United States Department of the Interior

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In Reply Refer To:
AESO/SE
02EAAZ00-2012-F-0203

August 28, 2012

Memorandum

To: Field Manager, Bureau of Land Management, Phoenix, Arizona
(Attn: Emily Garber)

From: Field Supervisor

Subject: Biological and Conference Opinion on Sonoran Desert National Monument and Lower Sonoran Resource Management Plan

Thank you for your request for formal consultation/conference with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (ESA). Your request was dated May 23, 2012, and received by us on May 24, 2012. At issue are impacts that may result from the proposed Lower Sonoran (LS) and Sonoran Desert National Monument (SDNM) Resource Management Plans (RMPs) located in Maricopa, Pima, and Pinal counties, Arizona (Fig. 1). The proposed action may affect Southwestern willow flycatcher (*Empidonax traillii extimus*) (SWFL), Sonoran pronghorn (*Antilocapra americana sonoriensis*) (SPH), lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) (LLNB), Yuma clapper rail (*Rallus longirostris yumanensis*) (YCR), and proposed critical habitat for Southwestern willow flycatcher.

In your memorandum, you requested our concurrence that the proposed action is "not likely to adversely affect**"** lesser long-nosed bat, Yuma clapper rail, and proposed critical habitat for Southwestern willow flycatcher. By memorandum of June 22, 2012 we concurred that the proposed action is "not likely to adversely affect" Yuma clapper rail and proposed critical habitat for southwestern willow flycatcher and the rationales are provided in Appendix A. Based on your clarification, by memorandum dated July 2, 2012, of the proposed action subsequent to our June 22, 2012 memorandum we concur that the that the proposed action is "not likely to adversely affect" lesser long-nosed bat and the rationale is provided in Appendix A.

This biological opinion addresses the Sonoran pronghorn and Southwestern willow flycatcher and is based on information provided in the May 23, 2012 "Biological Assessment Lower Sonoran and Sonoran Desert National Monument Resource Management Plans (RMPs) and Environmental Impact Statement (EIS)" (BA), May 2012 "Lower Sonoran-Sonoran Desert National Monument Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS)," telephone conversations, field investigations, and other sources of information. Literature cited in this biological is not a complete bibliography of all literature available on the species of concern, livestock grazing, recreational activities, mining activities etc. and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

January – May 2012: Informal discussions occurred on the approach to this consultation.

May 24, 2012: Formal consultation was initiated.

June 22, 2012: We sent a 30-day letter concurring in part, not concurring in part, and requesting additional information.

July 2, 2012: A letter was received from your office with clarifying information.

August 24, 2012: We sent the draft Biological Opinion to the action agency.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

A complete description of the proposed action is found in the BA and PRMP/FEIS. Complete text of numbered goals, objectives and decisions in the Resource Management Plans (RMPs) listed below related to SWFL and SPH are included in Appendix B. BLM will implement RMPs for the Lower Sonoran (LS) and Sonoran Desert National Monument (SDNM) planning areas in Maricopa, Pima, and Pinal County, Arizona. These RMPs allocate resources and make decisions regarding the management of Air Quality (AQ), Cave Resources (CR), Cultural and Heritage Resources (CH), Paleontological Resources (PL), Soil Resources (SL), Vegetation Resources (VM), Visual Resources (VR), Water Resources (WR), Wild Horse and Burro Management (HB), Wilderness Characteristics (WC), Wildland Fire management (WF), Wildlife and Special Status Species (WL), Lands and Realty (LR), Livestock Grazing (GR), Minerals Management (MM), Recreation Management (RM), Travel Management (TM), Areas of Critical Environmental Concern (AC), National Byways (NB), National Trails (NT), Fred J. Weiler Green Belt Resource Conservation Area (GB), and Hazardous Materials and Public Safety (PS). The planned life of the RMPs is fifteen years.

The “action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Within the U.S. portion of the Sonoran pronghorn’s range, pronghorn interact to form one sub-population in which interbreeding may occur. For the biological opinion for SPH the action area is the area utilized by the U.S. subpopulation. For the biological opinion for SWFL the action area is the Gila River floodplain corridor from the Salt-Gila River confluence (in Township 1 North, Range 1 East, Section 31 GSRBM) downstream to Painted Rock Dam (in Township 4 South, Range 7 West, Section 18 GSRBM) (Fig. 3). Painted Rock Dam is the downstream end of the Hassayampa/Agua Fria Management Unit of the Gila Recovery Unit for SWFL (USFWS 2002).

Decisions that could have effects on SPH include the decisions to:

- Continue to allow livestock grazing within the Lower Sonoran Decision Area on lands where it is currently authorized [[M = Management Action] GR-M 1.1.1, GR-M 1.1.6, GR-M 1.1.12]. Potential effects of livestock grazing were analyzed in consultation 2-21-94-F-192-R2;

- Provide opportunities for locatable, leasable and saleable minerals development except within developed recreation sites and Areas of Critical Environmental Concern (ACECs) (for saleable minerals) [MM-G 1, MM-O 1.1, MM-M 1.2.2, MM-M 1.1.7, MM-M 1.1.10, MM-M 1.1.14, AC-M 1.1.13];

- Emphasize recreational use and development in the Ajo area including Gunsight Wash [RM-M 1.2.1, RM-M 1.2.4, RM-M 1.2.4, RM-M 1.2.10, RM-O 2.1, RM-M 2.1.1, RM-O 2.1.1, RM-M 2.1.1.3, RM-M 2.1.1.7, TM-M 1.3.2]. Potential effects of Gunsight Wash area were analyzed in consultation 2-21-94-F-192-R2.

Decisions that could have effects on SWFL:

- Continue to allow livestock grazing within the Lower Sonoran Decision Area on lands where it is currently authorized [GR-M 1.1.1, GR-M 1.1.6, GR-M 1.1.12];

- The Lower Gila Terraces ACEC would be open to locatable minerals development and leasable minerals exploration with no surface occupancy [AC-M 1.1.13];

- Linear land use authorizations and disposals through Recreation and public Purposes (R&PP) Act would be considered on a case by case basis [LR-M 1.2.4, LR-M 1.2.5].

- Fire and fuels treatments within the Gila River floodplain.

General conservation measures include: the BLM Land Health Standards for uplands, riparian and desired plant communities would be emphasized and apply to all activities and actions in the planning areas; BLM Guidelines for Grazing Administration will be applied in order to meet the Land Health Standards; invasive/noxious weed management decisions will be implemented dependent on funding availability; acquisition of threatened/endangered (T/E) species habitat is a priority; activities and actions related to Land Tenure, Utility Corridors, Communication Sites,

Land Use Authorizations, Recreation and Public Purpose Act authorizations, Public Land Withdrawals, Mineral Material Sales and Mineral Leases are all subject to a review of environmental impacts and consistency with Land Use Plan objectives, including R&PP compliance; the BLM Fire and Fuels Conservation Measures from the State-wide Planning Amendment for Fire and Fuels (consultation 02-21-03-F-0210) will be implemented; and all motorized vehicle routes would be designated as open, closed or limited.

Conservation oriented decisions that affect SPH or its habitat include the following decisions:

- Protect and enhance SPH habitat and manage for no net loss of occupied habitat [[G = Goal] WL-G 3, [O = Objective] WL-O 3.1];

- Continue to implement a seasonal closure and prohibit authorizations during the fawning season [WL-M 3.1.2]; Potential effects of Gunsight Wash area were analyzed in consultation 2-21-94-F-192- R2.

- Manage populations and habitat in 10J areas to achieve recovery goals and facilitate reintroductions [WL-M 3.1.3, WL-M 3.1.4, WL-O 3.2, WL-M 3.2.1, WL-M 3.2.2];

- Maintain existing and develop new wildlife waters [WL-M 14.1.1, GR-M 1.1.11];

- Require restrictions on minerals activities to protect resources [MM-M 1.1.1, MM-M 1.1.5, MM-M 1.1.12, MM-M 1.1.13, MM-M 1.1.15, RM-M 1.2.7];

- Require restrictions on lands authorizations to protect resources [RM-M 1.2.12, RM-M 1.2.13, RM-M 2.7.3, RM-M 2.7.4, RM-M 2.7.5];

- Require restrictions on recreational activities to protect resources [RM-M 2.1.2.8];

- Designate Cuerda de Leña ACEC and emphasize protection of biological resources, including SPH, from lands, minerals and recreation related activities [AC-G 1, AC-M 1.1.1, AC-M 1.1.2, AC-M 1.1.3, AC-M 1.1.7, AC-M 1.1.8, AC-M 1.1.10, AC-M 1.1.14, AC-M 1.1.19, AC-M 1.1.27, AC-M 1.1.28, AC-M 1.1.31].

Conservation oriented decisions that affect SWFL or its habitat include the following decisions:

- Implement riparian vegetation treatments to improve conditions while avoiding the SWFL, YBC and YCR breeding season [VM-M 1.1.2, VM-M 2.1.3, VM-M 2.1.4, VM-M 2.1.5, VM-M 2.1.6];

- Implement conservation measures for fire and fuels treatments to avoid impacts to SWFL, YBC and YCR [VM-M 2.1.7, WF-M 3.2.3, WF-M 3.2.4, WF-M 3.2.13, WF-M 3.2.19, WF-M 3.2.23, WF-M 3.2.24, WF-M 3.2.27, WF-M 3.2.28, WF-M 3.3.2];

- Manage, maintain and restore habitat for the SWFL, YBC and YCR [WL-G 4, WL-O 4.1, WL-M 4.1.1, WL-M 4.1.3, WL-M 4.1.4, WL-G 5, WL-O 5.1, WL-M 5.1.1, WL-M 5.1.2, WL-M 5.1.3];

- Manage recreational activities to avoid impacts to SWFL, YBC and YCR [WL-M 4.1.2 , RM-M 2.5.6];

- Manage minerals activities to avoid or mitigate impacts [MM-M 1.1.5, RM-M 2.5.5];

- Designate and manage the Lower Gila Terraces and Historic Trails ACEC to: protect resource values, including special status species [AC-G 1, AC-M 1.1.3, AC-M 1.1.33]; manage minerals activities to avoid resource impacts [AC-M 1.1.14, AC-M 1.1.37, AC-M 1.1.38, AC-M 1.1.39]; prohibit utility scale renewable energy projects and utility corridors [AC-M 1.1.10]; retain and acquire lands [AC-M 1.1.1]; manage vehicle routes to avoid or minimize impacts to wildlife [AC-M 1.1.2, AC-M 1.1.8, AC-M 1.1.19]; and treat invasive species while minimizing resource impacts [AC-M 1.1.7];

- Manage the Fred J. Weiler Greenbelt to emphasize riparian habitat management for migratory birds [GB-G 1, GB-O 1.1, GB-M 1.4]; restore habitat [GB-M 1.3]; and preclude mineral material sales, mineral leasing and utility-scale renewable energy development and utility corridors [GB-M 1.6, GB-M 1.7, GB-M 1.8, GB-M 1.9].

STATUS OF THE SPECIES

Sonoran Pronghorn

A complete description of this species can be found in the "Final Revised Sonoran Pronghorn Recovery Plan" (USFWS 1998) and is summarized below.

A. Description

The Sonoran subspecies of pronghorn (*Antilocapra americana sonoriensis*) was first described by Goldman (1945) and is the smallest of the four subspecies of pronghorn (Nowak and Paradiso 1983, Brown and Ockenfels 2007). The subspecies was listed throughout its range as endangered on March 11, 1967 (32 FR 4001) under the Endangered Species Preservation Act of October 15, 1966 without critical habitat. Three sub-populations of the Sonoran pronghorn are extant: 1) a U.S. sub-population in southwestern Arizona, 2) a sub-population in the Pinacate Region of northwestern Sonora, and 3) a sub-population on the Gulf of California west and north of Caborca, Sonora. The three sub-populations are predominantly geographically isolated due to barriers such as roads and fences, and in the case of the two Sonora sub-populations, by distance.

The 1982 Sonoran Pronghorn Recovery Plan (USFWS 1982) was revised in 1998 (USFWS 1998). The recovery criteria presented in the revised plan entailed the establishment of a population of 300 adult pronghorn in one self-sustaining population for a minimum of five years, as well as the establishment of at least one other self-sustaining population in the U.S. to reclassify the subspecies to threatened. Actions identified as necessary to achieve these goals include the following: 1) enhance present sub-populations of pronghorn by providing supplemental forage and/or water; 2) determine habitat needs and protect present range; 3) investigate and address potential barriers to

expansion of presently used range and investigate, evaluate, and prioritize present and potential future reintroduction sites within historical range; 4) establish and monitor a new, separate herd(s) to guard against catastrophes decimating the core population, and investigate captive breeding; 5) continue monitoring sub-populations and maintain a protocol for a repeatable and comparable survey technique; and 6) examine additional specimen evidence available to assist in verification of taxonomic status. In 2001 a supplement and amendment to the 1998 Final Revised Sonoran Pronghorn Recovery Plan was prepared (USFWS 2001). We concluded that data do not yet exist to support establishing delisting criteria. Tasks necessary to accomplish reclassification to threatened status (as outlined in the 1998 plan) should provide the information necessary to determine if and when delisting will be possible and what the criteria should be.

B. Life History and Habitat

Sonoran pronghorn inhabit one of the hottest and driest portions of the Sonoran Desert. They forage on a large variety of perennial and annual plant species (Hughes and Smith 1990, Hervert *et al.* 1997b, USFWS 1998). During drought years, Hughes and Smith (1990) reported cacti were the major dietary component (44 percent). Consumption of cacti, especially chain fruit cholla (*Cylindropuntia fulgida*, Pinkava 1999), provides a source of water during hot, dry conditions (Hervert *et al.* 1997b). Other important plant species in the diet of the pronghorn include pigweed (*Amaranthus palmeri*), ragweed (*Ambrosia* sp.), locoweed (*Astragalus* sp.), brome (*Bromus* sp.), and snakeweed (*Gutierrezia sarothrae*) (USFWS 1998). Pronghorn will move in response to spatial limitations in forage availability (Hervert *et al.* 1997a). Water intake from forage is not adequate to meet minimum water requirements (Fox *et al.* 2000), hence pronghorn need and readily use both natural and artificial water sources (Morgart *et al.* 2005).

Sonoran pronghorn rut during July-September, and does have been observed with newborn fawns from February through May. Parturition corresponds with annual spring forage abundance. Fawning areas have been documented in the Mohawk Dunes and the bajadas of the Sierra Pinta, Mohawk, Bates, Growler, and Puerto Blanco mountains. Does usually have twins, and fawns suckle for about two months. Does gather with fawns, and fawns sometimes form nursery groups (USFWS 1998). Sonoran pronghorn form small herds of up to 21 animals (Wright and deVos 1986).

Telemetry locations of 35 Sonoran pronghorn demonstrated that during 1995-2002, pronghorn used creosote/bursage and palo verde/mixed cactus vegetation associations less than expected or equal to availability. Pronghorn use of palo verde/chain fruit cholla associations and desert washes occurred more than expected. However, during the cool and wet winter of 1997-1998, pronghorn were found in creosote/bursage associations more than expected (Hervert *et al.* 2005). In contrast, during 1983-1991, pronghorn used creosote/bursage and palo verde mixed cacti associations more than expected (deVos and Miller 2005). Differences between these study results may be due in part to differences in precipitation and forage patterns between these periods. The earlier period was wetter with greater forage availability in flats and valleys where creosote/bursage associations predominate. In wet winters and early spring pronghorn are often found in flats and valleys, such as Pinta Sands, the Mohawk Dunes west of the Mohawk Mountains, and the west side of the Aguila Mountains. In late spring and summer, pronghorn then move from the flats and valleys upslope into bajadas and often south or southeast where palo verde associations, chain fruit cholla, and washes are more common.

Movements are most likely motivated by the need for thermal cover provided by leguminous trees and water available in succulent chain fruit cholla (Hervert *et al.* 1997b). Home range size of Sonoran pronghorn during 1995-2002 ranged from 16.6 to 1,109 mi^2, with an average of 197 $\pm$ 257 mi^2 (Hervert *et al.* 2005).

From 1995-2002, adult mortality rates varied from 11-83%. Adults were killed by coyotes, bobcats, mountain lions, capturing efforts, drought, and unknown causes (Bright and Hervert 2005). However, during 1983-1991, apparently a more favorable period for pronghorn during which the population grew significantly, mean annual survival of females and males was 96% $\pm$ 0.04 and 92% $\pm$ 0.04 (deVos and Miller 2005). Disease may affect mortality, but has not been thoroughly investigated (Bright and Hervert 2005). Hervert *et al.* (2000) found that the number of fawns surviving until the first summer rains was significantly correlated to the amount of preceding winter rainfall, and negatively correlated to the number of days without rain between the last winter rain and the first summer rain. Drought may be a major factor in the survival of adults and fawns (Bright and Hervert 2005). Three radio-collared pronghorn died in July and August of 2002 with no obvious cause of death. Given that 2002 was one of the driest years on record, the proximate cause of these mortalities was likely heat stress and/or malnutrition resulting from inadequate forage conditions due to drought.

C. Distribution and Abundance

United States

Historically, the Sonoran pronghorn ranged in the U.S. from approximately the Santa Cruz River in the east, to the Gila Bend and Kofa Mountains to the north, and to Imperial Valley, California, to the west (Mearns 1907, Nelson 1925, Monson 1968, Wright and deVos 1986, Paradiso and Nowak 1971). Bright *et al.* (2001) defined the present U.S. range of the Sonoran pronghorn as bordered by Interstate 8 to the north, the International Border to the south, the Copper and Cabeza mountains to the west, and SR 85 to the east. This area encompasses 2,508 mi^2 (Bright *et al.* 2001).

While Mearns (1907) suggested that pronghorn may have been common in some areas in the late 1800s, evidence suggests that the sub-population declined dramatically in the early 20th century. Sub-population estimates for Arizona, which only began in 1925, have never shown the pronghorn to be abundant. Repeatable, systematic surveys were not conducted in Arizona until 1992. Since 1992, Sonoran pronghorn in the United States have been surveyed biennially (Bright *et al.* 1999, 2001) using aerial line transects (Johnson *et al.* 1991). Sub-population estimates from these transects have been derived using three different estimators; currently the sightability model (Samuel and Pollock 1981) is considered the most reliable estimator (Bright *et al.* 1999, 2001 including observation data from transects and compares estimates derived from the different population models from 1992 through 2006.

