emissions are below the general conformity de minimis threshold emission rates and the Proposed Action is exempt from a conformity determination.</p> <p>The Proposed Action will not conflict with or obstruct implementation of the AQMP or the ANF LMP, violate any air quality standards or contribute to an existing or projected air quality violation, result in a cumulatively considerable net increase of any criteria non-attainment pollutant, expose the public to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people. The Proposed Action will not result in substantial adverse air quality effects.</p>	
Biological Resources		
Plant Communities	Majority of disturbance will occur within the existing Line 2000 pipeline corridor. Plant communities within this corridor are a mosaic of native and non-native dominated shrub and annual species assemblages, likely due to high levels of utility related disturbance.	No disturbance would occur.
Estimated Disturbances to Native Plant Communities	14.85 acres	No disturbance would occur.
Estimated Riparian Habitat Disturbance	0.098 acres	No disturbance would occur.
Estimated Waters of the US and State Disturbance	0.127 acres	No disturbance would occur.
Impacts to threatened, endangered, candidate, or proposed for listing plant species	No impacts would occur.	No impacts would occur.
Impacts to Forest Service Sensitive or CNPS listed plant species	Four (4) Forest Service sensitive plant species (Club-haired Mariposa Lily, Slender Mariposa Lily, Parry's Spineflower and Robbins' Nemacladus) and one CNPS listed species (Peirson's morning glory) have the potential to be impacted.	No impacts would occur.
Impacts to threatened, endangered, candidate, or proposed for listing wildlife species	No impacts would occur.	No impacts would occur.
Impacts to Forest Service Sensitive, Migratory Bird Treaty Act or CDFW Species of Special concern wildlife species	Six (6) Forest Service sensitive and SSC wildlife species (California legless lizard, coastal rosy boa, San Bernardino Mountain Kingsnake, San Bernardino ring-necked snake, pallid bat, and Townsend's big-eared bat) have the potential to be impacted.	No impacts would occur.
Impacts to trees	Potentially impact 24 <i>Populus fremontii</i> (Fremont cottonwood) and <i>Salix laevigata</i> (red willow) individuals associated with riparian habitat at the intersection with Gun Club Creek.	No impacts would occur.

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Issue Area	Proposed Action	No Action
Impact Summary	Implementation of the Proposed Project has the potential to result in adverse environmental effects to biological resources. These adverse environmental effects will be reduced through adherence of Environmental Commitments BIO-1 through BIO-13. The Proposed Action will not result in substantial adverse effects to biological resources.	No impacts would occur.
Cultural and Paleontological Resources		
	<p>Construction activities associated with the Proposed Action would require excavation and grading for pipeline installation. A majority of pipeline re-routing/replacement would occur within existing and previously disturbed pipeline ROWs (Line 2000 and/or Line 63). Based on field surveys and reports prepared by LSA, it appears that existing ROWs have been heavily impacted by installation of crude oil pipelines and natural gas pipelines.</p> <p>The Line 63 and Line 2000 ROWs in the vicinity of the proposed re-route are in remote, mountainous terrain. The ROWs intersect or are adjacent to roadways at limited locations. Access to project work areas would be through Fisher Springs Road, the ORR, Templin Highway, and approved spurs branching off these roads. Initial access to these roads is gained from I-5. The ORR surface would be protected from damage from heavy equipment with a layer of dirt, steel plates, rubber pads, or other approved method. In order to prevent adverse effects to the historically significant ORR, PAALP shall implement Environmental Commitments CULT-1, CULT-2, CULT-3, and UNV-3 during construction of the Proposed Action. In addition, PAALP shall implement CULT-7 to reduce the potential for substantial adverse effects to paleontological resources to occur.</p>	No impacts would occur.
Environmental Contamination and Hazards		
	<p>The Proposed Action involves re-routing an existing pipeline segment to bypass high-ranked geohazards present along the existing alignment to reduce the potential risk of upset to pipeline operations to occur as a result of natural hazards.</p> <p>The Proposed Action would not result in soil contamination, result in mobilization of contaminants currently existing in the soil, cause contamination of soils or groundwater, or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident involving the release of hazardous materials into the environment.</p> <p>PAALP would implement Environmental Commitment HAZ-1 to avoid or minimize potential for an accidental release of hazardous materials at the project site. The Proposed Action will not result in substantial adverse environmental effects related to environmental contamination and hazards.</p>	No impacts would occur.

