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In Reply Refer To:
AESO/SE
22410-2006-F-0470

February 5, 2007

Memorandum

To: District Manager, Bureau of Land Management, Las Cruces District Office,
Las Cruces, New Mexico

From: Field Supervisor

Subject: Biological Opinion on the SFPP, L.P. El Paso to Phoenix Expansion Project

Thank you for your request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. et. seq.). Your request was dated September 8, 2006, and received by us on September 14, 2006. At issue are impacts that may result from the proposed construction of a petroleum products pipeline that will generally parallel existing pipelines along SFPP's present route from El Paso, Texas, to Phoenix, Arizona. You have determined that the project may adversely affect the endangered Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*, PPC), and may affect, but is not likely to adversely affect, the endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) and the endangered jaguar (*Panthera onca*). The rationales for our concurrences on the lesser long-nosed bat and jaguar are provided in the Appendix of this document.

This biological opinion (BO) is based on information provided in the August 2006 biological assessment (BA, Bureau of Land Management 2006a), the draft Environmental Assessment (EA, Bureau of Land Management 2006b), your supplemental memo (received via e-mail on January 24, 2007), meetings, and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available on the species of concern, the effects from pipeline projects, the project area, or other subjects considered in this opinion. A complete administrative record of this consultation is on file at the Arizona Ecological Services Office.

CONSULTATION HISTORY

November 2, 2005: We met with you and the applicant regarding the proposed project.

May 25, 2006: We met with you and the applicant to discuss species survey results.

June 8, 2006: We received your request for technical assistance with the proposed project.

June 29, 2006: We provided you with technical assistance regarding the proposed project.

July 14, 2006: We accompanied you and your consultant on a field trip to part of the project site and discussed appropriate conservation measures.

September 14, 2006: We received your request for consultation and accompanying BA.

January 18, 2007: We met with you and the applicant to discuss additional conservation measures.

February 1, 2007: We received supplemental information to the BA.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The applicant (Kinder Morgan, SFPP, L.P.) proposes to install approximately 127 miles of 16-inch-diameter pipeline and 28 miles of 12-inch-diameter pipeline adjacent to existing 8- and 12-inch-diameter pipelines. The replacement segments traverse portions of three states: Texas, New Mexico (approximately 60 miles in these two states) and Arizona (approximately 97 miles) (Figure 1). The proposed action also includes ancillary facilities to be constructed or modified, including the El Paso Breakout Facility (a 35-acre facility currently under construction in El Paso, Texas), four existing pump stations, two existing terminals, new and existing valves as needed, cathodic protection test stations, and pipeline markers. Construction of 15 of the 28 miles of replacement 12-inch pipeline and the new pump station at San Simon would be phased over a five to ten-year period as demand for products and additional shipping capacity dictates. SFPP has determined that no new upgrades, repairs, or reconditioning will be required on the existing pipelines to allow operation of the new pipeline systems under new operating conditions. The current SFPP plan is to begin construction in May 2007.

The project is divided into three logical segments from east to west (Segments A, B, and C) (Figures 2 and 3) based on contiguous areas where construction of the new pipeline is proposed. The route of the new segments was dictated largely by the location of the existing pipeline. Temporary construction workspace or easements (TCEs) would typically be 100 feet wide, while new permanent easements across public lands would be 30 feet wide. Some areas along the rights-of-way (ROW) would require workspace wider than 100 feet to allow for staging of materials or use of large construction equipment at highway and railroad crossings. Other areas would be less than 100 feet wide to avoid sensitive areas.

Proposed Conservation Measures

The Bureau of Land Management (BLM) and the applicant propose the following conservation measures to minimize the effects to PPC and its habitat:

- A pre-construction survey for PPC will be conducted from Mile Post (MP) 284 to MP 292 to locate any plants that may have been missed during initial surveys. This will require an additional one or two passes of the TCE depending on whether additional plants are located. We will be informed of any additional PPC located during pre-

construction surveys. To the extent practicable, any PPC located will be avoided by construction activities. All of the PPC to be avoided will be clearly marked before construction.