The sightability model population estimates from 1992 to 2000 showed a 45 percent decrease in sub-population size. The estimates indicate a steady decline in sub-population size, with the exception of the 1994 survey. The 1994 estimate may be somewhat inflated due to inconsistencies in survey timing (USFWS 1998, Bright *et al.* 2001). High fawn mortality in 1995 and 1996 and the death of half (8 of 16) of the adult, radio-collared pronghorn during the 13 months preceding the December 1996 survey corresponded to five consecutive six-month seasons of below normal

precipitation (summer 1994 through summer 1996) throughout most of the Sonoran pronghorn range, which likely contributed, in part, to observed mortality (Bright *et al.* 2001, Hervert *et al.* 1997b).

Mortality of Sonoran pronghorn in 2002 was exceptionally high (Bright and Hervert 2005). At the start of the year, seven radio-collared Sonoran pronghorn were at large in the U.S. sub-population. By December 2002, all but one of these had died. For most, drought stress was considered to be the proximate cause. For those animals that may have succumbed to predation, it was suspected that drought stress was again a factor, by making the animal more vulnerable to predation, due to an emaciated physical condition and being forced into predator habitats by drought. The 2002 drought was one of the driest on record. As an example, annual rainfall at the Organ Pipe Cactus National Monument (OPCNM) visitor center was only 2.54 inches in 2002 (T. Tibbitts, Organ Pipe Cactus NM, pers. comm. 2002); *average* annual rainfall for the visitor center is 9.2 inches (Brown 1982). The November/December 2002 population survey revealed the U.S. sub-population had declined to the lowest level ever recorded. A total of 18 pronghorn were observed, in three groups (8, 9, and 1). The sightability model resulted in a population estimate of 21 animals, or a 79% decline from 2000. Also, very few fawns survived in 2002 to replace these dying adults.

Although drought was likely the proximate cause of the dramatic decline of the U.S. sub-population in 2002, anthropogenic factors almost certainly contributed to or exacerbated the effects of the drought. Historically, pronghorn likely moved to wetted areas and foraged along the Río Sonoyta, Sonora, and the Gila and probably Colorado rivers during drought. These areas are no longer accessible to the U.S. population due to fences, Interstate 8, Mexico Highway 2, and other barriers. The rate of decline in the U.S. sub-population from 2000-2002 (79 percent) was also much greater than that observed in either the sub-population southeast of Highway 8 (18 percent decline) or the El Pinacate sub-population (26 percent) during the same period (see discussion of Mexican sub-populations in the next section). Observations of forage availability suggest the El Pinacate sub-population experienced the same severe drought that occurred on the Arizona side (T. Tibbitts, J. Morgart, pers. comm. 2003). Yet that sub-population fared much better than its U.S. counterpart. The high level of human activities and disturbance on the U.S. side, particularly in regard to undocumented alien traffic, smugglers, and required law enforcement response, as compared to what occurs in the El Pinacate area, is a likely contributing factor in the differing rates of decline observed north and south of the border. See the section entitled “Drought” in the Environmental Baseline and “Cumulative Effects” for further discussion.

The December 2004, 2006, 2008, and 2010 aerial surveys resulted in an estimated 58, 68, 68, and 85 (this 2010 estimate does not include the 17 pronghorn released from the pen in December 2010 - see below), respectively, pronghorn in the U.S. sub-population, a substantial increase brought on by the implementation of ongoing recovery measures and improved range conditions since 2002. The 2006 to 2010 estimates included a number of captive-born individuals that were released into the wild (see below). During the 2008 and 2010 surveys, observers noted a skewed sex ratio (approximately 2:1) with more males than females; this affects the rate at which the population may increase. Although the U.S. Sonoran pronghorn population has increased significantly since 2002, the increase is not as great as the Sonoran Pronghorn Recovery Team (Team) had predicted given the adequate to favorable range conditions since 2002 as well as tremendous multi-agency recovery efforts, including providing waters and forage enhancement plots, implementing seasonal

restrictions on public access to pronghorn habitat during the critical fawning season, and a captive breeding program. The Team asserts that this slow pronghorn population growth (caused by low fawn recruitment) is likely correlated with high cross-border violator (CBV) and USBP activity within the pronghorn range. Strong evidence of this correlation has been seen during the biennial aerial surveys, where since 2000, off-road vehicle tracks have been seen progressively increasing in extent and density, throughout the pronghorn's range U.S. range (electronic mail from Tim Tibbitts, Organ Pipe Cactus National Monument and member of the Sonoran Pronghorn Recovery Team, September 21, 2009). It has been well documented that human presence in wildlands can disturb animals, causing them to unnecessarily expend energy avoiding people, thereby potentially reducing reproductive success (e.g., Manville 1983, van Dyke *et al*. 1986, Goodrich & Berger 1994, Primm 1996; as cited by Kerley *et al*. 2002) or increasing the likelihood of fatal encounters with humans (Kasworm & Manley 1990, Saberwal *et al*. 1994, Khramtsov 1995, Mattson *et al.* 1996; as cited by Kerley *et al*. 2002). Failure of the wild U.S. pronghorn population to exceed 100 animals since the 2002 population decline is considered by many Team members to be evidence that acute adverse impacts from CBV and USBP activity, particularly off-road driving, continue to affect the population, inhibiting its ability to recover.

Semi-captive breeding facility

As part of a comprehensive emergency recovery program, a total of 11 adult pronghorn (10 females and one male) were initially captured (from Sonora and Arizona) and placed into a semi-captive breeding pen at Cabeza Prieta National Wildlife Refuge (CPNWR) in 2004. The breeding program has been very successful and as of July 2012 there were 78 pronghorn in the enclosure. Since establishing the program, as of January 2012, 16 pronghorn older than current year have died in the pen due to various causes, including one confirmed case of epizootic hemorrhagic disease, two from malnutrition prior to the introduction of alfalfa hay in the pen, two from bobcat predation, one from entanglement in the fence, and two from capture operations. Eight deaths were from unknown causes and although disease was suspected, it could not be confirmed. Sonoran pronghorn have been released from the pen every year since 2006. As of January 2012, a total of 73 individuals have been released, many of which are known to still be alive.

The objective is to produce at least 20 fawns each year to be released into the current U.S. population, and to establish additional U.S. populations at Kofa NWR and BMGR East, east of Highway 85. The additional populations will be established as an experimental, nonessential population under section 10(j) of the ESA. A final Environmental Assessment and final 10(j) rule were published in April and May, 2011, respectively. In December 2011, 13 Sonoran pronghorn were moved from the CPNWR breeding pen to the newly built breeding pen in the King Valley on Kofa NWR. Since then, two of the animals died, leaving 11 (9 does and 2 bucks) in the pen for breeding purposes. As of July 2012, there were 20 pronghorn in the pen, including 9 fawns born in 2012.

Mexico

In December 2007, surveys indicated pronghorn numbers declined with an estimated total of 404 (360 observed) individuals combined for both sub-populations (including 354 pronghorn [325 observed] in the area southeast of Mexico Highway 8 and 50 [35 observed] to the west of the highway). Of these pronghorn, four pronghorn (three does and 1 buck) from the Pinacate Biosphere

Reserve were captured and fitted with GPS radio collars. The male was found dead during a subsequent telemetry flight; his death was likely capture-related as his temperature rose dangerously high during the collaring effort. The decrease in Sonoran pronghorn population in Sonora from 2006 to 2007 is likely attributable, at least in part, to drought conditions in the pronghorn range in Mexico. During the aerial surveys, observers noted many extremely dry areas and some areas where the vegetation appeared dead in the pronghorn range. Additionally, an increasing number of fences and mine expansion within the range of the southeastern pronghorn population may be adversely affecting this population. In December 2009, surveys indicated pronghorn numbers increased somewhat with an estimated total of 482 (311 observed) individuals combined for both sub-populations (including 381 pronghorn [258 observed] in the area southeast of Mexico Highway 8 and 101 [53 observed] to the west of the highway). In December 2011, surveys indicated pronghorn numbers declined drastically with an estimated total of 241 (197 observed) individuals combined for both sub-populations (including 189 pronghorn [167 observed] in the area southeast of Mexico Highway 8 and 52 [30 observed] to the west of the highway).

D. Threats

Barriers that Limit Distribution and Movement

Highways, fences, railroads, developed areas, and irrigation canals can block access to essential forage or water resources. Brown and Ockenfels (2007) report that numerous railroads and highways bisect what was formerly contiguous pronghorn habitat, often dividing these rangelands into parcels too small to support viable, long-term populations of pronghorn in Arizona. Furthermore, they state railroads and paved highways are especially restrictive, as in addition to acting as intimidating barriers in their own right, they are often fenced on both sides of the right-of-way. Highways 2 and 8 in Sonora, and SR 85 between Gila Bend and Lukeville, Arizona support a considerable amount of fast-moving vehicular traffic, are fenced in some areas, and are likely a substantial barrier to Sonoran pronghorn (one pen-raised radio-collared male crossed SR 85 and Mexican Highway 2 recently; however, this is considered highly unusual). Interstate 8, the Wellton-Mohawk and Palomas Canals, agriculture, a railroad, and associated fences and human disturbance near the Gila River act as barriers for northward movement of pronghorn. De-watering of reaches of the Río Sonoyta and lower Gila River have also caused significant loss of habitat and loss of access to water (Wright and deVos 1986). Agricultural, urban, and commercial development at Sonoyta, Puerto Peñasco, and San Luis Río Colorado, Sonora; in the Mexicali Valley, Baja California; and at Ajo, Yuma, and along the Gila River, Arizona, have further removed habitat and created barriers to movement.

Human-caused Disturbance

A variety of human activities occur throughout the range of the pronghorn that have the potential to disturb pronghorn or its habitat, including livestock grazing in the U.S. and Mexico; military activities; recreation; poaching and hunting; clearing of desert scrub and planting of buffelgrass (*Pennisetum ciliare*) in Sonora; gold mining southeast of Sonoyta, dewatering and development along the Gila River and Río Sonoyta; CBV activity across the international border and associated required law enforcement response; and roads, fences, canals, and other artificial barriers.

Of the aforementioned human activities, in the U.S. range of the pronghorn, CBV activity and required law enforcement response is the most significant current source of disturbance to Sonoran

pronghorn and its habitat. As a result of increased presence of the USBP in the Douglas, Arizona area, and in San Diego (Operation Gatekeeper) and southeastern California, CBV traffic has shifted into remote desert areas, such as CPNWR, OPCNM, and BMGR (Klein 2000). In 2001, estimates of CBVs reached 1,000 per night in OPCNM alone (Organ Pipe Cactus National Monument 2001), and an estimated 150,000 people entered the monument illegally from Mexico (Milstead and Barns 2002). In fiscal years (FY) 2006 and 2007, OPCNM rangers apprehended 171 and 180 CBVs, respectively. Apprehensions of CBVs by the USBP Ajo Station, Tucson Sector, increased from 21,300 in 1999 to 22,504 in 2006 (USBP Ajo Station's apprehensions also reflect those apprehension made by OPCNM rangers as CBVs were transferred from OPCNM rangers to USBP agents for processing). In FY 2008, a total of 15,462 apprehensions were made by the Ajo Station USBP. The trend in apprehensions and drive-throughs in the Ajo Station's overall AOR has declined in recent years, particularly after the construction of the vehicle fence. An increase in the number of apprehensions and drive-throughs in the specific Ajo-1 project area increased from 2008 to 2009. This increase is believed to be attributable to increased CBV activity, as well as increased USBP effort, tactical infrastructure, and technology in the area which have improved USBP's ability to detect and apprehend CBVs (personal communication with USBP, December 2, 2009).

In fiscal year 2005, the Yuma Sector of the USBP apprehended record numbers of CBVs, and from October 1, 2005 to May 2006, 96,000 arrests were made, which was a 13% increase over the same time period in 2005 (Gerstenzang 2006). The Wellton Station of the Yuma USBP Sector made 2,080 apprehensions in fiscal year 2005 and 3,339 apprehensions from October 2005 to February 2006 (personal communication with USBP, February 10, 2006). USBP officials have indicated, however, that apprehensions in recent years have dramatically declined in the Yuma Sector, particularly in the western portions of the sector, due to USBP presence at Camp Grip, increased numbers of agents, and recently completed tactical infrastructure.

As USBP has been able to successfully gain control of more urban areas, CBV activity has shifted to more remote areas, such as CPNWR and OPCNM. Both CBV and USBP activities have resulted in increased human presence in and widespread degradation of Sonoran pronghorn habitat. Much of the CBV traffic travels through the southern passes of the Growler Mountains that lead either through or by all of the forage enhancements and the captive rearing pen in the Child's Valley, with potential to impact these recovery projects and use of the area by pronghorn (personal communication with Curtis McCasland, CPNWR, 2007). There is strong anecdotal evidence that pronghorn are avoiding areas of high CBV traffic and law enforcement activities (personal communication with Curtis McCasland, CPNWR, 2007). For example, prior to 2002 Sonoran pronghorn used the 90,000 acre Valley of the Ajo extensively during the fawning period (March 15-July 31); they primarily entered the Valley through an extremely critical and narrow mountain pass located near Bates Well. During the winter of 2001-2002, NPS stationed a ranger at Bates Well in a small (about 18-foot) temporary FEMA trailer, with no outdoor lighting or generators, to provide visitor security in the north part of OPCNM during the park's peak visitation period, which occurs prior to the Sonoran pronghorn fawning period. Beginning in 2002, USBP began to use the Bates Well site (i.e., Bates Well Forward Operating Base (FOB)) seasonally during the summer months. The NPS continued to use Bates Well for short periods during the late fall and winter in support of coordinated law enforcement efforts until ultimately discontinuing its use entirely in 2005. Because pronghorn traditionally used the Bates Well and Valley of the Ajo areas during the spring and summer months, it is unlikely that the NPS fall and winter presence at Bates Well between 2001

and 2005 had a significant effect on pronghorn use of the area. Since 2005, USBP has been the sole occupant at Bates Well. Over time USBP occupancy of this site has increased (the site can accommodate eight people) and today it is occupied nearly year round. Furthermore, USBP brought in generators that now run continuously and lights that operate throughout the night. Subsequent to the establishment of the FOB, no pronghorn have been documented entering the Valley of the Ajo through the Bates Well migration corridor. The establishment of the FOB coincides with a drastic decline in pronghorn (attributable to drought and an increase in border activity); therefore, changes in use of Bates Well area by pronghorn may be in part due to decreased population size, however the increased human presence at Bates Well, particularly during the fawning period, may have acted to prevent Sonoran pronghorn movements through the area and into the Valley of the Ajo. Since 2002, the population has increased and pronghorn continue to avoid the Bates Well migration corridor. Considering the sensitivity of pronghorn to human activity and the ongoing use of the Bates Well, it is likely that pronghorn are avoiding use of the area due to the high level of human activity currently associated with the site. In spring of 2009, it is thought that three does with fawns abandoned the Granite FEP due to the high amount of USBP activity at the site (a USBP drag road crosses adjacent to the FEP – it was created after the development of the FEP (electronic mail from John Hervert, AGFD, September 16, 2009). The does were later observed at OPCNM; however, the fawns died (electronic mail from John Hervert, AGFD, September 16, 2009).

As stated above, it has been well documented that human presence in wildlands can disturb animals, causing them to unnecessarily expend energy avoiding people, thereby potentially reducing reproductive success (e.g., Manville 1983, van Dyke *et al*. 1986, Goodrich & Berger 1994, Primm 1996; as cited by Kerley *et al*. 2002) or increasing the likelihood of fatal encounters with humans (Kasworm & Manley 1990, Saberwal *et al*. 1994, Khramtsov 1995, Mattson *et al*. 1996; as cited by Kerley *et al*. 2002).

In Sonoran pronghorn, Hughes and Smith (1990) found that pronghorn immediately ran 1,310-1,650 feet from a vehicle. Krausman *et al.* (2001, 2004, 2005a) examined effects of military aircraft and ground-based activities on Sonoran pronghorn at the North and South TACs on the Barry M. Goldwater Range (BMGR) and concluded that military activities, both ground-based and aerial, were associated with some changes in behavior (e.g., from standing to trotting or running, or bedded to standing) but the authors concluded that these changes were not likely to be detrimental to the animals. However, sightings of Sonoran pronghorn were biased towards disturbed habitats on the TACs and other areas of military activities, which also corresponded to areas of favorable ephemeral forage production (Krausman *et al.* 2005a). No conclusions could be drawn about effects of military activities on fawns due to poor fawn productivity during the Krausman *et al.* study. During times of drought, disturbances that cause pronghorns to startle and run would energetically have a more significant effect. Such energetic expenditures, particularly during times of stress, may lead to lower reproductive output and/or survival of individual animals (Geist 1971). Landon *et al*. (2003) evaluated whether Sonoran pronghorn used areas, as defined by noise levels produced by military aircraft, in proportion to their availability on the BMGR. In general, they found that Sonoran pronghorn used the lowest noise level area more than the higher noise level areas.

Habitat Disturbance

Livestock grazing has the potential to significantly alter pronghorn habitat and behavior (Leftwich and Simpson 1978, Kindschy *et al.* 1982, Yoakum *et al.* 1996). Overgrazing well into the 19th century by Spaniards and their descendants caused widespread habitat changes throughout much of the Sonoran Desert, particularly in more settled areas such as central Sonora, Mexico (Sheridan 2000). The effects of cattle grazing are largely historical; cattle were removed from OPCNM, CPNWR, and the BMGR in 1979, 1983, and 1986, respectively (USFWS 1998, Rutman 1997). In 2004, the BLM closed the Cameron Allotment on the borders of CPNWR and OPCNM, but grazing still occurs in the nearby Childs and Coyote Flat allotments near Ajo. In Sonora, livestock grazing occurs at Pozo Nuevo and at Ejido Puerto Peñasco, but cattle typically stay close to feed and water except in seasons with abundant annual growth when cattle range widely in the Pinacate region.

Mining occurred historically throughout much of the U.S. range of the pronghorn, but it is currently not a significant threat to Sonoran pronghorn in the U.S. During recent pronghorn surveys in Mexico, increasing effects from gold mining activities were noted in habitats used by the sub-population located southeast of Highway 8.