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Issue Area	Proposed Action	No Action
Geology / Soil Resources		
	<p>The Proposed Action was selected to bypass numerous high-ranked (i.e., high risk) geohazards present in the study area and has been designed to minimize the risk of upset to pipeline operations as a result of seismic activity and slope instability (e.g., landslide hazards). The Proposed Action will be primarily located within existing pipeline right of ways and an ANF designated utility corridor.</p> <p>Construction or operation of the Proposed Action is not expected to result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse as a result of unstable geologic units or soils. Environmental Commitment GEO-1 will be implemented to minimize the potential for soil erosion during construction activities. The Proposed Action will not result in substantial adverse environmental effects related to geology and soils.</p>	No impacts would occur.
Greenhouse Gas Emissions		
	<p>The Proposed Action would result in 298.82 metric tons of CO₂e during construction which is below the interim 10,000 metric tons CO₂e SCAQMD threshold.</p> <p>The Proposed Action is not expected to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. The Proposed Action will not result in substantial adverse environmental effects related to greenhouse gases.</p>	No impacts would occur.
Hydrology and Water Quality		
	<p>The Proposed Action would not violate water quality standards or create new sources of polluted runoff/degrade water quality, deplete groundwater or interfere with groundwater recharge, nor substantially alter a drainage pattern in a manner that would result in substantial erosion or other flood related damages with implementation of GEO-1 and HYD-1 through HYD-3. The Proposed Action will not result in substantial adverse environmental effects related to hydrology and water quality.</p>	No impacts would occur.
Land Use		

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Issue Area	Proposed Action	No Action
	<p>The Proposed Action would not be inconsistent or non-conformant with applicable land use plans and policies, preclude the viability of existing land uses, or be incompatible with land uses adjacent to or in the vicinity of the study area such that public health or safety is threatened. PAALP would adhere to Forest Service and County requirements and implement LU-1 and UNV-2 through UNV-7 to ensure conformance with land use. The Proposed Action will not result in substantial adverse environmental effects related to land use.</p>	<p>No impacts would occur.</p>
Noise		
	<p>The Proposed Action would result in short-term construction activity near a few sensitive receptors (i.e., residences). Proposed Action noise levels were modeled at the nearest sensitive and are:</p> <ul style="list-style-type: none"> ▪ 50.1 dBA from HDD Exit Location ▪ 65.1 dBA from HDD Entry ▪ 71.2 dBA from HDD Laydown Area <p>Predicted noise levels are below the County of Los Angeles construction noise threshold of 75 dBA during the daytime (7 a.m. to 8 p.m.). The Proposed Action will not result in substantial adverse environmental effects related to noise.</p>	<p>No impacts would occur.</p>
Socioeconomics and Environmental Justice		
	<p>The Proposed Action would not result in a substantial shift in population trends, adversely affect regional spending and earning patterns, introduce a new and overwhelming demand for public service and/or utilities, or cause a disproportionately high and adverse effect on low-income or minority communities adjacent to or in the vicinity of the study area.</p> <p>The Proposed Action will restore the pipeline system capacity back to its pre-2009 level and support increasing regional oil production which is providing much needed jobs and additional revenue for the State and local jurisdictions through taxes and royalties.</p>	<p>The No Action Alternative will result in the continuation of a diminished pipeline system capacity and will have an adverse economic effect when compared to the Proposed Action.</p>
Traffic and Transportation		
	<p>Construction of the Proposed Action would result in a temporary increase in vehicles trips on local roadway systems over the course of the proposed approximately 60-day construction duration. Proposed Action-related vehicle trips represent a small increase in comparison to existing traffic volumes and are not expected to create an adverse effect on traffic or the street system.</p> <p>Impacts to construction equipment and vehicles on Forest Service roads within ANF would be</p>	<p>No impacts would occur.</p>