- Monitoring of construction will occur from MP 284 to MP 292 for all construction-related activity, including pre-construction surveys and staking of the TCE. PPC protection will be emphasized in all environmental education programs required for the project.
- SFPP will purchase credit-acres from a Service-approved conservation bank for PPC. The number of credit-acres purchased from the conservation bank will be based on the loss of habitat of a six mile (approximate length of known habitat) by four foot (width of trench area) area; or 2.9 acres. This will compensate for the portion of the TCE that will not likely support PPC in the future due to the altered surface hydrology of the trench area.
- SFPP will also purchase an additional 7.1 credit-acres in a Service-approved conservation bank to offset the indirect effects to PPC habitat.
- SFPP will not grade the TCE within the six-mile area of PPC suitable habitat; rather, a “brush-hog” technique will be used, which involves trimming shrubs and small trees near the base and temporarily covering them with soil to prevent tire punctures, thus maintaining the root system and seed bank on-site.
- After construction, the ROW will be recontoured to match the adjacent undisturbed grade to ensure the normal drainage of rainwater is not compromised.
- The contractor will contact relevant BLM State Weed Coordinators prior to starting work in each area to discuss specific noxious weed concerns and requirements and will confer with the jurisdictional land management agency personnel to determine appropriate seed mixes where reseeding is required (e.g., BLM, State Land Department, private landowners, etc.). The contractor will use mixes or species recommended by agency personnel within each weed district where available. Native species will be used except in cases where non-persistent exotic species are preferable in order to establish vegetation cover quickly. In no cases will species on the “State Noxious Weed List” be included in revegetation seed mixes.
- To prevent the spread of noxious weeds, SFPP will clean off-road equipment (with power or high-pressure cleaning) before moving into a construction area. In areas at moderate to high ecological risk of weed invasion, gravel and fill will be placed in relatively weed-free areas and must come from weed-free sources. Additionally, active road construction sites in these areas will be closed to vehicles that are not involved with construction. New road maintenance programs will include monitoring for noxious weeds along newly constructed maintenance roads, and weed infestations will be inventoried and scheduled for treatment during construction.

STATUS OF THE SPECIES

Our February 3, 2006, BO for the Ocotillo Preserve Residential Subdivision (02-21-02-F-0210 and 02-21-04-F-0160) included a detailed Status of the Species for the PPC. This biological opinion is available on our website at <http://www.fws.gov/southwest/es/arizona/>, under Document Library; Section 7 Biological Opinions. Herein we incorporate that status discussion by reference.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform from which to assess the effects of the action now under consultation.

For this project, we define the action area as the 100-foot ROW within Segments A (28.8 miles), B (31.4 miles), and C (97.5 miles), as well as an additional 0.25 mile on either side of the ROW. The 0.25-mile distance includes the area that might be indirectly affected by the proposed action (e.g. the area that may be affected by the spread of invasive plants).

A 200-foot-wide area along the entire project was examined for environmental clearance. Early coordination with us resulted in the conclusion that Segment C (defined as Apache Pass to Tucson) is the only segment in which suitable habitat exists for PPC and lesser long-nosed bat; therefore, this was the segment for which analysis was focused. Segment C is approximately 97 miles in length and 1,174 acres in area, including the temporary 100-foot construction easement. Two new access roads will be built in Segment C at MP 256.01 and 274.13. Neither of these access roads fall within suitable habitat for PPC; however, they may fall within suitable foraging habitat for the lesser long-nosed bat.

Within the action area, approximately six miles (MP 284.9 to 290.9; Figure 4) contain suitable habitat for PPC; this is the area in which adverse impacts to this species will occur and to which we confine our analysis. This six-mile stretch is a combination of Arizona State Trust Lands and private lands. This area equates to 72.7 acres of suitable habitat within the project site (six miles multiplied by the 100 foot-wide TCE) plus an additional area of 1,920 acres (six miles multiplied by the 0.25-mile area on either side of the TCE in which indirect effects may occur). A 200-foot corridor was surveyed for PPC within this six-mile area, encompassing the proposed TCE but excluding a 0.8-mile section due to lack of permission from the landowner (total of 126 acres surveyed). Within the surveyed area, a total of five PPC were found within the currently proposed 100 foot-wide TCE. An additional 22 live PPC and one dead PPC were found within 200 feet of the proposed pipeline, but outside the 100 foot-wide TCE. It is likely that the 0.25-mile area outside of the ROW also contains suitable PPC habitat and some PPC.