As discussed above, CBV activities and required USBP response have resulted in increased human presence in remote areas and widespread habitat degradation. For instance, all the valleys at Cabeza Prieta NWR are now criss-crossed with a network of illegal north-south roads and trails, even though those areas are designated as Wilderness. Segee and Neely (2006) report about 180 miles of illegal routes were created in wilderness areas of CPNWR from 2002 to 2006. Based on preliminary estimates, OPCNM reports there may exist a maximum of 1000 miles of unauthorized vehicle routes within a 12-mile radius of the Ajo-1 towers. These routes were likely created both by CBVs and USBP, and most are likely currently used by USBP. In OPCNM, NPS notes that CBV vehicle activity has decreased since about 2004 (electronic mail, Tim Tibbitts, OPCNM, 2009). Decreased CBV vehicle traffic in pronghorn habitat as a result of the fences has significantly alleviated the adverse effects of this traffic on pronghorn and their habitat. USBP, however, continues to respond (by vehicle, horseback, foot, and aircraft) to ongoing CBV activity (mostly foot traffic) in these areas. Frequently, this required response necessitates driving off of authorized roads which, when conducted in pronghorn habitat, results in significant degradation of pronghorn habitat and disturbance to pronghorn as discussed above.

Fire

The winter and spring of 2004/2005 were very wet, resulting in some of the highest productivity of cool season annual plants in recent memory. As these annual plants dried out, they created fuel for wildfire. In 2005, Mediterranean grass combined with high densities of the native wooly plantain (*Plantago ovata*) and other species created fuels adequate to carry fire. Military training, such as strafing and bombing in the tactical ranges, as well as fires set by CBVs, provided the ignition sources. Exact numbers are unknown; however, in 2005 roughly 7,500 acres of pronghorn habitat burned on the CPNWR (personal communication with Curtis McCasland, CPNWR, February 15, 2006) and more than 63,000 acres burned on the BMGR-East during that time. Approximately 29,260 acres of pronghorn habitat were consumed as a result of these fires.

Most Sonoran Desert trees, shrubs, and cacti are poorly adapted to fire (Brown and Minnich 1986, Schwalbe *et al.* 2000, Alford and Brock 2002). If areas burn repeatedly, permanent changes are likely in the flora. Even in the best scenario it is likely to be many years before trees once again provide thermal cover in wash communities and cholla recover to a point that they are useful forage plants for pronghorn. In 2007, 2008, and 2009, pronghorn were attracted to the burned areas, which often supported better growth of annual plants and forbs than adjacent unburned areas. However, in the long term and if these areas continue to burn, removal of thermal cover (trees) and chain fruit cholla, which they depend on in drought, would likely adversely affect pronghorn and probably limit the use of these areas to wetter and cooler periods and seasons.

Drought and Climate Change

As discussed, drought may be a major factor in the survival of adults and fawns (Bright and Hervert 2005), and the major decline in 2002 was driven by drought. Mean annual temperatures rose 1.8-3.6° F in the American Southwest from 1970-2004. That trend is accelerating, and is predicted to continue through the 21st century and beyond (Intergovernmental Panel on Climate Change 2007). Most of the observed increases in globally averaged temperatures since the mid-20th century are very likely due to the observed increases in anthropogenic greenhouse gas concentrations (Intergovernmental Panel on Climate Change 2007). In the Sonoran Desert, anthropogenic climate change is causing warming trends in winter and spring, decreased frequency of freezing temperatures, lengthening of the freeze-free season, and increased minimum temperatures in winter, which will likely cause changes in vegetation communities (Weiss and Overpeck 2005). These increases in temperature are predicted to be accompanied by a more arid climate in the Southwest (Seager *et al.* 2007, Intergovernmental Panel on Climate Change 2007). As a result, the Sonoran pronghorn is expected to be confronted with more frequent drought, which increases the importance of recovery actions, such as forage enhancement plots and water developments, which can offset the effects of drought.

Small Population Size, Random Changes in Demographics, and Disease

At populations of less than 100, population viability declines at an increasingly steep rate. To maintain genetic diversity over the long term, a population of at least 500 is desirable (Defenders of Wildlife 1998). Populations at low levels may experience random variations in sex ratios, age distributions, and birth and death rates among individuals, which can cause fluctuations in population size and possibly extinction (Richter-Dyn and Goel 1972). In very sparse populations, males may have trouble finding females, reducing productivity (Ehrlich and Roughgarden 1987). Small populations are also sensitive to variations in natural processes, such as drought and predation (Hecht and Nickerson 1999).

Sonoran pronghorn can potentially be infected by a variety of viral and bacterial diseases, as well as parasites. Epizootic hemorrhagic disease and Bluetongue virus are the most common cause of disease caused die-off in wild pronghorn (Brown and Ockenfels 2007). Blood testing has shown pronghorn exposure to these diseases by increases in antibody titers over time. The diseases relevant to pronghorn can be transmitted indirectly through vectors, such as infected midges or ticks, or directly via aerosolized or direct contact of infected fluids or tissues. Diseases that potentially infect pronghorn are all serious diseases of cattle, which can act as vectors. Cattle within the current range of the pronghorn have not been tested for these diseases.

Southwestern Willow Flycatcher
A complete description of this species can be found in the "Southwestern Willow Flycatcher Recovery Plan" (USFWS 2002) and is summarized below.

Description
The southwestern willow flycatcher is a small grayish-green passerine bird (Family Tyrannidae) measuring approximately 5.75 inches. The song is a sneezy "fitz-bew" or a "fit-a-bew", the call is a repeated "whit." It is one of four currently recognized willow flycatcher subspecies (Phillips 1948, Unitt 1987, Browning 1993). It is a neotropical migrant that breeds in the southwestern U.S. and migrates to Mexico, Central America, and possibly northern South America during the non-breeding season (Phillips 1948, Stiles and Skutch 1989, Peterson 1990, Ridgely and Tudor 1994, Howell and Webb 1995). The historical breeding range of the southwestern willow flycatcher included southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern Utah, extreme southern Nevada, and extreme northwestern Mexico (Sonora and Baja) (Unitt 1987).

Listing and critical habitat
The southwestern willow flycatcher was listed as endangered, without critical habitat on February 27, 1995 (USFWS 1995). Critical habitat was later designated on July 22, 1997 (USFWS 1997a). A correction notice was published in the Federal Register on August 20, 1997 to clarify the lateral extent of the designation (USFWS 1997b).

On May 11, 2001, the 10th circuit court of appeals set aside designated critical habitat in those states under the 10th circuit's jurisdiction (New Mexico). The FWS decided to set aside critical habitat designated for the southwestern willow flycatcher in all other states (California and Arizona) until it could re-assess the economic analysis.

On October 19, 2005, the FWS re-designated critical habitat for the southwestern willow flycatcher (USFWS 2005). A total of 737 river miles across southern California, Arizona, New Mexico, southern Nevada, and southern Utah were included in the final designation. The lateral extent of critical habitat includes areas within the 100-year floodplain.

On August 15, 2011, the FWS proposed a revision to the critical habitat designation, identifying stream segments in each of the 29 Management Units where there are recovery goals (USFWS 2011). These segments totaled 2,090 stream miles. Similar to the 2005 rule, the lateral extent of critical habitat includes only the riparian areas within the 100-year floodplain. About 790 stream miles were identified as areas we will consider for exclusion from the final designation under section 4(b) (2) of the ESA. The 2005 designation remains in place until the new proposal is finalized towards the end of 2012.

A final recovery plan for the southwestern willow flycatcher was signed by the FWS Region 2 Director and released to the public in March, 2003 (USFWS 2002). The Plan describes the reasons for endangerment, current status of the flycatcher, addresses important recovery actions, includes detailed issue papers on management issues, and provides recovery goals. Recovery is based on reaching numerical and habitat related goals for each specific Management Unit established throughout the subspecies range and establishing long-term conservation plans (USFWS 2002).

Habitat

The southwestern willow flycatcher breeds in dense riparian habitats from sea level in California to approximately 8,500 feet in Arizona and southwestern Colorado. Historical egg/nest collections and species' descriptions throughout its range describe the southwestern willow flycatcher's widespread use of willow (*Salix* spp.) for nesting (Phillips 1948, Phillips *et al.* 1964, Hubbard 1987, Unitt 1987). Currently, southwestern willow flycatchers primarily use Geyer willow (*Salix geyeriana*), coyote willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), boxelder (*Acer negundo*), saltcedar (*Tamarix* sp.), Russian olive (*Elaeagnus angustifolio*), and live oak (*Quercus agrifolia*) for nesting. Other plant species less commonly used for nesting include: buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood (*Populus* spp.), white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Based on the diversity of plant species composition and complexity of habitat structure, four basic habitat types can be described for the southwestern willow flycatcher: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al.* 1997).

The flycatcher's habitat is dynamic and can change rapidly: nesting habitat can grow out of suitability; saltcedar habitat can develop from seeds to suitability in about four to five years; heavy runoff can remove/reduce habitat suitability in a day; or river channels, floodplain width, location, and vegetation density may change over time. The flycatcher's use of habitat in different successional stages may also be dynamic. For example, over-mature or young habitat not suitable for nest placement can be occupied and used for foraging and shelter by migrating, breeding, dispersing, or non-territorial southwestern willow flycatchers (McLeod *et al.* 2005, Cardinal and Paxton 2005). Flycatcher habitat can quickly change and vary in suitability, location, use, and occupancy over time (Finch and Stoleson 2000).

Tamarisk is an important component of the flycatcher's nesting and foraging habitat in the central part of the flycatcher's breeding range in Arizona, southern Nevada and Utah, and western New Mexico. In 2001 in Arizona, 323 of the 404 (80 percent) known flycatcher nests (in 346 territories) were built in a tamarisk tree (Smith *et al.* 2002). Tamarisk had been believed by some to be a habitat type of lesser quality for the southwestern willow flycatcher, however comparisons of reproductive performance (USFWS 2002), prey populations (Durst 2004) and physiological conditions (Owen and Sogge 2002) of flycatchers breeding in native and exotic vegetation has revealed no difference (Sogge *et al.* 2005). The southwestern willow flycatcher is an insectivore, foraging in dense shrub and tree vegetation along rivers, streams, and other wetlands.

The introduced tamarisk leaf beetle was first detected affecting tamarisk within the range of the southwestern willow flycatcher in 2008 along the Virgin River in St. George, Utah. Initially, this insect was not believed to be able to move into or survive within the southwestern United States in the breeding range of the flycatcher. Along this Virgin River site in 2009, 13 of 15 flycatcher nests failed following vegetation defoliation (Paxton *et al.* 2010). As of 2012, the beetle has been found in southern Nevada/Utah and northern Arizona/New Mexico within the flycatcher's breeding range. Because tamarisk is a component of about 50 percent of all known flycatcher territories (Durst *et al.* 2008), continued spread of the beetle has the potential to significantly alter the distribution, abundance, and quality of flycatcher nesting habitat and impact breeding attempts.

Breeding biology

Arizona distribution and abundance
While numbers have significantly increased in Arizona (145 to 459 territories from 1996 to 2007) (English *et al.* 2006, Durst *et al.* 2008), overall distribution of flycatchers throughout the state has not changed much. Currently, population stability in Arizona is believed to be largely dependent on the presence of two large populations (Roosevelt Lake and San Pedro/Gila River confluence). Therefore, the result of catastrophic events or losses of significant populations either in size or location could greatly change the status and survival of the bird. Conversely, expansion into new habitats or discovery of other populations would improve the known stability and status of the flycatcher.

Fire
The evidence suggests that fire was not a primary disturbance factor in southwestern riparian areas near larger streams (USFWS 2002). Yet, in recent time, fire size and frequency has increased on the lower Colorado, Gila, Bill Williams, and Rio Grande rivers. The increase has been attributed to increasing dry, fine fuels as a result of the cessation of flood flows and human caused ignition sources. The spread of the highly flammable plant, tamarisk, and drying of river areas due to river flow regulation, water diversion, lowering of groundwater tables, and other land practices is largely responsible for these fuels. A catastrophic fire in June of 1996, destroyed approximately a half mile of occupied tamarisk flycatcher nesting habitat on the San Pedro River in Pinal County. That fire resulted in the forced dispersal or loss of up to eight pairs of flycatchers (Paxton *et al.* 1996). Smaller fires have occurred along the upper most portion of the San Pedro River closer to the Mexico Border and another large fire occurred on the lower San Pedro River at the Nature Conservancy's San Pedro Preserve between Winkelman and Dudleyville in 2004. Recreationists cause over 95 percent of the fires on the lower Colorado River (USFWS 2002).

Mortality and Survivorship
There are no extensive records for the actual causes of adult southwestern willow flycatcher mortality. Incidents associated with nest failures, human disturbance, and nestlings are typically the most often recorded due to the static location of nestlings, eggs, and nests. As a result, nestling predation and brood parasitism are the most commonly recorded causes of southwestern willow flycatcher mortality. Also, human destruction of nesting habitat through bulldozing, groundwater pumping, and aerial defoliants has been recorded in Arizona (T. McCarthey, AGFD, pers. comm.). Human collision with nests and spilling the eggs or young onto the ground have been documented near high use recreational areas (USFWS 2002). A southwestern willow flycatcher from the Greer Town site along the Little Colorado River in eastern Arizona, was found dead after being hit by a vehicle along SR 373. This route is adjacent to the breeding site (T. McCarthey, AGFD, pers. comm.).

Past Consultations
Since listing in 1995, at least 206 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range. This list of consultations can be found in the administrative record for this consultation. Since flycatcher critical habitat was finalized in 2005, at least 33 formal opinions have been completed in Arizona (within and outside

designated critical habitat). While many opinions were issued for the previous critical habitat designation, the stream reaches and constituent elements have changed.

Activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.). Introduced tamarisk eating leaf beetles were not anticipated to persist within the range of the southwestern willow flycatcher. However, they were detected within the breeding habitat (and designated critical habitat) of the flycatcher in 2008 along the Virgin River near the Town of St. George, Utah. In 2009, beetles were also known to have been detected defoliating habitat within the range of flycatcher habitat in southern Nevada, and along the Colorado River in the Grand Canyon and near Shiprock in Arizona. Stochastic events also continue to change the distribution, quality, and extent of flycatcher habitat.

Conservation measures associated with some consultations and Habitat Conservation Plans have helped to acquire lands specifically for flycatchers on the San Pedro, Verde, and Gila rivers in AZ and the Kern River in CA. Additionally, along the lower Colorado River, the U.S. Bureau of Reclamation is currently attempting to establish riparian vegetation to expand and improve the distribution and abundance of nesting flycatchers. A variety of Tribal Management Plans in CA, AZ, and NM have been established to guide conservation of the flycatchers. Additionally, during the development of the critical habitat rule, management plans were developed for some private lands along the Owens River in CA and Gila River in NM. These are a portion of the conservation actions that have been established across the subspecies' range.

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 to assess the effects of the action now under consultation.

Sonoran Pronghorn

A. Action Area

For the biological opinion for SPH the action area is the area utilized by the United States subpopulation (Fig. 2). The U.S. sub-population is effectively separated from sub-populations in the El Pinacate Region and on the Gulf Coast of Sonora by Mexico Highways 2 and 8. Activities that may affect animals in any portion of the U.S. range of the pronghorn may affect the size or structure of the U.S. sub-population, or habitat use within the U.S. range.

Management of the action area is almost entirely by Federal agencies. The BMGR (roughly 1.6 million acres) is managed by Luke Air Force Base and the Marine Corps Air Station (MCAS)-Yuma primarily for military training. OPCNM manages 329,000 acres in the southeastern corner of

the action area for scenic, ecological, natural, and cultural values. CPNWR lies along the U.S./Mexico border west of OPCNM and encompasses 860,000 acres. CPNWR is managed to protect, maintain, and restore the diversity of the Sonoran Desert. Most of the refuge and OPCNM are designated as wilderness. The BLM manages lands near Ajo for recreation, grazing, and other multiple uses in accordance with the Lower Gila South Resource Management Plan. OPCNM and CPNWR are critically important for Sonoran pronghorn recovery because of their management for protection of natural resources. Lands on the BMGR are managed primarily for military training, and although important recovery is ongoing on these lands and the Department of Defense has generously contributed to the recovery program both on and off the BMGR, changing military priorities could, in the future, limit the value of the BMGR for Sonoran pronghorn recovery.

B. Terrain, Vegetation Communities, and Climate in the Action Area

The action area is characterized by broad alluvial valleys separated by block-faulted mountains and surface volcanics. The Yuma Desert on the western edge of the BMGR is part of a broad valley that includes the Colorado River. Major drainages and mountain ranges run northwest to southeast. Major drainages flow mostly northward to the Gila River, although southern portions of OPCNM and the southern slope of the Agua Dulce Mountains drain south to the Río Sonoyta.

Climate is characterized by extreme aridity, mild winters, and hot summers. Approximately 2.7 inches of precipitation fall annually at Yuma, with slightly more than half of this occurring in the winter months (Brown 1982). Annual precipitation increases from west to east across the BMGR; at Aguajita/Quitobaquito, precipitation is 10.5 inches annually. The vegetation community of the western portion of the BMGR has been classified as the lower Colorado River Valley subdivision of Sonoran Desert scrub (Brown 1982). It is the largest and most arid subdivision of Sonoran Desert scrub. The Arizona Upland subdivision of Sonoran Desert scrub is found in the Growler, Puerto Blanco, Ajo and Bates mountains, and surrounding bajadas.

C. Status of the Sonoran Pronghorn in the Action Area

Distribution, Abundance, and Life History

The distribution and abundance of the Sonoran pronghorn in the action area is the same as that described above in the Status of the Species for the U.S. sub-population. Life history, including demographics, chronology of breeding and movements, diet, and other factors were also described above for the U.S. population. BLM lands subject to the LSRMP near Ajo comprise a block of habitat that has not been used extensively by SPH in recent years (see Fig. 2 which includes SPH locations and land ownership).

Drought

As discussed in the Status of the Species, climate change in the Southwest and the Sonoran Desert is predicted to result in warming trends and drier conditions, with accompanying changes in vegetation communities (Weiss and Overpeck 2005, Seager *et al.* 2007). Rowlands (2000) examined trends in precipitation for southwestern Arizona and OPCNM from 1895-1999. For southwestern Arizona, no trend in precipitation was found for the period, but low precipitation occurred around 1895 and during the 1950s. Periods of high precipitation occurred in 1915-1920 and in the 1980s. For OPCNM, there was a slightly increasing trend in monthly and annual

precipitation over the period 1895-1999, a strong drought occurred in the 1950s, and a lesser drought occurred in the 1970s. No discernable trend in precipitation in southwestern Arizona or OPCNM was found in the 1990s, which is when the current decline in the U.S. pronghorn sub-population began.