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Issue Area	Proposed Action	No Action
	<p>subject to compliance with a special use permit obtained from the Forest Service for construction and operation of the project on ANF lands. ANF roads would be maintained by PAALP in accordance with Forest Service requirements, including those to assure protection of the ORR.</p> <p>Implementation of Environmental Commitments T-1 would reduce potential adverse impacts from traffic associated with construction and operation. The Proposed Action will not result in substantial adverse environmental effects related to traffic and transportation.</p>	
Visual Resources		
	<p>Implementation of Environmental Commitments VR 1-18 should, after 3 years, reduce potential adverse aesthetic effects to a Moderate Scenic Integrity level. With approval from the Forest Supervisor the Proposed Action would comply with the first exception of Standard S10, which would allow for a drop of one SIO level. If the Forest Supervisor approves the one level SIO drop, then the successful implementation of the Proposed Action would comply with the Aesthetic Management Standards of the LMP. The Proposed action should not have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings; create a new source of substantial light or glare that would adversely affect day or nighttime views in the area; or substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed. With successful implementation of Environmental Commitments the Proposed Action would not result in substantial adverse environmental effects related to visual resources.</p>	No impacts would occur.
Wildfire Suppression and Prevention		
	<p>Environmental Commitments WF-1 through W-20 and BIO-1 would ensure that the Proposed Action does not adversely affect fire prevention and suppression activities, expose communities, firefighters, personnel, and/or natural resources to an increased risk of wildfire.</p>	No impacts would occur.

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6.0 CONSULTATION AND COORDINATION

6.1 REGULATORY AGENCIES INVOLVED

Table 6.1-1 lists the regulatory agencies with jurisdiction over components of the Proposed Action, permit/approval necessary and current status.

Table 6.1-1: Regulatory Agencies Involved

REGULATORY AGENCY	PERMIT/APPROVAL	STATUTORY AUTHORITY	STATUS
Federal			
United States Fish and Wildlife Service	Section 7 Endangered Species Act Consultation	Federal Endangered Species Act, Section 7	Angeles National Forest has initiated informal consultation.
United States Army Corps of Engineers	Section 404 Permit	Clean Water Act, Section 404	Proponent has submitted application. Application deemed complete and processing in progress.
State			
Regional Water Quality Control Board	Section 401 Water Quality Certification & Construction Storm Water Permit	Clean Water Act, Sections 401 & National Pollutant Discharge Elimination System	Proponent submitted application for 401 Water Quality Certification. OpLaw approval obtained on January 27, 2014. Construction Storm Water Pollution Prevention Plan must be submitted and approved prior to construction.
California Department of Fish and Wildlife	Streambed Alteration Agreement	Fish and Game Code, Sections 1601 and 1603	Proponent submitted application. Permit received on March 12, 2014.
California Office of Historic Preservation	Consultation with State Historic Preservation Officer	National Historic Preservation Act, Section 106 Compliance	Angeles National Forest has initiated consultation.
Local			

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Los Angeles County Department of Regional Planning	Conditional Use Permit	Los Angeles County Zoning Ordinance	Proponent has submitted application. Application deemed complete and processing in progress.
Los Angeles County Department of Public Works	Grading Permit	Los Angeles County Building Code, Title 26, Appendix J	Permit must be obtained prior to construction.

6.2 PREPARERS AND REVIEWERS

Table 6.2-1 lists all personnel responsible for the preparation and review of the document.

Table 6.2-1: List of Preparers

PROJECT ROLE	NAME OF INDIVIDUAL	AFFILIATION
Quality Assurance/Quality Control	Michael Weber	Stantec Consulting Services Inc.
Project Manager	Dave Romero	Stantec Consulting Services Inc.
Document Management	StephAnnie Roberts	Stantec Consulting Services Inc.
Graphics Design	Kimberly Clyma Hubert Switalski	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Air Quality	Michael Weber StephAnnie Roberts	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Biological Resources	Logan Elms Manju Venkat	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Cultural and Paleontological Resources	Hubert Switalski	Stantec Consulting Services Inc.
Environmental Contamination and Hazards	Dave Romero	Stantec Consulting Services Inc.
Geology/Soil Resources	Carol Shestag, PG	Stantec Consulting Services Inc.
Greenhouse Gas Emissions	Michael Weber StephAnnie Roberts	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Hydrology and Water Quality	Bernadette Bezy Kate Gross	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Land Use	Erinn Johnson Kendall Lousen	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Noise	Michael Weber Jason Stagno	Stantec Consulting Services Inc. Stantec Consulting Services Inc.
Socioeconomics and Environmental Justice	StephAnnie Roberts	Stantec Consulting Services Inc.
Traffic and Transportation	Kristy Edblad, PE, CAPP	Stantec Consulting Services Inc.
Visual Resources	Dalton LaVoie, PLA, ASLA	Stantec Consulting Services Inc.
Wilderness and Recreation	Erinn Johnson	Stantec Consulting Services Inc.
Wildfire Suppression and Prevention	Erinn Johnson Kendall Lousen	Stantec Consulting Services Inc. Stantec Consulting Services Inc.