Segment C of the proposed pipeline is located in Cochise and Pima counties, and the majority of land ownership is private and Arizona State Trust Lands. The small portion of Federal land is in BLM and National Park Service ownership. The private lands are used for grazing or were

previously used for grazing and agriculture. All of the livestock activities on BLM lands have been through section 7 consultation (2-21-96-F-160 and reinitiations).

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The proposed action will result in the direct loss of a minimum of five PPC situated within the project's TCE. Direct effects to the other 22 live PPC found adjacent to the TCE, as well as others likely occurring outside the TCE, are avoidable. These 22 PPC will be clearly marked and protected during construction to insure they are avoided by construction activity. Additionally, pre-construction surveys and monitoring during construction will take place, during which any newly discovered PPC will be clearly marked and avoided, if possible. The applicant proposes to offset the direct effects to PPC and its habitat by purchasing 2.9 acre-credits in a Service-approved conservation bank for PPC. This is the amount of habitat directly over the pipeline that will likely suffer permanent disturbance due to trenching (six miles multiplied by four feet).

Within the TCE, approximately 69.8 acres (six miles multiplied by 100 feet subtracting the four-foot wide trench) of suitable PPC habitat will be cleared. This area will not be graded; rather, a "brush-hog" technique will be used, which involves trimming shrubs and small trees near the base and temporarily covering them with soil to prevent tire punctures, maintaining the root system and seed bank on-site. New disturbance and equipment can contribute to the spread of non-native species into a previously uninfected area. Nearby areas already support stands of buffelgrass, and additional disturbance can facilitate its spread, as well as that of other exotic plants. This invasive grass species has the potential to alter the ecosystem of the plant community by forming monotypic stands that do not allow for the regeneration of native species and create a much heavier fuel load with higher fire intensities. This change in plant composition can lead to a permanent change in the plant community by allowing fires to burn hotter and more frequently than would occur in the natural vegetation. Certain species (like PPC) that are not fire-adapted can be lost as a result of such fires.

To minimize indirect effects to PPC habitat, the applicant will clean off-road equipment (with power or high-pressure cleaning) before moving into a construction area. In areas at moderate to high ecological risk of weed invasion, gravel and fill will be placed in relatively weed-free areas and must come from weed-free sources. Additionally, active road construction sites in these areas will be closed to vehicles that are not involved with construction. New road maintenance programs will include monitoring for noxious weeds along newly constructed maintenance roads, and weed infestations will be inventoried and scheduled for treatment during construction. This should minimize noxious weed invasions both within the TCE as well as the 0.25-mile area surrounding it during construction; however, there is no monitoring or treatment scheduled after construction is completed, which is when noxious weeds are most likely to invade the area.

For this reason, the applicant also proposes to purchase an additional 7.1 acre-credits in a Service-approved conservation bank for PPC. These acre-credits are to compensate for the temporary, but long-term (greater than 10 years), disturbance to the remaining suitable habitat within the TCE. Vasek et al. (1975) found that desert vegetation is fragile and easily destroyed, but does have a long-term potential (probably measured in centuries) to recover from drastic disturbance such as a pipeline project. To minimize the effects of disturbance, the applicant proposes to recontour the TCE after construction to match the adjacent undisturbed grade to ensure the normal drainage of rainwater is not compromised. The contractor will reseed disturbed areas using native seed mixes tested free of weed seed as directed by the land management agency with jurisdiction. Also, by trimming plants at the base instead of grading the 100-foot TCE, some of the shrubs, trees, and succulents will re-sprout and the seed bank will remain intact. These measures will help to prevent noxious weed infestations during the time of construction and will assist in the regeneration of native vegetation within the TCE. PPC and native vegetation have been able to re-occupy the area in the past after the TCE was cleared for the existing pipeline (over 50 years ago), so we believe the effects of disturbing the TCE, while possibly long-term, are temporary. However, because it is unknown if PPC will be able to re-occupy areas after the current proposed disturbance (due to invasive grasses, long-term drought, global climate change, etc.), the applicant is proposing to offset indirect effects to PPC and its habitat due to the uncertainty of the proposed conservation measures. Areas outside of the 100-foot TCE but within the 0.25-mile buffer of the action area will not be directly affected, as disturbance activities will be confined within the 100-foot TCE; however, this buffer area may be indirectly affected by the invasion of non-native weeds after construction is completed.