Since Rowland's analysis, there was one year characterized by above-average rainfall and abundant ephemeral forage (2001) followed by a year with virtually no precipitation or ephemeral forage (2002). Recruitment and survival were high in 2001 and very low in 2002 (Bright and Hervert 2005). Based on the lack of forage and water, and the condition of pronghorn observed, drought is considered the proximate cause of the 79% decline in the U.S. pronghorn sub-population from 2000 to 2002. From 2003 to 2008, rainfall and Sonoran pronghorn range conditions have varied, but have improved overall when compared to 2002. The July 2012 long-term (48-months) drought status report (http://www.azwater.gov/azdwr/StatewidePlanning/drought/DroughtStatus2.htm) indicates that southwestern Arizona is experiencing conditions of moderate to extreme drought conditions.

Historically, pronghorn populations must have weathered severe droughts in the Sonoran Desert, including many that were more severe and longer term than what has occurred recently. Given that pronghorn populations survived the droughts of the 1890s, 1950s, 1970s, and others before those, it is unreasonable to solely attribute recent declines in the U.S. pronghorn population to drought. OPCNM (2001) concluded, "If (individual) recent dry years have had an impact on Sonoran pronghorn, it is most likely because in recent decades Sonoran pronghorn have much more limited options for coping with even brief moderate drought. Because of restrictions on their movements and range, and increasing human presence within their range, pronghorn are less able to employ their nomadic strategy in search of relief. It is not that drought itself is an impact, but possibly that drought has *become* an impact, due to other factors confounding the species' normal ecological strategy."

Recent Recovery Actions

A number of critically important recovery projects have been recently initiated in an attempt to reverse the decline of the U.S. sub-population of the Sonoran pronghorn (Krausman *et al.* 2005b). These projects are designed to increase availability of green forage and water during dry periods and seasons to offset to some extent the effects of drought and barriers that prevent pronghorn from accessing greenbelts and water, such as the Gila River and Río Sonoyta. Many developed and 10 emergency water sources (7 on CPNWR, one on OPCNM, and two on BMGR-West) have been constructed in recent years throughout the range of the U.S. sub-population. Construction of additional waters is currently undergoing environmental review. Four forage enhancement plots, each consisting of a well, pump, pipelines and irrigation lines, have been developed to irrigate the desert and produce forage for pronghorn. Construction of an additional plot is nearly complete and additional plots may be constructed in the future if warranted. Plots and waters located in areas with little human activity and better range conditions appear to be more effective (i.e., contribute to fawn and adult survival to a greater degree) than those located in areas of high human activity and poor range condition (i.e., experiencing drought) (personal communication with John Hervert, AGFD, September 16, 2009). Therefore, to ensure success of these measures, it is critical that human activity is avoided or significantly minimized near the plots and waters.

Additionally, starting in 2009, temporary, experimental feed and water stations were placed strategically within the South TAC to enhance pronghorn fawn survival and recruitment during periods of prolonged drought. The primary purpose was to draw pronghorn away from active military targets as an offset to the target closure distances that were in place at that time. These stations were heavily used by pronghorn during times with poor range conditions brought on by drought.

A semi-captive breeding facility at CPNWR was first stocked with pronghorn in 2004 and as of July 2012 contains 78 pronghorn (46 adults and 32 fawns). As described above, this facility will be used to augment the current U.S. sub-population and potentially to establish additional herds at Kofa NWR and BMGR-East, east of Highway 85. These crucial projects, which we hope will pull the U.S. population back from the brink of extinction, have been cooperative efforts among many agencies and organizations, including FWS, Arizona Game and Fish Department (AGFD), MCAS-Yuma, Luke Air Force Base, OPCNM, CBP, Arizona Desert Bighorn Sheep Society, Arizona Antelope Foundation, the Yuma Valley Rod and Gun Club, the University of Arizona, the Los Angeles and Phoenix Zoos, and others.

D. Past and Ongoing Non-Federal Actions in the Action Area

The Status of the Species section describes a variety of human activities that have affected the Sonoran pronghorn since initiation of livestock grazing over 300 years ago (Officer 1993). Many non-Federal activities that have affected the pronghorn are historical in nature, and pronghorn have been all but extirpated from private, state, and Tribal lands. However, increased illegal activities have likely had a significant impact on Sonoran pronghorn in the U.S. in recent times, particularly since the turn of the millennium. See the "*Human-caused Disturbance*" and "*Habitat Disturbance*" portions of the "Threats" section under "Status of the Species" above for further detail.

E. Past and Ongoing Federal Actions in the Action Area

Because of the extent of Federal lands in the action area, with the exception of CBV activities, most activities that currently, or have recently, affected the U.S. sub-population or their habitat are Federal actions. The primary Federal agencies involved in activities in the action area include the MCAS-Yuma, Luke Air Force Base, FWS, BLM, OPCNM, and Border Patrol. In the following discussion, we have categorized Federal actions affecting the pronghorn as: 1) those actions that have not yet undergone section 7 consultation (although in some cases consultation has been completed on components of the Federal activity), and 2) Federal actions that have undergone consultation.

Federal Actions For Which Consultation Has Not Been Completed

1) U.S. Border Patrol Activities in the Tucson Sector, Arizona

While some USBP field activities to detect, deter, and apprehend CBVs in the Tucson Sector have undergone consultation, others have not. In 2006, the USBP sent us a draft Biological Assessment for review that addressed all activities within their sector. We responded with comments on the BA; however, USBP never sent us a final BA. Activities within the Ajo Station of the Tucson

Sector have the greatest potential to adversely affect pronghorn and these have been addressed, in part, in the SBI*net* Ajo-1 Tower consultations. As USBP has been able to successfully gain control of more urban areas, CBV activity has shifted to more remote areas, such as CPNWR and OPCNM. Both activities have resulted in increased human presence in and widespread degradation of Sonoran pronghorn habitat. As discussed above (see the "*Human-caused Disturbance*" and "*Habitat Disturbance*" portions of the "Threats" section under "Status of the Species"), hundreds to thousands of illegal routes have been created and are likely currently used by CBVs and USBP on CPNWR and OPCNM. Also as mentioned previously, there is substantial evidence that pronghorn avoid areas of high CBV traffic and USBP activities on CPNWR and OPCNM. This activity in pronghorn habitat has likely lead to significant disturbances to pronghorn resulting in decreased fitness and death (from reduced availability of important habitat, separation of does and fawns, increased energetic expenditure from fleeing, etc.). However, it is logical to assume the presence of agents in these areas generally reduces the amount of CBV activity which consequently reduces the potential for disturbance to pronghorn from CBVs.

2) Smuggler/Drug Interdiction

We are aware of U.S. Customs, Drug Enforcement Administration, and Arizona Army National Guard smuggler or drug interdiction activities in pronghorn habitat, including vehicle and helicopter activities. However, we have not received information regarding the extent or types of activities they conduct, and no consultation has occurred on these activities.

3) DHS-CBP Hybrid Fence on BMGR and Vehicle Fence on CPNWR

Consultation was completed for the installation of a vehicle barrier (fence) along the U.S.-Mexico border from Avenue C to the western boundary of OPCNM, including the BMGR (see details below), however, subsequent to issuing the biological opinion, the action was changed to include the installation of a section of hybrid-style fence designed to prevent the passage of pedestrians. Because all environmental laws were waived (as permitted by the Real ID Act of 2005) by Secretary of the DHS, CBP never reinitiated consultation with us regarding this change to their proposed action. However, DHS did provide funding to the FWS for the implementation offsetting measures for Sonoran pronghorn. These offsetting measures will contribute to recovery actions for the Sonoran pronghorn.

4) DHS-CBP Vehicle Fence on CPNWR

CBP constructed and maintains a 1.6-mile segment of vehicle fence (known as CV-2a) and associated roads on the CPNWR. Though the project was likely to adversely affect pronghorn, as well as benefit pronghorn by reducing CBV vehicle activity within the pronghorn range, because all environmental laws were waived (as permitted by the Real ID Act of 2005) by Secretary of the DHS, it never underwent formal consultation. We provided CBP with recommendations to avoid, minimize, and offset effects to pronghorn, however, to date, we do not know if they were implemented.

Federal Actions Addressed in Section 7 Consultations

As part of our comprehensive discussion of all past and present actions affecting pronghorn within the action area, we describe below all biological opinions issued to date on actions that may affect the pronghorn.

Several opinions addressed projects with minor effects to the pronghorn (capture and collaring of pronghorn for research purposes, consultations 02-21-83-F-0026 and 02-21-88-F-0006; installation of a water source in the Mohawk Valley for pronghorn, consultation 02-21-88-F-0081; implementation of the CPNWR Comprehensive Conservation Plan, consultation 22410-2006-F-0416; change in aircraft type from the F-15A/B to the F-15E on BMGR-East [F-15E Beddown Project], consultation 02-21-89-F-0008; and the following projects at OPCNM: widening of North Puerto Blanco Road, consultation 02-21-01-F-0109; improvements to SR 85 roadway and drainages, consultation 02-21-01-F-0546; and construction of a vehicle barrier, consultation 02-21-02-F-237). Incidental take was anticipated only for the Beddown Project in the form of harassment as a result of aircraft overflights. This project was later incorporated into the biological opinion on Luke Air Force Base's activities on the BMGR, discussed below. All of these formal consultations can be viewed on our website at http://www.fws.gov/southwest/es/arizona.

Eleven biological opinions evaluated major projects with greater effects to pronghorn:

1) U.S. Border Patrol Activities in the Yuma Sector, Wellton Station, Yuma, Arizona

This biological opinion (consultation 02-21-96-F-0334), issued September 5, 2000, addressed all USBP activities along the United States/Mexico border in Yuma County from the Colorado River to about the area of Pinta Sands at the southern end of the Sierra Pinta Mountains. The Yuma Sector requested reinitiation of consultation, and we delivered a draft biological opinion in 2004; however, we have not received comments from the USBP to date. Currently, USBP activities within the Yuma Sector/Wellton Station include air and ground patrols; drag road preparation and assessment of road maintenance; remote sensor installation and maintenance; pedestrian and vehicle fence and associated road maintenance; apprehensions and rescues; and assistance to other sectors and agencies. Disturbance to pronghorn was anticipated as a result of on-the-ground USBP operations, and direct injury or mortality of pronghorn as a result of collision with USBP vehicles or by low-level helicopter flights abruptly approaching and startling pronghorn, which may result in injury or energetic stress, particularly during drought. Pronghorn may also be adversely affected by noise and visual impacts of helicopter overflights. To reduce adverse effects on pronghorn, the USBP agreed to implement a number of conservation measures, which to date have not been completed. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. We anticipated take in the form of harassment that is likely to injure up to one pronghorn in 10 years. The following reasonable and prudent measures were provided: 1) minimize injury of pronghorn; 2) monitor and study reactions of pronghorn on BMGR to USBP activities; and 3) provide a means to determine the level of incidental take resulting from USBP activities. Several conservation recommendations were also provided. We are not aware of any incidental take attributable to Yuma Sector activities.

2) BLM's Lower Gila South Management Area

Three biological opinions address BLM's Lower Gila South Management Area. The Lower Gila South Resource Management Plan-Goldwater Amendment (consultation 02-21-90-F-0042), proposed specific and general management guidance for non-military activities on the BMGR. The non-jeopardy biological opinion, issued April 25, 1990, was programmatic, requiring BLM to consult when site-specific projects are proposed. No incidental take was anticipated. The Lower Gila South Habitat Management Plan (HMP) (consultation 02-21-89-F-0213) provided management guidance for both specific and general actions in southwestern Arizona. Four actions were addressed in the HMP, including an exchange of 640 acres near Ajo, rehabilitation work on two catchments, and assessment of livestock removal from pronghorn habitat. Exchange of land out of public ownership may facilitate development or other uses that would preclude use by pronghorn. The non-jeopardy opinion was issued on May 15, 1990. The biological opinion for the Lower Gila South Resource Management Plan and Amendment (consultation 02-21-85-F-0069) addressed programmatic management of lands in southwestern Arizona, including livestock grazing, wilderness, cultural resources, fire, minerals and energy, recreation, wildlife management, wood cutting, Areas of Critical Environmental Concern, and other land uses. The non-jeopardy biological opinion was issued on March 27, 1998; no incidental take was anticipated. In regard to management on the BMGR, these three opinions have been replaced by the opinion on the BMGR's Integrated Natural Resources Management Plan (INRMP) (see below). The Air Force and MCAS-Yuma have assumed BLM's management responsibilities on the BMGR.

3) BLM grazing allotments in the vicinity of Ajo, Arizona

The original biological opinion (consultation 02-21-94-F-0192), issued December 3, 1997, addressed effects to pronghorn resulting from issuance of grazing permits on five allotments, four of which were located near Ajo and Why (Cameron, Childs, Coyote Flat, and Why allotments); and the fifth near Sentinel (Sentinel allotment). All but portions of allotments east of Highway 85 were considered to be within the current distribution of the Sonoran pronghorn. Reinitiations resulted in revised biological opinions dated November 16, 2001, September 30, 2002, June 21, 2004, March 3, 2005, and March 8, 2007. Under the current proposed action, the Cameron Allotment is closed, the Sentinel Allotment has been in non-use for several years, the Coyote Flat and Why allotments were combined into one (Coyote Flat Allotment), and the Childs Allotment remains relatively unchanged in terms of management. Effects of livestock grazing activities included reduced forage availability for pronghorn, human disturbance due to livestock management, barriers to movement caused by pasture and allotment fences, and potential for disease transfer from cattle to pronghorn. The March 8, 2007 opinion concluded that the proposed action was not likely to jeopardize the continued existence of the pronghorn. No incidental take was anticipated, and none is known to have occurred.

4) Organ Pipe Cactus National Monument General Management Plan

The original biological opinion (consultation 02-21-89-F-0078), issued June 26, 1997, addressed implementation of OPCNM's General Management Plan (GMP). This opinion was reinitiated five times, resulting in revised biological opinions dated November 16, 2001, April 7, 2003, March 10 and August 23, 2005, and March 8, 2007. GMP plan elements included: 1) continuing travel and

commerce on SR 85 while enhancing resource protection, 2) seeking designation of OPCNM as the Sonoran Desert National Park, 3) establishment of partnerships, 4) increased wilderness and an interagency wilderness and backcountry management plan, 5) changes in trails, facilities, and primitive camping, and 6) implementation of a Cultural Resources Management Plan. Included were a number of conservation measures to minimize impacts to pronghorn, including "Limiting future development to the area north of the North Puerto Blanco Drive and east of the Senita Basin Road/Baker Mine Trail/Dripping Springs Trail." Effects of the action included human disturbance to pronghorn and habitat due to recreation and management activities. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. In the latest versions of the opinion, no incidental take of pronghorn was anticipated. No incidental take is known to have occurred. The original opinion was the subject of a lawsuit (Defenders of Wildlife, *et al*. v. Bruce Babbitt, *et al*.) and was remanded by the court due to our failure to adequately address the impact of proposed activities on pronghorn.

5) Marine Corps Air Station-Yuma in the Arizona Portion of the Yuma Training Range Complex

The original biological opinion (consultation number 02-21-95-F-0114), was issued on April 17, 1996. That opinion was reinitiated and revised opinions were issued November 16, 2001, August 6, 2003, and October 21, 2009. These opinions addressed all proposed and authorized actions on the BMGR by MCAS-Yuma, including ongoing and proposed changes to military flights over CPNWR and the BMGR, operation of various training facilities such as landing strips, a rifle range, targets, a parachute drop zone, a transmitter/telemetry system, ground support areas, and Weapons Tactics Instructor courses, conducted twice a year (March-April and October-November) that involve overflights, ground-based activities, and ordnance delivery at targets in BMGR-East. Ground-based activities, such as those of troops and vehicles at ground-support areas were determined to adversely affect pronghorn habitat use. In areas where helicopters fly particularly low and create noise and visual stimuli, disturbance of pronghorn was anticipated. Ordnance delivery at North and South TACs could disturb pronghorn, and ordnance, live fire, and shrapnel could potentially strike and kill or injure a pronghorn. MCAS-Yuma proposed measures to reduce the direct and indirect impacts of the proposed action, including measures to reduce or eliminate take of Sonoran pronghorn and to minimize destruction and degradation of habitat. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. In the 2003 and 2009 versions of the biological opinion, no incidental take of pronghorn was anticipated and none is known to have occurred.

6) Luke Air Force Base Use of Ground-Surface and Airspace for Military Training on the BMGR

The original biological opinion (consultation number 02-21-96-F-0094), issued August 27, 1997, addressed military use of the airspace above and the ground space on BMGR-East and CPNWR by Luke Air Force Base. Military activities within the area of overlap with the CPNWR were limited to use of airspace and operation of four Air Combat Maneuvering Instrumentation sites. Military activities occurring within BMGR-East included: airspace use, manned air-to-ground ranges, tactical air-to-ground target areas, auxiliary airfields, Stoval Airfield, and explosive ordnance disposal/burn areas. Primary potential effects of the action included habitat loss due to ground-based activities, harassment and possible mortality of pronghorn at target areas, and disturbance of pronghorn due to military overflights and ground activities. We determined that the proposed

action was not likely to jeopardize the continued existence of the pronghorn. This opinion was reinitiated in 2001, 2003, and 2010 resulting in revised opinions dated November 16, 2001, August 6, 2003, and May 3, 2010. In the latest (2010) opinion, we anticipated take of one wild Sonoran pronghorn every 10 years, one pen-raised (free ranging) female pronghorn every 10 years, and four pen-raised (free ranging) male pronghorn every 10 years in the form of direct mortality or injury; and one wild Sonoran pronghorn of either sex, one pen raised (free ranging female) every 10 years, and two pen-raised (free ranging) male pronghorn every 10 years in the form of harassment. The following reasonable and prudent measure was provided: monitor incidental take resulting from the proposed action and report to the FWS the findings of that monitoring. To date, we are not aware of any incidental take attributable to the project. We are not aware of any take of pronghorn confirmed attributable to Luke Air Force Base use of the ground-surface and airspace on the BMGR. A pronghorn found dead near a target may have been strafed, but it may also have died from other causes. Because the animal had been heavily scavenged by the time it was found, the cause of death was impossible to determine. It is possible that it was killed by strafing near North TAC or it may have died during combat with another animal.