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Cumulative Effects	Michael Weber	Stantec Consulting Services Inc.
Comparison of Alternatives	Michael Weber	Stantec Consulting Services Inc.
Third Party Review	Whitney Fiore	E2 ManageTech

6.3 SCOPING COMMENTS AND RESPONSES

Table 6.3-1 lists the organizations that provided written comments during the public scoping period. Each letter was reviewed for content and specific responses have been provided below. In addition, the specific section of the EA where applicable comments are addressed is provided.

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Table 6.3-1: Consultation and Coordination

AGENCY	CONTACT NAME	DATE	COMMENT	RESPONSE TO COMMENT
South Coast Air Quality Management District (SCAQMD)	Ilan MacMillan, Program Supervisor (909) 396-3244 imacmillan@aqmd.gov	March 19, 2014	Please forward a copy of the Draft NEPA directly to SCAQMD at the address in our letterhead. In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files.	The Lead Agency will provide the Draft NEPA document and all appendices to the SCAQMD for review.
			SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development.	The Lead Agency understands that CalEEMod is a widely used air quality modeling tool for calculating the air quality emissions of proposed projects subject to CEQA/NEPA compliance. CalEEMod is a model that produces emissions estimates, but is more appropriate for land use development projects. As a result, Proposed Action emissions of criteria air pollutants were quantified using Excel spreadsheets and using the same emissions factors as those used by CalEEMod. Emissions summaries and the methodologies used are included in Section 3.1 and Appendix B.
			Identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.	Emissions of criteria air pollutants during Proposed Action construction have been quantified. Potential adverse impacts have been evaluated and compared to established SCAQMD thresholds of significance. Please refer to Section 3.1 and Appendices B through D for additional details. As the Proposed Action is limited to re-routing an existing pipeline, there are no operational or indirect emissions associated with this project.
			The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds.	The Lead Agency has quantified criteria air pollutant emissions and compared the results to the recommended regional significance thresholds. Please refer to Section 3.1 for additional details.
			In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a NEPA document.	The Lead Agency has elected not to utilize the LSTs for the Proposed Action as it occurs in the Angeles National Forest and does not include substantial emissions sources operating in close proximity to sensitive receptors.
			In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is	The Proposed Action does not include any component with the potential to generate or attract a substantial

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AGENCY	CONTACT NAME	DATE	COMMENT	RESPONSE TO COMMENT
			<p>recommended that the lead agency perform a mobile source health risk assessment.</p> <p>CARS's Land Use Handbook is a general reference guide for evaluation and reducing air pollution impacts associated with new projects that go through the land use decision-making process.</p>	<p>number of vehicle trips. As such, a mobile source health risk assessment was not performed.</p>
			<p>In the event that the project generates significant adverse air quality impacts, NEPA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts.</p>	<p>The Proposed Action applicant will adhere to seven air quality-related environmental commitments to reduce emissions of criteria air pollutant emissions to levels below the established SCAQMD thresholds of significance. These environmental commitments are included in Sections 2.3 and 3.1 for reference.</p>
<p>Southern California Edison Company (SCE)</p>	<p>Laura (Verdugo) Solorio, SCE Land Services Agent (626) 302-7747 (951) 315-5622</p> <p>Laura.Verdugo@sce.com</p>	<p>March 13, 2014</p>	<p>Southern California Edison has high voltage power lines in the vicinity and would need to coordinate the moving of any tall equipment under the lines as well as any construction taking place close to the power lines. Please make sure SCE is contacted for coordination of this project.</p>	<p>Plains shall ensure coordination with SCE regarding the moving of any tall equipment under SCE high voltage power lines as well as any construction taking place close to the power lines.</p>
<p>Southern California Gas Company (SoCalGas)</p>	<p>Anthony Klecha, SoCalGas Principal Environmental Specialist (213) 244-4339</p> <p>aklecha@semprautilities.com</p>	<p>March 5, 2014</p>	<p>SoCalGas has two existing natural gas transmission lines (34-inch Line 225 and 26-inch Line 85) that traverse the ANF in the project area. In order to ensure protection of these lines, PAALP's rerouted pipeline should be constructed to accommodate a minimum horizontal clearance of 15 feet and minimum vertical clearance of no less than 18 inches away from SoCalGas's pipeline.</p>	<p>Plains shall ensure that the rerouted pipeline is constructed to accommodate a minimum horizontal clearance of 15 feet and a minimum vertical clearance of no less than 18 inches away from SoCalGas' pipeline where space allows. In areas where the utility corridor does not provide sufficient spacing, Plains will coordinate spacing with SoCalGas.</p>
			<p>SoCalGas requests that the project proponent provide us with a copy of their proposed pipeline plans for review. Depending on the proposed pipeline alignment, the plans may need to be rerouted to various departments within SoCalGas for review. The copy should be sent to Ms. Christine Medina at the following address as soon as possible, but not less than six weeks prior to construction.</p>	<p>Plans shall provide SoCalGas with a copy of the proposed pipeline plans for review. The copy should be sent to Ms. Christine Medina as soon as possible, but not less than six weeks prior to construction.</p>
			<p>Depending on the proximity of the proposed alignment to SoCalGas' pipelines, a preconstruction notification may be required to arrange for a SoCalGas Inspector to be onsite during excavations near our lines. SoCalGas requests that PAALP notify Ms. Medina once their construction schedule has been</p>	<p>Plains shall notify Ms. Medina once their construction schedule has been established, but not less than four weeks prior to construction.</p>