In summary, this project will result in the loss of approximately five PPC and 2.9 acres of suitable habitat, and the alteration (possibly temporary) of 69.8 acres of suitable PPC habitat. Additionally, a 0.25-mile area surrounding the six miles of suitable PPC habitat may be affected by invasive plant species. The applicant proposes to purchase a total of ten acre-credits from an approved PPC conservation bank to offset these adverse effects.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

The amount of development within the action area that may occur in the future is unknown. Pima County grew by 26.5 percent between 1990 and 2000 (see http://www.censusscope.org/us/s4/rank_popl_growth.html). It seems likely that this growth will continue, especially near and in the Tucson area. Areas in Pima County within the action area, where the suitable habitat for PPC is located, are a mix of private and State lands. All of these lands could become available for development in the future. This would mean continued loss and further fragmentation of PPC habitat.

CONCLUSION

After reviewing the current status of PPC, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the

proposed action is not likely to jeopardize the continued existence of PPC. No critical habitat has been designated; therefore, none will be affected. While we remain concerned about the status of the PPC as described in this BO, we make this determination because:

- Any PPC located outside the TCE will be avoided during construction activities.
- The applicant will purchase ten acre-credits in a Service-approved conservation bank, 2.9 of which are to compensate for the direct effects to PPC habitat and 7.1 of which are to compensate for the indirect effects. We feel this is an adequate conservation measure, as the majority of the habitat loss is likely to be temporary. This conservation measure permanently protects ten acres of PPC habitat within the conservation bank.
- The applicant will use a “brush-hog” technique within suitable PPC habitat, thus maintaining the root system and seed bank on-site.
- After construction, the ROW will be recontoured to match the adjacent undisturbed grade to ensure the normal drainage of rainwater is not compromised.
- The applicant will clean off-road equipment, prevent vehicles not involved with construction from accessing the construction site, and monitor and control noxious weed infestations during construction. This should minimize noxious weed invasions within the TCE and the 0.25-mile area surrounding it during construction.
- The applicant will reseed areas with appropriate seed mixes where reseeded is required. No species on the “State Noxious Weed List” will be included in revegetation mixes. This will assist in the regeneration of native vegetation within the TCE.
- The loss of five PPC and 2.9 acres of suitable habitat, as well as the long-term temporary alteration of 69.8 acres of suitable habitat, comprise less than one percent of the known population and extant suitable habitat.

INCIDENTAL TAKE STATEMENT

Sections 7(b)(4) and 7(o)(2) of the ESA do not apply to listed plant species. However, protection of listed plants is provided to the extent that the ESA requires a Federal permit for removal or reduction to possession of endangered plants from areas under Federal jurisdiction, or for any act that would remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law. Neither incidental take nor recovery permits are needed from us for implementation of the proposed action.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- We recommend that the PPC conservation bank credits be secured through a Notarized Credit Agreement before construction begins.

In order that we are kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the SFPP El Paso to Phoenix Expansion Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded (not applicable to this consultation); (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

We appreciate your efforts to identify and minimize effects from this project. Please contact Marit Alanen at (520) 670-6150 (x234) or Jim Rorabaugh at (602) 242-0210 (x238) if you have further questions. Please refer to consultation number 22410-2006-F-0471 in future correspondence regarding this project.

/s/ Steven L. Spangle

cc: BLM Gila District, Sierra Vista, AZ (Attn: Scott Cooke)
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Field Supervisor, Fish and Wildlife Service, Albuquerque, NM (Attn: Lyle Lewis)
Field Supervisor, Fish and Wildlife Service, Austin, TX (Attn: Allison Arnold)
Fort Bowie National Historic Site, Bowie, AZ

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ

LITERATURE CITED

Bureau of Land Management. 2006a. Biological Assessment for the SFPP El Paso to Phoenix Expansion Project. Las Cruces District Office, Las Cruces, New Mexico.