During the development of these opinions, Luke Air Force Base made substantial commitments to minimize the effects of their activities on the Sonoran pronghorn, and additionally committed to implementing a variety of recovery projects recommended by the Sonoran Pronghorn Recovery Team.

7) Western Army National Guard Aviation Training Site Expansion Project

The non-jeopardy biological opinion for WAATS (consultation 02-21-92-F-0227) was issued on September 19, 1997; however, Sonoran pronghorn was not addressed in formal consultation until reinitiations and revised opinions dated November 16, 2001 and August 6, 2003. The purpose of WAATS is to provide a highly specialized environment to train Army National Guard (ARNG) personnel in directed individual aviator qualification training in attack helicopters. The WAATS expansion project included: 1) expansion of the existing Tactical Flight Training Area, which includes establishing four Level III touchdown sites, 2) development of the Master Construction Plan at the Silver Bell Army Heliport, and 3) establishment of a helicopter aerial gunnery range for use by the ARNG on East TAC of the BMGR. All activities that are part of the proposed action occur outside the current range of the pronghorn, with the exception of training at North TAC. Training at North TAC only occurs when East TAC is closed for annual maintenance and EOD clearances (4-6 weeks each year). Effects to pronghorn at North TAC are minimized by monitoring protocols established by Luke Air Force Base. Training at East TAC could preclude recovery of historical habitat if the many other barriers that prevent pronghorn use of East TAC were removed. The November 16, 2001 and August 6, 2003 opinions found that the proposed action was not likely to jeopardize the continued existence of the pronghorn. No incidental take was anticipated and none is known to have occurred as a result of the proposed action. ARNG included the following conservation measures as part of their proposed action: 1) they proposed to study the effects of low-level helicopter flights on a surrogate pronghorn population at Camp Navajo (to date this measure has not been implemented), and 2) they committed to funding up to five percent of emergency recovery actions on the BMGR.

8) BMGR Integrated Natural Resources Management Plan

The non-jeopardy opinion for this action was issued on August 26, 2005. The Military Lands Withdrawal Act (MLWA) of 1999 required that the Secretaries of the Air Force, Navy, and Interior jointly prepare an INRMP for the BMGR, the purpose of which was to provide for the "proper management and protection of the natural and cultural resources of [the range], and for sustainable use by the public of such resources to the extent consistent with the military purposes [of the BMGR]." The proposed action was comprehensive land management, including public use restrictions, authorizations, and permitting on portions of the BMGR regarding camping, vehicle use, shooting, entry into mines, firewood collection and use, rockhounding, and other activities; natural resources monitoring, surveys, and research; habitat restoration; wildlife water developments; development of a wildfire management plan; law enforcement; limitations on the locations of future utility projects and the Yuma Area Service Highway; control of trespass livestock; and designation of special natural/interest areas, while allowing other designations to expire. The proposed action included many land use prescriptions that would improve the baseline for the pronghorn. No incidental take was anticipated, and none is known to have occurred from the proposed action.

9) CBP and USBP Permanent Vehicle Barrier from Avenue C to OPCNM, Arizona

This biological opinion (consultation 22410-2006-F-0113), issued September 15, 2006, addressed the CBP - Office of the Border Patrol's installation of a permanent vehicle barrier (as well as access improvements, construction/improvement of border roads, and associated maintenance and patrol activities) along sections of the border from the western end of the OPCNM barrier to Avenue C just east of San Luis, Arizona. Effects to pronghorn included 1) disturbance of a narrow swath of habitat along the border, 2) presence of construction crews and vehicles that may disturb or preclude use of the area by pronghorn, 3) presence of maintenance and patrol vehicles and crews along the barrier access road, and 4) dramatic reduction or elimination of illegal drive-throughs and required law enforcement response, with much reduced route proliferation and habitat damage from off-highway vehicles. Included were a number of conservation measures to minimize and offset impacts to pronghorn, including the contribution of funds to establish pronghorn waters and forage enhancement plots. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. No incidental take of pronghorn was anticipated. As mentioned above, subsequent to issuing the biological opinion, the action was changed to include the installation of a section of hybrid-style fence designed to prevent the passage of pedestrians. Because all environmental laws were waived (as permitted by the Real ID Act of 2005) by Secretary of the DHS, CBP never reinitiated consultation with us regarding this change to their proposed action.

10) CBP and USBP 5.2-Mile Primary Fence near Lukeville, Arizona

This biological opinion (consultation 22410-2008-F-0011), issued February 11, 2008, addressed the CBP and USBP action to construct and maintain 5.2 miles of primary fence along the U.S.-Mexico border near Lukeville, Arizona. Effects to pronghorn included 1) disturbance of a narrow swath of habitat along the border, 2) disturbance to pronghorn from construction and maintenance activities, 3) disturbance to pronghorn and their habitat from potential redirection of CBV traffic and ensuing

USBP response to the west of the fence; and 4) reduction in CBV and USBP activities north of the fence, with reduced habitat impacts and disturbance to pronghorn. Included were a number of conservation measures to minimize and offset impacts to pronghorn, including the contribution of funds to close and restore unauthorized routes within pronghorn habitat in OPCNM. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. No incidental take of pronghorn was anticipated.

11) SBI*net* Ajo-1 Tower Project, Ajo Area of Responsibility, USBP Tucson Sector, Arizona

This biological opinion (consultation number 22410-F-2009-0089), issued December 10, 2009, addressed the DHS's implementation of the SBI*net* Ajo-1 Tower Project in the Ajo Station's Area of Responsibility of USBP-Tucson Sector, Arizona. The project included the following components: construction, operation, and maintenance of communication and sensor towers; construction, use, and maintenance of new associated access roads; repair, improvement, use, and maintenance of associated approach roads; USBP operations, including relocating and operating a forward operating base (FOB); and implementation of conservation measures for endangered species. Adverse effects to pronghorn included 1) disturbance of Sonoran pronghorn from noise and lights associated with tower, road, and FOB construction, operation, and maintenance; 2) loss of foraging habitat from tower and road construction; 3) increased risk of collision with project construction and maintenance vehicles; 4) continued degradation of habitat from USBP operations; and 5) disturbance of pronghorn from USBP operations, potential shifts in CBV traffic to important pronghorn areas, better access for the public provided by new or improved roads, and the presence of towers in Sonoran pronghorn habitat. Long-term beneficial effects to Sonoran pronghorn were anticipated if the project results in greater effective control of the border leading to eventual decreased CBV and USBP activity in the project area. Included were a number of best management practices and offsetting measures to avoid, minimize, and offset effects to Sonoran pronghorn resulting from the project, including the contribution of funds to implement Sonoran pronghorn recovery actions. These funds were provided to CPNWR and OPCNM in 2011 and pronghorn recovery actions are currently being implemented. We determined that the proposed action was not likely to jeopardize the continued existence of the pronghorn. We anticipated take of three Sonoran pronghorn due to harassment within the first year of towers becoming operational and two every 5 years thereafter; and one due to direct mortality over the life of the project. The following reasonable and prudent measures were provided: 1) monitor incidental take resulting from the proposed action and report to the FWS the findings of that monitoring; and 2) minimize harassment of Sonoran pronghorn resulting from the proposed action (e.g. CBP will avoid using aircraft, vehicles off of authorized roads, and other CBP activities within 0.25 mile of Sonoran pronghorn waters, forage enhancement plots, and the captive breeding pen except in emergency, exigent circumstances as defined in the 2006 MOU among DHS, DOI, and DOA). This opinion was reinitiated once in 2010 and three times in 2011 resulting in revised opinions dated March 15, 2010, April 29, 2011, September 16, 2011, and December 15, 2011. In the latest (2010) opinion, we anticipated take of one wild Sonoran pronghorn every 10 years, one pen-raised (free ranging) female pronghorn every 10 years, and four pen-raised. To date, we are not aware of any incidental take attributable to the project.

F. Summary of Activities Affecting Sonoran Pronghorn in the Action Area

Historically, livestock grazing, hunting or poaching, and development along the Gila River and Río Sonoyta were all probably important factors in the well-documented Sonoran pronghorn range reduction and apparent population decline that occurred early in the 20th century. Historical accounts and population estimates suggest pronghorn were never abundant in the 20th century, but recently, the estimated size of the wild population in the action area declined from 179 (1992) to 21 (December 2002). Although the proximate cause of the decline during 2002 was drought, human activities limit habitat use options by pronghorn and increase the effects of drought on the sub-population. The U.S. pronghorn sub-population is isolated from other sub-populations in Sonora by a highway and the U.S./Mexico boundary fence, and access to the greenbelts of the Gila River and Río Sonoyta, which likely were important sources of water and forage during drought periods, has been severed. Since 2002, due to improved drought status and implementation of emergency recovery actions, the wild population increased to 68 in 2008. At 68, however, the wild sub-population is still in grave danger of extirpation due to, among other factors, human-caused impacts, drought, loss of genetic diversity, and predation.

Within its remaining range, the pronghorn is subjected to a variety of human activities that disturb the pronghorn and its habitat, including military training, increasing recreational activities, grazing, significant presence of CBV and subsequent required law enforcement activities. OPCNM (2001) identified 165 human activities in the range of the pronghorn, of which 112 were adverse, 27 were beneficial, 26 had both adverse and beneficial effects, and four had unknown effects. OPCNM (2001) concluded that in regard to the pronghorn, "while many projects have negligible impacts on their own, the sheer number of these actions is likely to have major adverse impacts in aggregate." MCAS-Yuma (2001) quantified the extent of the current pronghorn range that is affected by select activities and found the following: recreation covers 69.6 percent of the range, military training on North and South TACs covers 9.8 percent, active air-to-air firing range covers 5.8 percent, proposed EOD five-year clearance areas at North and South TACs and Manned Range 1 cover 1.0 percent, and MCAS-Yuma proposed ground support areas and zones cover 0.29 percent.

CBV traffic and responding USBP enforcement activities occur throughout the range of the pronghorn, and evidence suggests pronghorn are avoiding areas of high CBV and enforcement activities. Historically, pronghorn tended to migrate to the southeastern section of their range (southeastern CPNWR, such as south of El Camino del Diablo, and OPCNM, such as the Valley of the Ajo) during drought and in the summer. Within the last several years, very few pronghorn have been observed south of El Camino del Diablo on CPNWR. This suggests CBV and the interdiction of these illegal activities have resulted in pronghorn avoiding areas south of El Camino del Diablo; these areas are considered important summer habitat for pronghorn and may have long-term management and recovery implications (personal communication with Curtis McCasland, CPNWR, 2007). Additionally, since the establishment of a FOB at Bates Well, located in the middle of an extremely critical and narrow Sonoran pronghorn movement corridor (Bates Pass) on OPCNM, few pronghorn have been documented using the Valley of the Ajo, and no pronghorn have been documented entering the Valley of the Ajo through the Bates pass area. The valleys at CPNWR and OPCNM, which were once nearly pristine wilderness Sonoran Desert, now have many braided, unauthorized routes through them and significant vehicle use by USBP pursuing CBVs. These areas have also been affected by trash and other waste left by CBVs.

Although major obstacles to recovery remain, since 2002, numerous crucial recovery actions have been implemented in the U.S. range of the species, including 10 emergency waters and four forage enhancement plots, with additional waters planned. The projects tend to offset the effects of drought and barriers that prevent movement of pronghorn to greenbelts such as the Gila River and Río Sonoyta. A semi-captive breeding facility, built on CPNWR, currently holds 78 pronghorn. This facility will provide pronghorn to augment the existing sub-population and hopefully to establish additional U.S. sub-populations. Additionally, vehicle barriers on the international border on CPNWR and OPCNM are facilitating recovery of pronghorn by drastically reducing the amount of CBV vehicle traffic in pronghorn habitat.

The current range of the pronghorn in the U.S. is almost entirely comprised of lands under Federal jurisdiction; thus authorized activities that currently affect the pronghorn in the action area are almost all Federal actions. However, CBV foot traffic and off-road vehicle activity and required Federal law enforcement response have been and continue to be significant threats to the pronghorn and its habitat. Prior to November 2001, in seven of 12 biological opinions issued by FWS that analyzed impacts to the pronghorn, we anticipated that take would occur. In total, we anticipated take of five pronghorn in the form of direct mortality every 10-15 years, and an undetermined amount of take in the form of harassment. Given the small and declining population of pronghorn in the U.S. at the time the opinions were written, take at the levels anticipated in the biological opinions would constitute a substantial impact to the population.

Changes made in proposed actions and reinitiated biological opinions from 2001 to the present, plus the findings in other recent opinions, reduced the amount or extent of incidental take anticipated to occur from Federal actions. Significantly, action agencies have worked with us to modify proposed actions and to include significant conservation measures that reduce adverse effects to the pronghorn and its habitat. The current opinions that anticipate incidental take are 1) the Yuma Sector opinion, in which we anticipated take in the form of harassment that is likely to injure up to one pronghorn in 10 years; 2) the Ajo 1 Tower opinion, in which we anticipated take of three Sonoran pronghorn due to harassment within the first year of towers becoming operational and two every 5 years thereafter; and one due to direct mortality over the life of the project; and 3) the Luke Air Force Base Opinion, in which we anticipated take of one wild Sonoran pronghorn every 10 years, one pen-raised (free ranging) female pronghorn every 10 years, and four pen-raised (free ranging) male pronghorn every 10 years in the form of direct mortality or injury; and one wild Sonoran pronghorn of either sex, one pen raised (free ranging female) every 10 years, and two pen-raised (free ranging) male pronghorn every 10 years in the form of harassment. With the exception of likely capture-related deaths during telemetry studies (which were addressed in 10(a)(1)(A) recovery permits), we are unaware of any confirmed incidental take resulting from the Federal actions described here (although a pronghorn may have been strafed near one of the targets on BMGR-East – see above).

We believe the aggregate effects of limitations or barriers to movement of pronghorn and continuing stressors, including habitat degradation and disturbance within the pronghorn's current range resulting from a myriad of human activities, exacerbated by periodic dry seasons or years, are responsible for the present precarious status of the Sonoran pronghorn in the action area. However, collaborative, multi-agency and multi-party efforts to develop forage enhancement plots and

emergency waters, reduce human disturbance of pronghorn and their habitat, combined with the success of the semi-captive breeding facility, plus planned future recovery actions, including establishment of a second U.S. sub-population, provide hope that recovery of the Sonoran pronghorn in the U.S. is achievable. Key to achieving recovery will be a drastic reduction in human disturbance to pronghorn and their habitat caused by CBV and corresponding enforcement activities.

Southwestern Willow Flycatcher

A. Action Area

The Southwestern willow flycatcher in the action area includes the lower Gila River and its floodplain, beginning at the confluence of the Salt and Gila Rivers downstream to Painted Rock Dam (in Township 4 South, Range 7 West, Section 18 GSRBM) (Fig. 3). Perennial surface water is present in much of the reach from the Salt/Gila confluence to approximately 1 mile below Gillespie Dam due to sewage effluent input at the 91st Avenue Waste Water Treatment Plant and agricultural return flows. Surface water normally dries up not far below Gillespie Dam, and the Gila River essentially becomes a sandy wash for many miles. During high flow years surface water may be present throughout the Salt/Gila confluence to Gillespie Dam reach. The Hassayampa River confluence is contained within this reach of the lower Gila River a little more than five miles downstream from the Highway 85 bridge. The Hassayampa River is more or less perennial for about two miles upstream from the confluence with the Gila River due to agricultural return flows.

B. Terrain, Vegetation Communities, and Climate in the Action Area

The vegetation within the floodplain sites consists of tamarisk (salt cedar) (*Tamarix* spp.), phragmites, Fremont cottonwood, Goodding's willow, seep willow, arroweed, honey mesquite, screwbean mesquite, coyote willow, quailbush , and four-wing saltbush (*Atriplex canescens*). Vegetation of desert washes needing treatment include: desert willow (*Chilopsis linearis*), catclaw acacia (*Acacia greggii*), ironwood (*Olneya tesota*), and palo verde. The vegetation of the floodplain is dynamic due to periodic flooding that can scour away much of the vegetation. The vegetation is also affected by periodic wildfires. Saltcedar, willow, and cattails tend to rebound rapidly following fires, whereas mesquites, cottonwoods, palo verdes, and ironwoods do not. If timed appropriately in the spring, flooding and scouring can result in the reproduction, germination, and regeneration of native riparian species.

C. Status of Southwestern Willow Flycatcher in the Action Area

Areas that meet the description of flycatcher breeding habitat occur in the action area. Most of these areas are dense salt cedar that is ten to fifteen feet high, with occasional willows. There are some fairly large stands of salt cedar, but most are small patches. Other areas along the Gila River provide foraging and migratory habitat. No assessment to determine condition and acres of flycatcher habitat has been completed.

Protocol surveys within some of the action area were completed by the (AGFD) from 2003 to 2008, with no territories being confirmed. One flycatcher was detected in 2008 at the Arlington Wildlife

Area. The Arlington Wildlife Area was surveyed in 2009 by AGFD with no detections and no other surveys have been completed in the action area since 2009 (Bill Burger, AGFD, pers. comm. 2012). The only other detection was an incidental detection in 2002. Surveys in the action area downstream of Gillespie Dam (Old Hwy. 80 Bridge) were completed for another project in 2006, 2008, and 2009. Flycatchers were detected in 2006 and 2008, but no territories were confirmed. No surveys specifically for this project were implemented. Based on the available survey information, we believe that the project area is occasionally used by migrating flycatchers, but it is currently not a breeding or nesting area.

The minimum number of territories for reclassification, i.e. recovery criteria, for the Hassayampa/Agua Fria Management Unit of the Gila Recovery Unit for SWFL is 25 (USFWS 2002). No critical habitat for the flycatcher has been designated in the action area.

D. Past and Ongoing Non-Federal Actions in the Action Area

The lower Gila River has a mix of ownership patterns, from active and fallow farm use on private lands to wildlife habitat areas, managed by the (AGFD). The wildlife management areas have management (farming and structure maintenance) and recreation (hiking, wildlife watching, and hunting) actions that may occasionally disturb flycatchers. Recreation use in the river consists of fishing, and occasional kayaking, which may occasionally disturb flycatcher. Off highway vehicle (OHV) use is common in the uplands but river access is limited by private and state landowners.