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			established, but not less than four weeks prior to construction.	
ExxonMobil	Teri A. Shinde, SR/WA, R/W-NAC, West Coast Regional Right-of-Way Coordinator for ExxonMobil Oil Corporation (310) 212-1842	March 19, 2014	<p>Please be advised that the ExxonMobil Oil Corporation's (formerly known as Mobil Oil Corporation) West Coast/ Rockies Pipeline Department maintains one active 16-inch (M-70) pipeline and one idle 16-inch (M-70) pipeline. We are prepared to mark our facilities upon receiving 48-hour advanced Underground Service Alert (USA) notice.</p> <p>Upon completion of your final drawings and plan, please provide us a detailed set of your plans for our review to determine if there is a conflict with any of our existing facilities.</p> <p>ExxonMobil requires a representative to be onsite during any construction activities within the vicinity of our facilities. Therefore, you or your contractors are hereby notified to contact, in addition to the above-referenced USA notice, ExxonMobil's designated representative at (310) 212-1842, or (310) 909-4898 between the hours of 6:30 am and 3:00 pm, Monday through Friday, a minimum of 48 hours in advance of commencing said construction activities.</p> <p>Any ExxonMobil facilities identified as "Active", "Idle", or "Abandoned", unless otherwise clearly specified, remain the property of ExxonMobil Oil Corporation, and that all activities affecting these facilities must be approved and controlled by ExxonMobil. Should it be determined that such ExxonMobil facility potentially interferes with your project, this office must be notified immediately, at which time ExxonMobil personnel will review the issues to determine what actions will be necessary to identify and resolve any conflicts.</p>	<p>Plains shall ensure that (48-hour) advanced notice is submitted to Underground Service Alert (USA).</p> <p>Plains shall provide ExxonMobil with detailed final drawings and plans for the project.</p> <p>Plains shall contact the designated ExxonMobil representative at least 48 hours prior to construction.</p> <p>Plains shall notify ExxonMobil immediately should any such facilities appear to potentially interfere with Plains' project.</p>
Tribal Historic and Cultural Preservation Committee (Committee)	Kimia Fatehi, Tribal Historic and Cultural Preservation (818) 837-0794 KFatehi@tataviam-nsn.us	March 17, 2014	In accordance with the National Historic Preservation Act of 1966, consultation with the tribe is legally mandated... Please contact our offices so we can begin consultation.	On April 23, 2014 the Forest Tribal Relations Manager and an archaeologist from the Forest Heritage Staff met with Fernandeno Tataviam representatives at their office, and continued consultation with subsequent electronic communications.

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APPENDIX A

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Plan of Development and Best Management Practices

APPENDIX B

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Air Quality/Greenhouse Gas Emissions Estimates

APPENDIX C

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Clean Air Act General Conformity Analysis

APPENDIX D

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Dust Control Plan

APPENDIX E

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Biological Assessment/Biological Evaluation

APPENDIX F

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Management Indicator Species Report

APPENDIX G

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Water and Soil Evaluation Report

APPENDIX H

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

**Preliminary Delineation of Waters of the United States,
including Wetlands and Waters of the State**

APPENDIX I

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Weed Risk Assessment

APPENDIX J

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Cultural and Paleontological Resource Study

APPENDIX K

ENVIRONMENTAL ASSESSMENT PAALP LINE 63 RE-ROUTE PROJECT

Noise Modeling Results

APPENDIX L

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Visual Assessment

APPENDIX M

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Fire Prevention Plan