Bureau of Land Management. 2006b. Draft Environmental Assessment of the SFPP El Paso to Phoenix Expansion Project. Las Cruces District Office, Las Cruces, New Mexico.

Vasek, F.C., H.B. Johnson, and D.H. Eslinger. 1975. Effects of pipeline construction on creosote bush scrub vegetation of the Mojave Desert. *Madroño* 23: 1-13.

APPENDIX – CONCURRENCES

The appendix contains our concurrences with your determinations that the proposed action may affect, but is not likely to adversely affect, the lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) and jaguar (*Panthera onca*). These concurrences are based on the full implementation of the proposed action as described in the Description of the Proposed Action section of the Biological Opinion, including the conservation measures proposed by the applicant.

Lesser long-nosed bat

The lesser long-nosed bat is migratory and found throughout its historical range, from southern Arizona and extreme southwestern New Mexico, through western Mexico, and south to El Salvador. The bat is a seasonal resident in Arizona, usually arriving in early April and leaving in mid-September to early October. Lesser long-nosed bats consume nectar and pollen of paniculate agave flowers and the nectar, pollen, and fruit produced by a variety of columnar cacti, and have been documented foraging many miles from maternity colonies. A lesser long-nosed bat roost exists within three miles of the action area in the Chiricahua Mountains (Cochise County).

For a detailed Status of the Species, please see our July 9, 2003 Biological Opinion on the effects of the development of Section 36 in Township 11 South, Range 12 East in Marana, Arizona (02-21-02-F-0544) available on our website at <http://www.fws.gov/arizonaes>, under Document Library; Section 7 Biological Opinions.

CONSERVATION MEASURES

There are no conservation measures proposed by the applicant specific to the lesser long-nosed bat.

DETERMINATION OF EFFECTS

We concur with your determination that this project may affect, but is not likely to adversely affect, the lesser long-nosed bat for the following reasons:

- The species has occurred within three miles of, and likely makes foraging flights through, the action area. The occurrence was likely a foraging individual, as there are no roost sites for this species within the action area. Therefore, any potential direct effects on the species are discountable.
- The action area within the range of the lesser long-nosed bat does not support any saguaro nor any large stands of agave. A few individual agave within the TCE will be removed; however, their removal is insignificant compared to the foraging habitat available. Therefore, indirect effects related to removal of forage resources are insignificant.

Jaguar

The jaguar currently is found from southern South America north into southeastern Arizona and southwestern New Mexico. The historical range in the United States included all of the Southwest as far north as the Grand Canyon. Individual jaguars have been seen and photographed infrequently in southeastern Arizona and southwestern New Mexico during the last few decades, including a jaguar photographed in the Peloncillo Mountains in 1996, and a jaguar killed illegally in the Dos Cabezas Mountains in 1986. It is conceivable that an individual could wander as far north as the project area, especially through the Apache Pass, Cienega Creek, and San Pedro River areas. However, any jaguars that may use the action area would likely be transients from Mexico and only present for a short period of time.

For a detailed Status of the Species, please see our December 12, 2006 Reinitiated Biological and Conference Opinion on the effects of the Safford Resource Management Plan (02-21-05-F-0086 and 02-21-88-F-0114) available on our website at <http://www.fws.gov/arizonaes>, under Document Library; Section 7 Biological Opinions.

CONSERVATION MEASURES

There are no conservation measures proposed by the applicant specific to the jaguar.

DETERMINATION OF EFFECTS

We concur with your determination that this project may affect, but is not likely to adversely affect, the jaguar for the following reasons:

- No jaguars have been documented in the action area. The last sighting of a jaguar near the action area was in 1986 in the Dos Cabezas Mountains, where a jaguar was killed illegally. Jaguars are transient species in Arizona; therefore, direct effects to the jaguar or its movement patterns are discountable.
- It is unlikely that the proposed action will measurably affect jaguar cover or prey habitat. Any changes to prey habitat are likely to be very localized, and are not expected to significantly change prey availability throughout the area in which jaguars may occur. Therefore, the indirect effects of the proposed action on jaguar travel, foraging cover, and prey habitat are insignificant.