E. Past and Ongoing Federal Actions in the Action Area

BLM manages four ephemeral grazing allotments along the Gila River and has consulted regarding SWFL on the Lower Gila South Resource Management Plan (consultation 2-21-85-F-069). Livestock access to the river from BLM upland areas is restricted by fencing. The proposed action herein includes conservation recommendations from the earlier consultation, including establishing an ACEC along the river.

The Corps of Engineers (Corps) consulted on issuance of a permit under Section 404 of the Clean Water Act for the Cotton Lane Bridge Project (consultation 02-21-04-F-0255). The Corps, with the City of Phoenix as local sponsor, is implementing the Tres Rios Environmental Restoration Project (USACE 2000) to restore and create conditions for sustainable riparian habitats from 91st Avenue (east of the action area for SWFL) to the Agua Fria-Gila River confluence (in the action area approximately 3 miles downstream from the eastern end). The City of Phoenix and AGFD are developing a Safe Harbor Agreement with the FWS to maintain project features along the Gila River at the eastern end of the action area.

F. Summary of Activities Affecting Southwestern Willow Flycatcher in the Action Area

The Gila River in the action area is a highly regulated stream, because of dams and diversions occurring farther upstream on the Gila River, and also along nearby major tributaries, the Salt, Verde, and Agua Fria Rivers. Episodic high flow events, typically from intense storms on the Verde River watershed when storage capacity at Horseshoe and Bartlett Reservoirs is exceeded, often result in regeneration of cottonwood and willow trees on available suitable seedbeds with

potential for establishment of suitable habitat for SWFL. Once flood flows recede a sufficient quantity and quality of water must be available to support seedling cottonwood and willow and that is often not the case in many areas in the action area. Because of the mixed land ownership pattern along the Gila River in the action area, cattle may wander from adjacent non-BLM lands onto BLM managed lands in the river bottom and impact young trees that otherwise might mature and become nesting habitat for SWFL. Many factors affect potential for SWFL use of the action area other than BLM discretionary activities and habitat has typically not developed to support nesting SWFL for a variety of reasons.

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 and interdependent with that action, that 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 guide BLM's allocation of resources to make management decisions.

Sonoran Pronghorn

Implementation of the following decisions of the proposed RMP may result in degradation of SPH habitat and/or disturbance to SPH:

- Continue to allow livestock grazing within the Lower Sonoran Decision Area on lands where it is currently authorized [[M = Management Action] GR-M 1.1.1, GR-M 1.1.6, GR-M 1.1.12]. Potential effects of livestock grazing were analyzed in consultation 2-21-94-F-192-R2;

- Provide opportunities for locatable, leasable and saleable minerals development except within developed recreation sites and Areas of Critical Environmental Concern (ACECs) (for saleable minerals) [MM-G 1, MM-O 1.1, MM-M 1.2.2, MM-M 1.1.7, MM-M 1.1.10, MM-M 1.1.14, AC-M 1.1.13];

- Emphasize recreational use and development in the Ajo area including Gunsight Wash [RM-M 1.2.1, RM-M 1.2.4, RM-M 1.2.4, RM-M 1.2.10, RM-O 2.1, RM-M 2.1.1, RM-O 2.1.1, RM-M 2.1.1.3, RM-M 2.1.1.7, TM-M 1.3.2]. Potential effects of Gunsight Wash area were analyzed in consultation 2-21-94-F-192-R2.

Adverse effects to pronghorn could result from vehicular and foot traffic associated with grazing, management of waters, mineral extraction, and recreational activities. These activities may disturb pronghorn and/or degrade their habitat in a number of ways, such as from associated noise and light pollution; visual and auditory disturbance of pronghorn; disturbance of soils; and crushing, destruction, or removal of vegetation that may provide forage and cover to pronghorn.

Additionally, though it has not been documented for SPH, and is highly unlikely, there is a potential for pronghorn to be killed or injured through collision with vehicles.

Although the RMP broadly addresses activities that could adversely affect pronghorn, some of these activities have been specifically addressed in existing section 7 consultations or would be subject to future consultation. Furthermore, although the RMP would authorize some activities that may be detrimental to pronghorn, restrictions, prohibitions, and provisions included in the RMP should generally reduce disturbance to pronghorn and degradation of their habitat. Additionally, certain wildlife and habitat management activities included in the RMP will aid in the conservation of pronghorn.

Continued livestock grazing may degrade foraging habitat and result in competition for forage. Trees serving as thermal cover along washes may be affected if cattle browse on young trees, affecting recruitment of large trees that provide shade, thus affecting vegetation recovery from fire. Cattle can also spread non-native plant species within SPH habitat. Diseases that potentially infect pronghorn are all serious diseases of cattle, which can act as vectors. Although the cattle grazing element of the RMP could have adverse effects on SPH, management of livestock grazing on Ajo area allotments and its effects (including disease transmission from cattle to SPH) have been addressed in consultation 2-21-94-F-192- R2 (including all conservation measures) which remains in effect. With closure of the Cameron Allotment, analyzed in consultation 2-21-94-F-192-R3, the overlap of cattle grazing on BLM lands and occupied SPH habitat has been substantially reduced.

Water available to SPH would be maintained or increased in that existing waters would be maintained and new wildlife waters developed, where such waters are in areas utilized by SPH. The effects of maintaining of former livestock waters on the Cameron Allotment for SPH were analyzed in consultation 2-21-94-F-192-R2 R2 and development of new waters will undergo future section 7 consultation, as needed.

Providing opportunities for locatable, leasable and saleable minerals development could degrade SPH habitat and disturb individuals. However, individual minerals related actions by BLM will undergo individual Section 7 consultation as needed. Additionally, excluding developed recreation sites and ACECs from sales of saleable minerals will reduce adverse effects to SPH compared to current conditions. Establishment of the Cuerda de Leña ACEC restricts sales of minerals over a large block of SPH habitat on BLM lands in the action area.

OHV use on BLM lands can degrade habitat by destroying vegetation, exacerbating erosion, and disturbing SPH. Under the RMPs, however, vehicular travel on BLM lands will be restricted to designated roads, minimizing direct impacts to forage and human disturbance. Seasonal closure (identified in consultation 2-21-94-F-192-R2) of the Cuerda de Leña ACEC area will minimize disturbance in that area during the fawning season.

Recreational use of the existing informal OHV course, within 1 mile of Highway 85 northwest of Ajo, could degrade SPH habitat by destroying vegetation, exacerbating erosion, and disturbing SPH, particularly if the area were to expand through informal use. Through the LSRMP, BLM will limit travel on the existing informal course to the existing road to minimize effects of habitat degradation and disturbance to SPH.

Emphasizing recreational use and development in the Ajo area, including Gunsight Wash, in the SPH action area, for camping may degrade habitat and cause disturbance of SPH. Allowing hiking and camping on the BLM lands in the action area may result in continued disturbance to pronghorn and degradation of their habitat. Seasonal closures of the Cuerda de Leña ACEC, however, will minimize adverse effects to pronghorn from hikers and campers in that area. Establishment of the Gunsight Wash campground focuses camping impacts into that area potentially reducing the quality of the habitat for SPH and resulting in human disturbance of SPH. However, potential effects of Gunsight Wash area were analyzed in consultation 2-21-94-F-192-R2, which, as stated above, remains in effect. Establishment of the Cuerda de Leña ACEC will reduce human disturbance to SPH in that area during the fawning season (March 15 to July 15) (this measure was already in place; however, it will continue to be implemented under the RMP) and reduce impacts to SPH habitat by emphasizing protection of biological resources over lands, minerals, and recreational activities.

Recreational activities involving pack and saddle stock on BLM lands may result in disturbance to pronghorn (i.e., deny pronghorn access to important habitat or waters) and degradation of their habitat (i.e., stock could introduce non-native species, cause erosion, etc.). Seasonal closures of the Cuerda de Leña ACEC and a requirement for weed-free hay, however, will minimize adverse effects to pronghorn from use of recreational use of pack and saddle stock in that area.

The management decisions in the proposed action are, in general, designed to conserve the SPH and other special status species. Conservation Measures from previous Biological Opinions are included as part of the proposed action. BLM participates in fire management on non-federal lands and will manage livestock grazing and other authorized activities while considering the effects to SPH habitat on adjacent non-BLM lands. The BLM will prepare a SPH spreadsheet documenting wildlife sightings by employees that can be shared with other agencies and placed in the SPH database that is being managed by Luke AFB. The BLM will coordinate with OPCNM and CPNWR to determine appropriate measures to correct the effects of erosion. BLM will propose measures to improve SPH habitat on the Sentinel allotment, similar to those proposed herein for the Ajo area allotments. BLM will consider developing or funding forage enhancement plots. The proposed action implements Recovery Actions 1.51 (Protect Present Range) and 1.8 (Minimize Human Disturbance) from the 2002 Sonoran Pronghorn Recovery Plan (USFWS 2002).

Many of the goals and objectives associated with this program will protect SPH or its habitat. BLM lands subject to the LSRMP comprise a block of habitat that has not been used extensively by SPH in recent years. Pronghorn movement through the Bates Well area may be constrained by human activity associated with CBV and associated CBP response. Nevertheless BLM lands in the Valley of the Ajo, in which the Cuerda de Leña ACEC lies, are a significant block of SPH habitat. Reducing human disturbance and habitat degradation in the ACEC should maintain the area in a condition suitable for use by SPH if numbers increase.

Southwestern Willow Flycatcher

Implementation of the following decisions of the proposed RMP may result in degradation of SWFL habitat and/or disturbance to SWFL:

- Continue to allow livestock grazing within the Lower Sonoran Decision Area on lands where it is currently authorized [GR-M 1.1.1, GR-M 1.1.6, GR-M 1.1.12];

- The Lower Gila Terraces ACEC would be open to locatable minerals development and leasable minerals exploration with no surface occupancy [AC-M 1.1.13];

- Linear land use authorizations and disposals through Recreation and public Purposes (R&PP) Act would be considered on a case by case basis [LR-M 1.2.4, LR-M 1.2.5].

- Fire and fuels treatments within the Gila River floodplain.

Adverse effects to SWFL could result from livestock grazing, mineral extraction, land use authorizations and disposals, and fire and fuels treatments in the SWFL action area. These activities may disturb SWFL and/or degrade their habitat in a number of ways, such as from associated noise; disturbance of soils; and crushing, destruction, or removal of vegetation that may provide or grow to become nesting habitat. Fire and fuels treatments can result in impacts to habitat and disturbance to SWFL.

Because no known nesting SWFL are known to occur in the SWFL action area along the Gila River, we do not anticipate any direct or indirect effects to nesting SWFL as a result of BLM authorized activities. We do anticipate that migrant SWFL will continue to occur in the SWFL action area and take advantage of the broad quality of Gila River riparian vegetation. We anticipate that the BLM strategies for riparian habitat conservation will maintain the conditions that support this migratory habitat. Migrant SWFL use of these areas is anticipated to be irregular, unpredictable, and of short-duration. Because of the short period of time that migratory SWFL are anticipated to use this habitat, the broad quality of habitat conditions believed to be used by SWFL flycatchers, and the expected maintenance of riparian habitat through the BLM's conservation strategies, any impact to the SWFL behavior, such as accidently flushing a migrant flycatcher from implementing strategies in this plan, will be insignificant.

When livestock grazing is authorized by BLM on uplands adjacent to the Gila River and cattle escape from those areas into the river bottom, cattle may degrade SWFL habitat directly and disturb SWFL. Recruitment of trees that can serve as nesting habitat for SWFL may be affected if escaped cattle browse on young trees. Recovery of native trees from fire may be reduced if escaped cattle browse on young trees.

Fire and fuels treatments can result in impacts to habitat and disturbance to SWFL, if they occupy the SWFL action area, but inclusion of conservation measures from the Biological and Conference Opinion for the BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management (consultation 02-21-03-F-0210) will reduce those effects.

Most of the objectives and management actions will not affect the species and may benefit the species or its habitat. Authorization of cattle grazing on uplands within 5 miles of the Gila River may increase brown-headed cowbird (BRCO) abundance in river bottom habitats. There are many other potential areas of concentration for BRCO along the river and it would likely be difficult to attribute brood parasitism of SWFL nests to livestock grazing on BLM, as opposed to other sources.

Portions of the Gila River within the Lower Sonoran planning area fall within the Agua Fria/Hassayampa Management Unit, as described in the Southwestern Willow Flycatcher Recovery Plan. The recovery goal for this Management Unit is 25 SWFL territories, double the amount of suitable habitat to maintain these territories, and conservation plans to maintain SWFL habitat and territories into the future (USFWS 2002). It is anticipated that a collection of stream segments along the Hassayampa River, Agua Fria River, and Gila River will be needed to reach these goals (USFWS 2002, Table 10).

Overall, SWFL habitat conditions have been degraded within the SWFL action area due to the impact of upstream water regulation and diversion. Because of the altered condition of the Environmental Baseline, BLM land management will have less overall influence on the condition of riparian vegetation. As a result, there are expected to be limited opportunities for Gila River riparian habitat improvement as a result of the reduced water availability.

However, in the most upstream portion of the Gila River within the SWFL action area, because of the proximity to combined water sources such as waste water, tributary inflow, agricultural run-off, and the Tres Rios Environmental Restoration Project, there may be opportunities for development of higher quality riparian habitat and possibly nesting SWFL habitat. Similarly, following the irregular occurrence of flooding, groundwater recharge may provide short-term opportunities for riparian habitat growth and improvement. As the Gila River continues downstream and the distance from these water sources increases, the likelihood of establishing SWFL nesting habitat and nesting populations is expected to be further reduced.

Future management of the Fred J. Weiler Greenbelt and the Lower Gila Terraces and Historic Trails ACEC (these land designations overlap each other throughout much of the SWFL action area) may help facilitate improved riparian habitat quality. As mentioned above, restrictions on land uses within these areas, such as precluding mineral material sales, mineral leasing and utility-scale renewable energy development, utility corridors, plus the overall management of vehicle routes, invasive species, and cattle, can help to maintain and possibly improve habitat quality. The BLM expects to retain management authority of these lands and if the opportunity arises, to acquire additional lands.

We expect that BLM will continue to evaluate these lands for riparian habitat improvement and possibly SWFL territories, especially following the occurrence of flooding. As the BLM continues to manage these lands and implement projects, activities associated with fire, recreation, or cattle management could impact the success of SWFL territories or the suitability of nesting habitat (USFWS 2002,). However, we are uncertain at this time whether this higher quality habitat will develop, exactly where it will occur, and to what extent BLM-authorized actions may or may not affect them. Therefore, we expect the BLM will continue to periodically evaluate these lands, re-examine conservation strategies described in this Plan, consider Conservation Recommendations included in this Biological Opinion, and strategies described in the Flycatcher Recovery Plan to facilitate habitat development toward recovery.

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.

Sonoran Pronghorn

Most lands within the action area (current range of the pronghorn within Arizona) are managed by Federal agencies; thus, most activities that could potentially affect pronghorn are Federal activities that are subject to section 7 consultation. The effects of these Federal activities are not considered cumulative effects. Relatively small parcels of private and State lands occur within the currently-occupied range of the pronghorn near Ajo and Why, north of the BMGR from Dateland to Highway 85, and from the Mohawk Mountains to Tacna. State inholdings in the BMGR have been acquired by the Department of Defense. Continuing rural and agricultural development, recreation, vehicle use, grazing, and other activities on private and State lands adversely affect pronghorn and their habitat. MCAS-Yuma (2001) reports that 2,884 acres have been converted to agriculture near Sentinel and Tacna. These activities on State and private lands and the effects of these activities are expected to continue into the foreseeable future. Historical habitat and potential recovery areas currently outside of the current range are also expected to be affected by these same activities on lands in and near the action area in the vicinity of Ajo, Why, Yuma, and along the Gila River.

Of most significant concern to pronghorn is the high level of CBV activity in the action area. CBV activity and its effects to pronghorn and pronghorn habitat is described under the "*Human-caused Disturbance*" and "*Habitat Disturbance*" portions of the "Threats" section under "Status of the Species" for Sonoran pronghorn. CBV activity has resulted in route proliferation, off-highway vehicle activity, increased human presence in backcountry areas, discarded trash, abandoned vehicles, cutting of firewood, illegal campfires, and increased chance of wildfire. Habitat degradation and disturbance of pronghorn have resulted from these CBV activities. Although CBV activity levels are still high, the trend in overall CBV apprehensions and drive-throughs has declined in recent years within the action area likely due to increased law enforcement presence, the border fence, and the status of the economy in the U.S. Despite high levels of CBV activity and law enforcement response throughout the action area, pronghorn in the U.S. have managed to increase since 2002 in part due to releases from the captive breeding pen and also very likely due to

the construction of forage plots and emergency waters. However, pronghorn use of areas subject to high levels of CBV and law enforcement activity appear to have declined. We expect CBV activities and their effects on pronghorn to continue for the foreseeable future.

Southwestern Willow Flycatcher

Lands along the north and west sides of the Gila River in the planning area are characterized by developed irrigated agriculture and suburban housing development. Livestock husbandry is common throughout the area and BRCO are common. The El Rio Watercourse Master Plan, developed through a collaborative effort by the Flood Control District of Maricopa County, is intended to provide a framework for local jurisdictions over mixed ownership lands along the Gila River from the Agua Fria confluence to State Route 85 to manage the Gila River to pass flood flows while restoring and maintaining habitat. Although adopted in 2006 implementation of the Master Plan slowed as development adjacent to the river slowed. The Watercourse Master Plan does not include specific projects but is a planning overlay.

In the State Route 85 to Gillespie Dam reach much of the Gila River floodplain is managed by AGFD as Robbins Butte Wildlife Area, Powers Butte Wildlife Area, and Arlington Wildlife Area. Management of floodplain portions of these areas is generally passive to maintain habitat values for migratory birds and other wildlife. These lands are contiguous to the Fred J. Weiler Greenbelt and Public Land Order (P.L.O.) 1015 lands subject to the LSRMP.