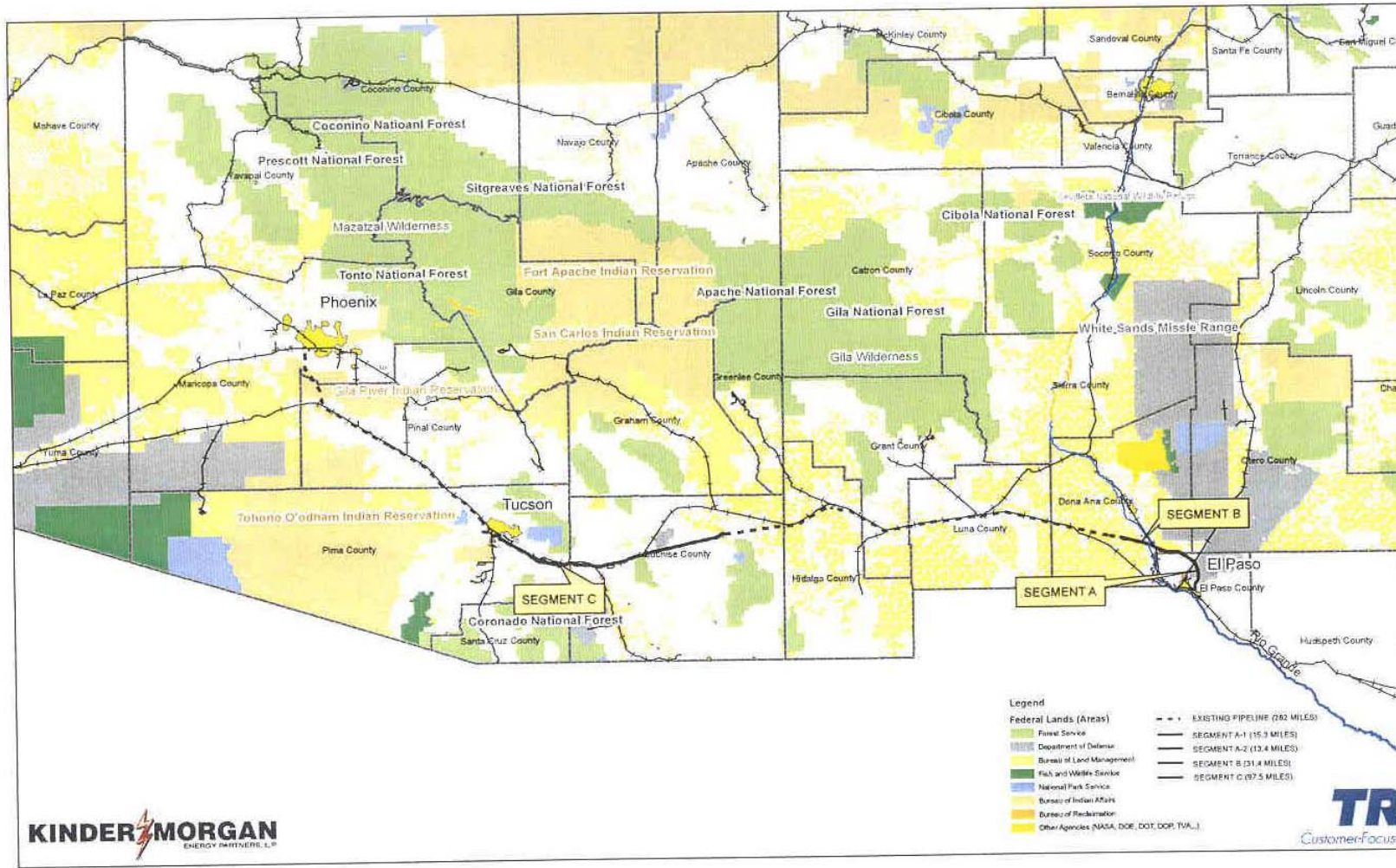