CONCLUSION

After reviewing the current status of the Sonoran pronghorn and the Southwestern willow flycatcher, the environmental baseline for the action areas, the effects of implementation of the Lower Sonoran and Sonoran Desert National Monument Resource Management Plans and the cumulative effects, it is the FWS's biological opinion that the implementation of the Lower Sonoran and Sonoran Desert National Monument Resource Management Plans, as proposed, is not likely to jeopardize the continued existence of the Sonoran pronghorn or the Southwestern willow flycatcher. No critical habitat has been designated for the Sonoran pronghorn, therefore, none will be affected. Critical habitat for Southwestern willow flycatcher has been designated more than 65 miles upstream of the action area on the Verde, Salt, and Gila Rivers; however, this action does not affect those areas. Proposed critical habitat for SWFL is addressed in Appendix A.

We present this conclusion on Sonoran pronghorn for the following reasons:

- While livestock grazing may degrade habitat and result in competition for forage management of grazing on Ajo area allotments is subject to consultation 2-21-94-F-192- R2 which remains in effect.

- Existing waters will be maintained and new wildlife waters developed, providing water to SPH.

- Establishment of the Gunsight Wash Campground focusses camping related human disturbance into that area, reducing impacts in the larger Valley of the Ajo. Effects on SPH were analyzed in 2-21-94-F-192- R2 which remains in effect.

- On the Cuerda de Leña ACEC: seasonal closure will minimize human disturbance to pronghorn during the fawning season and protection of biological resources will be emphasized over lands, minerals, and recreational activities, minimizing effects.

- Throughout the action area vehicular travel will be restricted to designated roads, minimizing direct impacts to forage and human disturbance.

We present this conclusion on Southwestern willow flycatcher for the following reasons:

- Existing Fred J. Weiler Greenbelt, along the Gila River, will be managed to emphasize riparian habitat management for migratory birds; to restore habitat; and to preclude mineral material sales, mineral leasing and utility-scale renewable energy development and utility corridors.

- Lower Gila Terraces and Historic Trails ACEC, including the Gila River floodplain in the action area, will be designated and managed to: protect resource values, including special status species; manage minerals activities to avoid resource impacts; prohibit utility scale renewable energy projects and utility corridors; retain and acquire lands; manage vehicle routes to avoid or minimize impacts to wildlife; and treat invasive species while minimizing resource impacts.

- Riparian vegetation treatments will be implemented to improve conditions while avoiding the SWFL breeding season.

- Recreational activities will be managed to avoid impacts to SWFL, including seasonal restrictions around breeding sites.

- Conservation measures for fire and fuels treatments (from Biological and Conference Opinion for the BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management) will be implemented.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly

impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

The FWS does not anticipate the proposed action will incidentally take any Sonoran pronghorn for the following reasons:

- Management of grazing on allotments in the Ajo area is subject to conservation measures in consultation 2-21-94-F-192R2. Grazing has been discontinued on the Cameron Allotment (consultation 2-21-94-F-192R3).

- Travel management programs will restrict travel to designated roads. Mineral materials sales are restricted in the Gunsight Wash campground and Cuerda de Leña ACEC. Beneficial effects associated with the Conservation Measures, including seasonal closure of the Cuerda de Leña ACEC eliminated likelihood of incidental take.

The FWS does not anticipate the proposed action will incidentally take any Southwestern willow flycatcher for the following reasons:

- Based on surveys and monitoring of habitat conditions, no breeding habitat has been documented recently in the action area and is not expected to establish during the 15 year life of the project.

- Conservation Measures to address effects of the proposed action eliminate incidental take if conditions improve and breeding habitat develops and is utilized by SWFL.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize 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.

Sonoran Pronghorn

1. We recommend that BLM continue to monitor the condition of fences on and adjacent to BLM lands in the action area to address unauthorized cattle use and identify opportunities to improve SPH passage across fence lines.

2. We recommend that BLM coordinate with CBP to identify opportunities for alternatives to the Bates Well FOB to re-establish a pronghorn movement corridor to the Valley of the Ajo from adjacent lands.

Southwestern Willow Flycatcher

1. We recommend that BLM monitor the condition of fences on BLM lands in the action area to address unauthorized cattle use of Gila River bottom lands.

2. We recommend that BLM participate in planning efforts along the Gila River to integrate BLM efforts with the Flood Control District of Maricopa County and local jurisdictions to improve habitat conditions along the Gila River.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in the request. 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; (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. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

The FWS appreciates the BLM's efforts to identify and minimize effects to listed species from this project. For further information please contact Bill Werner (602) 242-0210 (ext. 217), or Debra Bills, (ext. 239). Please refer to the consultation 02EAAZ00-2012-F-0203 in future correspondence concerning this project.

/s/ Jeff Humphrey Acting for Steven L. Spangle

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TABLES AND FIGURES

Table 1. Estimated rangewide population for the southwestern willow flycatcher based on 1993 to 2007 survey data for Arizona, California, Colorado, New Mexico, Nevada, Utah, and Texas[1].

State	Number of sites with WIFL territories 1993-07[2]	Percentage of sites with WIFL territories 1993-07	Number of territories[3]	Percentage of total territories
Arizona	124	43.1 %	459	35.3 %
California	96	33.3 %	172	13.2 %
Colorado	11	3.8 %	66	5.1 %
Nevada	13	4.5 %	76	5.9 %
New Mexico	41	14.2 %	519	40.0 %
Utah	3	1.0 %	7	0.5%
Texas	?	?	?	?
Total	288	100 %	1,299	100 %

[1]Durst *et al.* 2008.
[2]Site boundaries are not defined uniformly throughout the bird's range.
[3] Total territory numbers recorded are based upon the most recent years survey information from that site between 1993 and 2007.

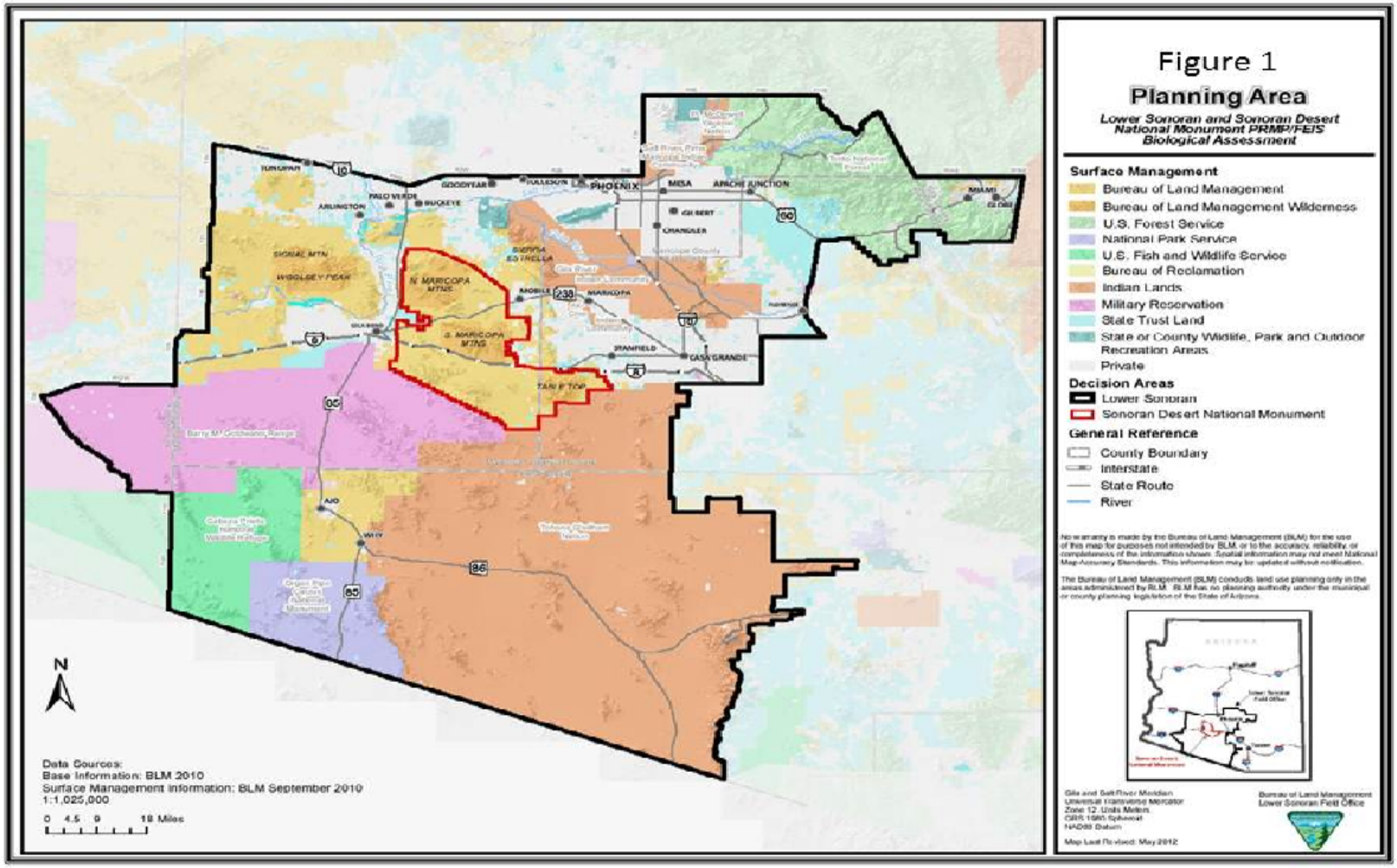

Figure 1. Lower Sonoran and Sonoran Desert National Monument Planning Area

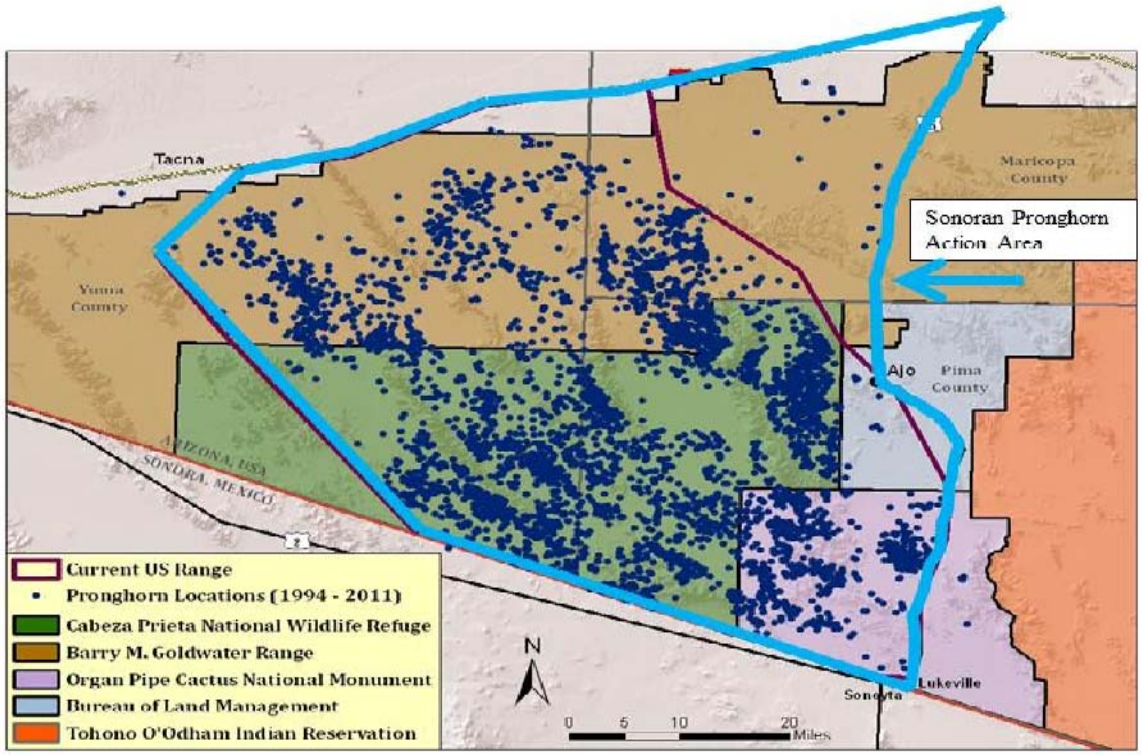

Figure 2. Sonoran Pronghorn Action Area

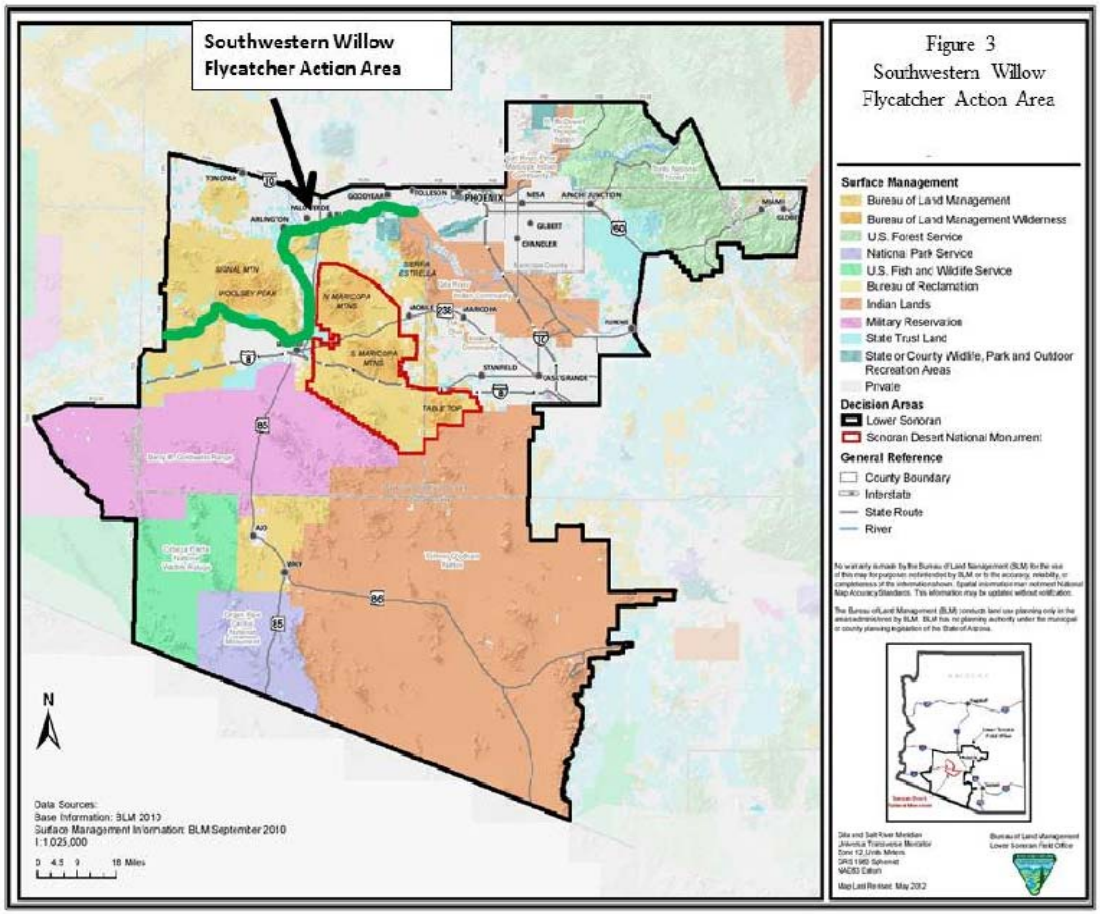

Figure 3. Southwestern Willow Flycatcher Action Area

Appendix A: Concurrences

We concur that implementation of the Lower Sonoran and Sonoran Desert National Monument Resource Management Plans "may affect but is not likely to adversely affect" the lesser long-nosed bat, Yuma clapper rail, and proposed critical habitat for the Southwestern willow flycatcher for the following reasons:

Lesser long nosed bat

Roosting habitat for the LLNB is found on OPCNM, CPNWR, and BLM land near Ajo. Foraging habitat associated with these roosts includes all BLM lands near Ajo, the Sentinel Plain, and the Javelina Mountain area of the SDNM.

- Some adverse effects are possible from grazing management, invasive species management, lands, minerals, fire and fuels management, travel management, and recreation program activities. These effects are insignificant because the RMPs include conservation measures to protect lesser long-nosed bat forage resources (columnar cacti and paniculate agaves) including: restricting travel to designated routes; maintaining foraging habitat; emphasizing protection of LLNB from lands, minerals, and recreation activities; and establishing Coffee Pot Mountain ACEC to protect resource values.

- Installation of gates to restrict human access to mines used as roosts by LLNB will be addressed as a future Federal action and subject to individual consultation. Other activities included in the RMP are unlikely to directly affect lesser long-nosed bat roost locations. Therefore, these effects are discountable.

Yuma clapper rail

Habitat for the YCR in the planning area is localized along the Salt and Gila Rivers in areas of permanent standing water where cattail marsh has matured.

- Some short-term adverse effects are possible from grazing management, vegetation management, lands, minerals, and recreation program activities. These effects are insignificant because suitable marsh habitat is very localized in the planning area and effects are offset by conservation measures including: implement vegetation treatments to improve conditions while avoiding the YCR breeding season; implement fuels treatments to reduce the risk of wildland fire with conservation measures to avoid impacts to YCR; and establishing the Lower Gila Terraces and Historic Trails ACEC to protect resource values. Many project elements and conservation measures address stressors affecting YCR habitat.

Southwestern willow flycatcher 2011 Proposed Critical Habitat

The primary constituent elements of designated critical habitat are based on riparian plant species, structure and quality of habitat and insects for prey. The 2011 proposed critical habitat designation has a nearly identical list of plant and insect features as the primary constituent elements. The primary constituent elements are:

1. Riparian habitat in a dynamic successional riverine environment (for nesting, foraging, migration, dispersal, and shelter) that comprises:

    a. Trees and shrubs that include, but are not limited to, willow species, box elder, tamarisk, Russian olive, cottonwood, stinging nettle, alder, ash, poison hemlock, blackberry, oak, rose, false indigo, Pacific poison ivy, grape, Virginia creeper, Siberian elm, and walnut.

    b. Dense riparian vegetation with thickets of trees and shrubs ranging in height from 2 to 30 meters (m) (6 to 98 feet (ft.). Lower-stature thickets (2 to 4 meters or 6 to 13 feet tall) are found at higher elevation riparian forests, and tall-stature thickets are found at middle- and lower-elevation riparian forests;

    c. Areas of dense riparian foliage at least from the ground level up to approximately 4 m (13 ft.) above ground or dense foliage only at the shrub level, or as a low, dense tree canopy;

    d. Sites for nesting that contain a dense tree and/or shrub canopy (the amount of cover provided by tree and shrub branches measured from the ground) (*i.e.*, a tree or shrub canopy with densities ranging from 50 percent to 100 percent); or

    e. Dense patches of riparian forests that are interspersed with small openings of open water or marsh, or shorter/sparser vegetation that creates a mosaic that is not uniformly dense. Patch size may be as small as 0.1 ha (0.25 ac) or as large as 70 ha (175 ac).