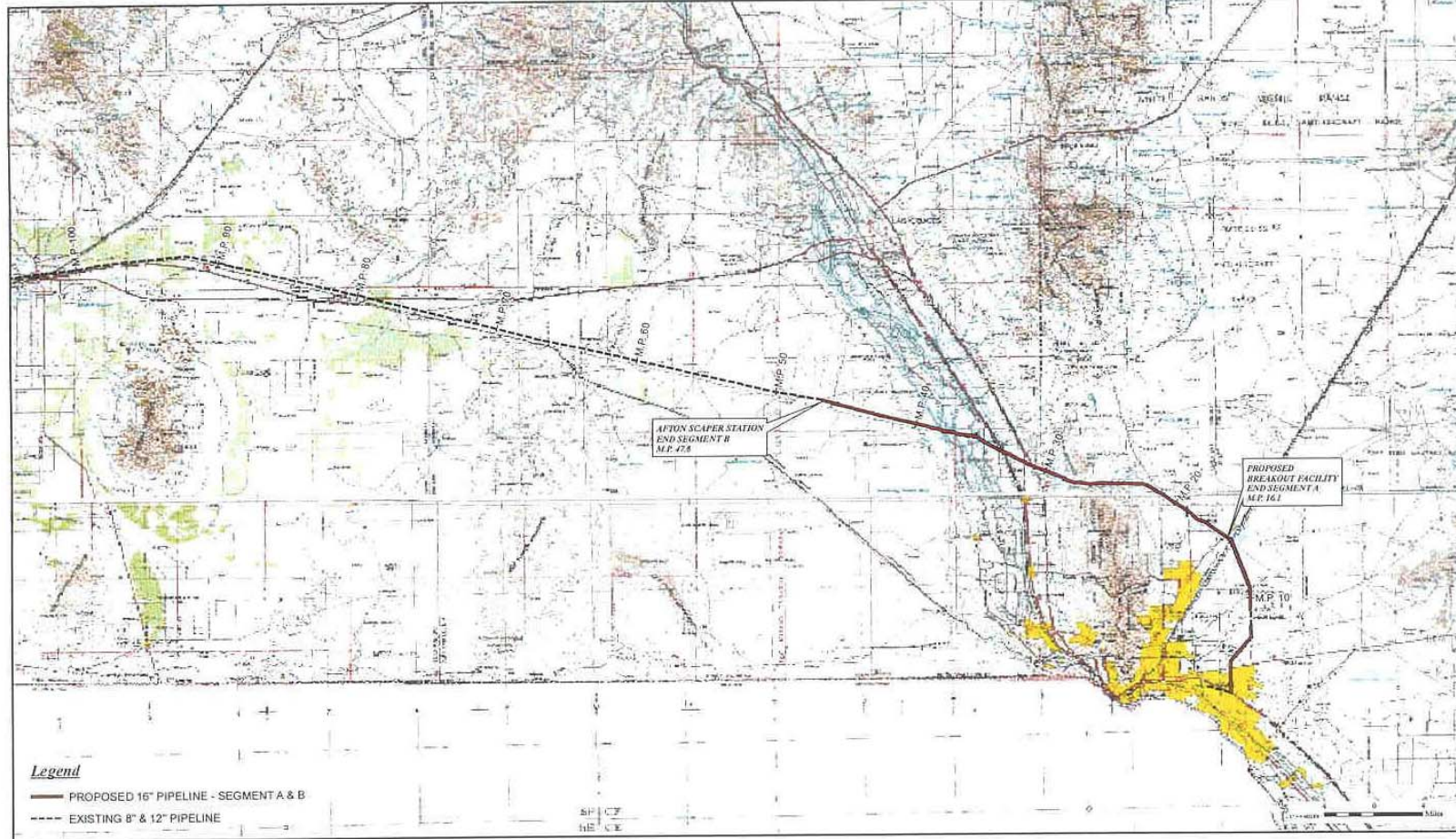


Figure 1. Map of Segments A, B and C of the SFPP El Paso to Phoenix Expansion Project.



**EL PASO TO PHOENIX EXPANSION PROJECT
OVERALL MAP
SEGMENTS A & B**

PREPARED BY
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Carter

Figure 2. Map of Segments A and B of the SFPP El Paso to Phoenix Expansion Project.



EL PASO TO PHOENIX EXPANSION PROJECTS
 OVERALL MAP
 SEGMENT C

Figure 3. Map of Segment C of the SFPP El Paso to Phoenix Expansion Project.

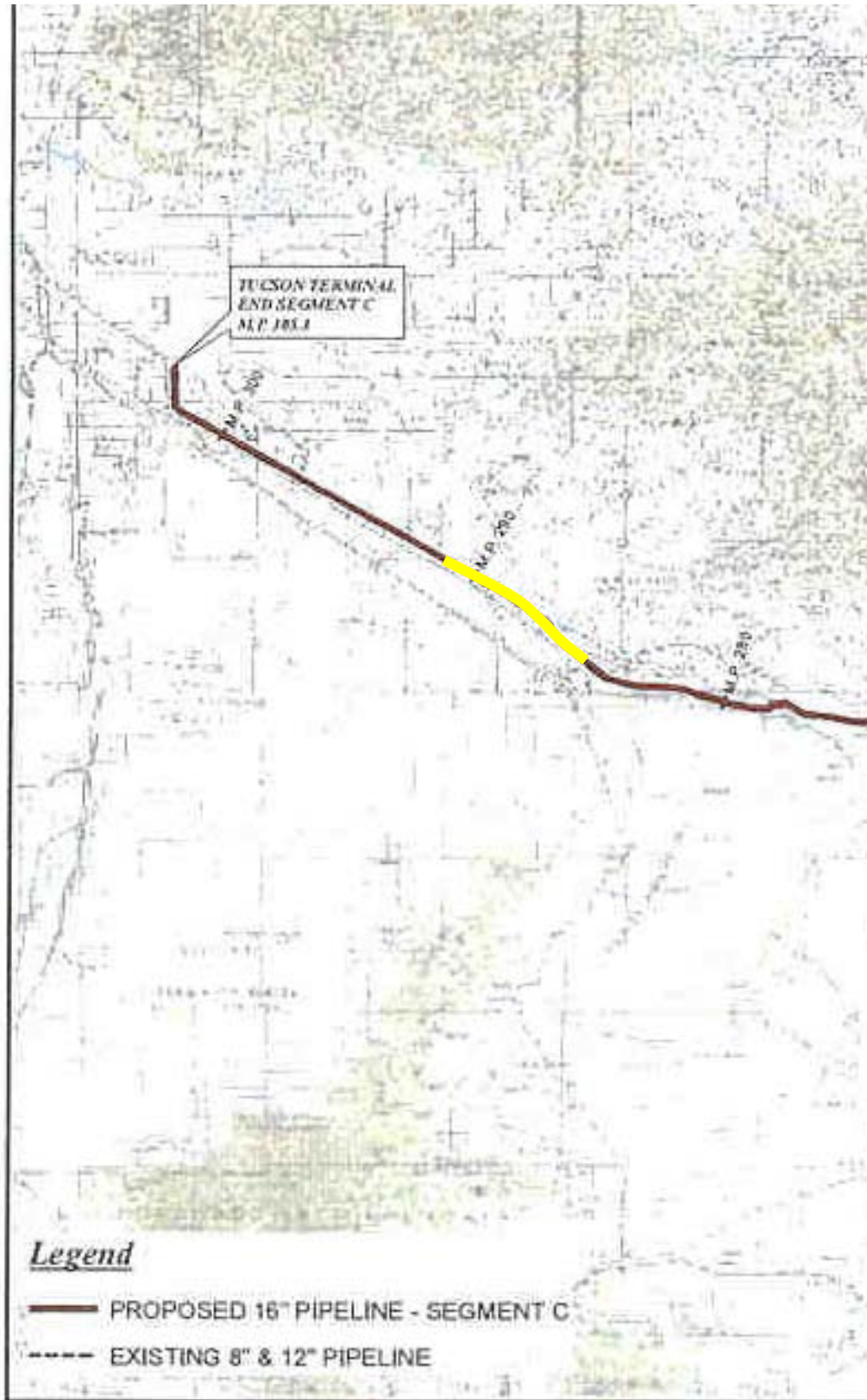


Figure 4. Approximate six-mile portion (MP 284.9 to 290.9) of Segment C containing suitable habitat for the Pima pineapple cactus (shown in yellow).