2. A variety of insect prey populations found within or adjacent to riparian floodplains or moist environments, including: flying ants, wasps, and bees; dragonflies; flies; true bugs; beetles; butterflies/moths and caterpillars; and spittlebugs.

A variety of river features such as broad floodplains, water, saturated soil, hydrologic regimes, elevated groundwater, fine sediments, etc. help develop and maintain these constituent elements (USFWS 2005) and are also listed as the physical and biological features of critical habitat described in the 2011 revision proposal.

A small 1.5 mile section of proposed flycatcher critical habitat occurs at the most upstream portion of the Gila River Action Area, near the Tres Rios Environmental Restoration Project. The BLM's riparian habitat management in this area emphasizes reducing habitat stressors by precluding mineral material sales, mineral leasing and utility-scale renewable energy development, and utility

corridors. Similarly, cattle grazing is not authorized within these riparian areas and fences occur to prevent access. Fences can be ruined by nature or vandalism and cattle can gain access into these unauthorized areas. BLM is anticipated to manage these areas to reduce the frequency, magnitude, and duration of trespass cattle. As a result of the BLM's reducing stressors to strategies maintain migratory bird riparian habitat, we do not anticipate adverse effects to proposed flycatcher critical habitat in this section of stream from the implementation of these Plan's.

- Effects are insignificant because project effects are limited to a parcel approximately 1.5 miles in length which is within the Fred J. Weiler Greenbelt. Management of that area is to emphasize riparian habitat management for migratory birds and it is: unallocated for livestock grazing; closed to mineral material sales, mineral leasing, utility scale renewable energy development, and major land use authorizations. The lands are an avoidance area for minor land use authorizations. These measures mitigate stressors affecting SWFL habitat.

REINITIATION NOTICE

This concludes the conference for the BLM Lower Sonoran Resource Management Plan for proposed critical habitat for SWFL. You may ask the FWS to confirm the conference opinion as a biological opinion issued through formal consultation if the proposed critical habitat is designated. The request must be in writing. If the FWS reviews the proposed action and finds there have been no significant changes in the action as planned or in the information used during the conference, the FWS will confirm the conference opinion as the biological opinion for the project and no further section 7 consultation will be necessary.

Appendix B
Project Description Excerpts

Following is complete text of numbered goals, objectives, management actions, and project descriptions contained in the PRMP/FEIS the BLM determined in Appendix A of the BA to affect Sonoran pronghorn (SPH) and Southwestern willow flycatcher (SWFL).

Note from Appendix A of BA

> *"The organization of the Proposed Action in this appendix has been modified from that presented in Chapter 2 of the EIS in order to facilitate analysis in the Biological Assessment. Best Management Practices and Standard Operating Procedures (Section 2.9 and a complete list in Appendix H)*[PRMP/FEIS] *are then presented followed by Interrelationships (Section 2.17)*[PRMP/FEIS] *which assist the reader in understanding how decisions and management actions are implemented.*
>
> *The numbers and text in the left margin are for organizational purposes and reflect numbering used for reference in the analysis. The alphanumeric designations used are "G" for Goals, "O" for Objectives, "M" for Management Actions, and "AA" for Administrative Actions (i.e. AQ-G 1, AQ-O 1.1, AQ-M 1.1 and AQ-AA 1). Within each program there could be multiple Goals and Objectives. The numerical designations correspond to sections of the document, by resource allocation.*
>
> *Those decisions that implement recovery actions identified in approved recovery plans are so noted with "RA" followed by the species abbreviation and the recovery action number from the respective recovery plan (i.e. RA -SPH - 8). The following recovery actions are implemented through some of the decisions listed below."*
>
> *Species will be designated: Southwestern willow flycatcher (Empidonax traillii extimus)(*SWFL*), Sonoran pronghorn (Antilocapra americana sonoriensis)(*SPH*).*

<u>AL-M-1, 2.7.2</u>: *Arizona Land Health Standards (AL)*

The Arizona Standards for Rangeland Health and Guidelines for Grazing Administration were developed, pursuant to 43 CFR 4180, through a collaborative process involving BLM staff and the Arizona BLM Resource Advisory Council, and approved by the Secretary of the Interior in April 1997. The Standards and Guidelines have been developed to identify the characteristics of healthy ecosystems on public lands and the management actions that promote them.

When approved, the Standards and Guidelines became Arizona BLM policy, guiding the planning for and management of BLM public lands. Arizona Standards and Guidelines, therefore, have been incorporated into this PRMP/FEIS. The Standards for Rangeland Health describe the conditions necessary to encourage proper functioning of ecological processes, and are adopted as Land Health Standards. In managing and implementing all resource programs, the BLM must consider the Land Health Standards and they are identified below.

The Guidelines for Grazing Administration are a series of management practices used to ensure that grazing activities meet the Land Health Standards. These Guidelines are incorporated into the PRMP/FEIS in **Section 2.11.2**, Livestock Grazing, and are in **Appendix B**, Applicable Laws, Regulations, and Policies and **Appendix L**, Guidelines for Grazing Administration.

Note: Further explanation of the Arizona Land Health Standards is contained in Appendix A of the BA.

SL-M-2.1.3: Motorized vehicle use would be limited to designated roads, primitive roads, and trails. Specific designations would occur within this plan for the SDNM. LSFO routes would be designated within 5 years of RMP completion. Vehicle travel in LSFO would be restricted to inventoried routes only for the interim.

VM-O-1.1, Objective 1.1: Maintain or restore vegetative communities to achieve desired future conditions (DFCs) as identified below:

DFCs common to all vegetative communities:

- Vegetative communities will provide appropriate cover levels, as described in NRCS Ecological Site Descriptions, to protect soils from wind and water erosion. This will ensure properly functioning watersheds and ecological processes in order to sustain healthy biotic populations and communities (biological objects within the SDNM Planning Area).

- Each vegetation community will be maintained within its natural range of variation in plant composition, structure, and cover at the landscape level. Site potentials (soil, climate, topography) establish the natural limits on what can be produced in terms of vegetation and related resource values like forage, wildlife habitat, and watershed characteristics.

DFCs by specific vegetative community:

The DFCs described below are general descriptions of the expected plant community makeup. Site potentials (based on ecological sites) and the development of specific desired plant community objectives for each vegetation type should be determined through the use of the NRCS ecological site descriptions, rangeland health reference sheets, or information collected from reference or comparison areas or a combination of the above. The ecological site descriptions that correspond to each vegetation community can be found at http://esis.sc.egov.usda.gov.

The vegetative communities listed below that occur within the SDNM are identified as biological objects of the Monument. Within the SDNM, specific desired plant community objectives and site potentials were developed for each ecological site and corresponding vegetation type (biological object) through the land health evaluation process. These site potentials were determined through

the use of a combination of the information collected from the BGR and Area A (comparison areas), the NRCS's ecological site descriptions, and the rangeland health reference sheets for the ecological sites. Achievement of these desired plant community objectives would ensure that the biological objects of the Monument are being protected.

- Creosote Bush–Bursage: (597,700 acres LS; 179,600 acres SDNM) The potential of this community is a shrub dominated site with desert scrub species, cacti, and annual forbs and grasses.

- Palo Verde-Mixed Cacti: (312,000 acres LS; 303,300 acres SDNM) This vegetative community should consist of more diverse vegetative composition and structure than that of the creosote bush- bursage community. It includes vegetation varying from small shrubs to large trees (such as ironwood, palo verde, and mesquite) interspersed with a variety of cacti, such as mammalaria (Mammalaria spp.), prickly pear (Opuntia spp.), cholla (Opuntia spp.), barrel cactus (Ferocactus wislizenii), hedgehog (Echinocereus spp.), and saguaro (Carnegiea gigantea). Where potential exists, saguaro cactus forests would support appropriate densities of saguaro, with all age classes represented to ensure recruitment.

- Riparian: (8,800 acres LS; 0 acres SDNM) Riparian habitats should contain a diversity of native riparian obligate trees (such as cottonwood [Populus spp.] and willow [Salix spp.]) of various age and size classes and herbaceous plants adapted to hydric soils to restore ecological conditions and function.

- Apacherian-Chihuahuan Upland Scrub: (3,400 acres LS; 400 acres SDNM) The potential for this community is a shrubland dominated community consisting of large desert scrub/trees, including mesquites, acacias or junipers, and cacti. Perennial grass cover is typically low.

- Sonoran Mid-Elevation Desert Scrub (Woodlands): (1,800 acres LS; 2,000 acres SDNM) This vegetative community should consist of a diverse vegetative composition and structure, similar to that of the palo verde-mixed cacti community, but with an increase of perennial grasses, forbs, and large shrub species (jojoba, crucifixion thorn, etc.) due to the increased precipitation.

- Mogollon Chaparral: (1,400 acres LS; 100 acres SDNM) This vegetative community should consist of woody species such as shrub live oak, mountain mahogany, desert ceanothus, and cliffrose interspersed with an understory of perennial grasses along with small shrub and forb species.

- Desert Grassland: (0 acres LS; 1,054 acres SDNM) Manage this plant community as a tobosa (Pleuraphis mutica)-dominated grassland while limiting the encroachment of mesquites and other shrubs.

- Desert Washes (xeroriparian): (1,658 miles in the LS; 970 miles in the SDNM) This community should have a multi-layered vegetative structure, as provided by perennial vegetation.

- Diverse vegetative composition and structure would include such species as foothills palo verde (Cercidium microphyllum), blue palo verde (Cercidium floridum), desert willow (Chilopsis linearis), ironwood (Olneya tesota), mesquite (Prosopis spp.), smoke tree (Psorothamnus spinosus), and catclaw acacia (Acacia greggii) of various sizes and growth forms appropriate to the ecological site.

- Ensure sufficient bank and floodplain vegetation (including along braided channel floodplains) provides for hydrologic function of the site. *Based on USGS 1:100K scale topographic quadrangles.

VM-1.1.1: Activities would be evaluated on a case-by-case basis and impacts minimized, mitigated, or avoided to achieve land-health standards and vegetation community DFCs, and ensure protection of the vegetative objects of the SDNM.

VM-1.1.2: Vegetation treatments could be conducted in order to make progress toward achieving land health standards. Treatments would include, but would not be limited to, thinning, burning, seeding, transplanting, watering, seasonal closures, and seasonal use restrictions.

VM-2.1.3: Implement activities to reduce hazardous fuels or improve riparian habitats (prescribed burning or vegetation treatments) within occupied or found to be occupied habitat for southwestern willow flycatchers only during the non-breeding season (October 1 to March 31).

VM-2.1.4: Vegetation treatment projects adjacent to occupied or found to be occupied habitat will only be conducted when willow flycatchers are not present (October 1 – March 31).

VM-G-3, Goal 3: (Noxious Weeds): Noxious and undesirable plant species would not occur on the landscape or, if they occur, they would make up a sufficiently small percent of the vegetative community that they do not affect ecological processes.

VM-O-3.1, Objective 3.1: Control invasive species using an integrated weed-management approach, including prevention, restoration, mechanical, chemical, biological control methods, and prescribed fire, where appropriate.

VM-3.1.1: Proposed projects would use practices that minimize the introduction and spread of invasive species.

VM-3.1.2: Priority would be assigned to the control of invasive species that have a substantial and apparent impact on native plant communities and wildlife. When infestations are identified, they would be evaluated for their potential threat and scheduled for removal accordingly.

WF-1.1.1: Management Response to unplanned ignitions will be full suppression for all lands within the LFSO Planning Area.

WF-O-3.1, Objective 3.1: Reduce the frequency of human-caused wildland fires and minimize the total number of acres burned within the Planning Area.

WF-3.1.1: Management Response to unplanned ignitions will be full suppression for all lands within the Planning Area.

Objective 3.2: For all fire management activities (wildfire suppression, prescribed fire, and mechanical, chemical, and biological vegetation treatments), a focus will be to maintain or improve habitat for federally threatened, endangered, proposed, and candidate (federally protected) species.

WF-3.2.1: Identify and implement post-fire stabilization and rehabilitation actions in burned areas to restore a functional landscape to meet the resource management objectives.

WF-3.2.5: Protect known locations of habitat occupied by federally listed species. Minimum impact suppression tactics (MIST) will be followed in all areas with known federally protected species or habitat.

WF-3.2.7: Crew camps, equipment staging areas, and aircraft landing and fueling areas should be located outside of listed species habitats, preferably in locations that have previously been disturbed. If camps must be located in listed species habitat, the resource advisor will be consulted to ensure habitat damage and other effects to listed species are minimized and documented. The resource advisor should also consider the potential for indirect effects to listed species or their habitat from the siting of camps and staging areas (e.g., if an area is within the water flow pattern, there may be indirect effects to aquatic habitat or species located off-site).

WF-3.2.8: Use of motorized vehicles during prescribed burns or other fuels treatment activities in suitable or occupied listed species habitat will be restricted, to the extent feasible, to existing roads, trails, washes, and temporary fuel breaks or site-access routes. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after the prescribed burn or fuels treatment project is completed.

WF-3.2.10: Use of motorized vehicles during rehabilitation or restoration activities in suitable or occupied listed species habitat will be restricted, to the extent feasible, to existing roads, trails, or washes, and to temporary access roads or fuel breaks created to enable the fire suppression, prescribed burn, or fuels treatment activities to occur. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after rehabilitation or restoration activities are completed.

WF-3.2.11: All temporary roads, vehicle tracks, skid trails, and OHV trails resulting from fire suppression and the proposed fire management activities will be rehabilitated (water bars, etc.), and will be closed or made impassible for future use.

WF-3.2.12: During wildfire suppression, apply MIST within riparian areas. Fire-suppression actions in riparian areas should be prioritized to minimize damage to stands of native vegetation from wildfire or suppression operations. To the extent possible, retain large, downed woody materials and snags that are not a hazard to firefighters.

WF-3.2.13: In riparian areas, use natural barriers or openings in riparian vegetation where possible as the easiest, safest method to manage a riparian wildfire. Where possible and practical, use wet fuelbreaks in sandy overflow channels rather than constructing fire lines by hand or with heavy equipment.

WF-3.2.19: All conservation measures for wildland fire suppression also apply to fuels treatment activities (prescribed fire; mechanical, chemical, and biological treatments) in riparian, wetland, and aquatic habitats.

WF-3.2.23: Implement the conservation measures for Fire Management Activities in Riparian and Aquatic Habitats.

WF-3.2.24: Except where fires are active in occupied Southwestern willow flycatcher habitat, minimize unnecessary low-level helicopter flights during the breeding season (April 1 – September 30). Approach bucket dip sites at a 90-degree direction to rivers to minimize flight time over the river corridor and occupied riparian habitats. Locate landing sites for helicopters at least one-quarter mile from occupied sites to avoid impacts on Southwestern willow flycatchers and their habitat.

WF-3.2.25: Minimize use of chainsaws or bulldozers to construct fire lines through occupied or found to be occupied listed species habitat except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that would otherwise be burned.

WF-3.2.26: Avoid developing access roads that would result in fragmentation or a reduction in habitat quality for listed species. Close and rehabilitate all roads that were necessary for project implementation**.**

WF-3.2.27: Prescribed burning will only be allowed within one-half mile of occupied or found to be occupied habitat when weather conditions allow smoke to disperse away from the habitat when Southwestern willow flycatchers may be present (breeding season of April 1 – September 30)

WF-3.2.28: The following reasonable and prudent measures, terms, and conditions are necessary and appropriate to minimize take of southwestern willow flycatchers:

- Minimize the effects of harassment, harm, and mortality to southwestern willow flycatchers.

- In cooperation with USFWS and using guidance from southwestern willow flycatcher recovery plan, the BLM shall incorporate the elements recommended for fire risk evaluation and planning into its fire management plans for all current flycatcher breeding sites on or adjacent to BLM-administered lands.

- If additional sites become occupied, the BLM shall include them in the yearly fire management plans in cooperation with USFWS, prior to the next wildfire season.

WF-3.2.3: Hazardous fuel reduction projects will be integrated with riparian restoration projects to reduce the frequency and the extent of fires along the Gila River as well as improve the quality and quantity of native riparian vegetation communities.

WF-3.2.4: Utilize fuels management treatments including prescribed fire to manage decadent marsh vegetation and improve habitat for Yuma Clapper Rail and other species that depend upon cattail and bulrush marsh for foraging and nesting habitat.

WF-3.3.2: As part of an integrated vegetation resources management strategy, create fuel breaks and complete hazardous fuels reduction activities within the Fred J. Weiler Green Belt to protect and restore mesquite bosques and native riparian woodlands.

WF-AA-1, *Administrative Actions For Wildland Fire Management*

- Resource advisors from the BLM will be designated to coordinate natural resource concerns, including federally protected species. They will also serve as a field contact representative responsible for coordination with the USFWS. Duties will include identifying protective measures endorsed by the field office manager, and delivering these measures to the incident commander; surveying prospective campsites, aircraft landing, and fueling sites; and performing other duties necessary to ensure adverse effects on federally protected species and their habitats are minimized. On-the-ground monitors will be designated and used when fire-suppression activities occur within identified occupied or suitable habitat for federally protected species.
- All personnel on the fire (firefighters and support personnel) will be briefed and educated by resource advisors or designated supervisors about listed species and the importance of minimizing impacts on individuals and their habitats. All personnel will be informed of the conservation measures designed to minimize or eliminate take of the species present. This information is best identified in the incident objectives.
- The effectiveness of fire-suppression activities and conservation measures for federally protected species should be evaluated after a fire when practical, and the results shared with the USFWS and AGFD. Revise future fire-suppression plans and tactical applications as needed and as practical.
- Biologists will be involved in the development of prescribed burn plans and vegetation treatment plans to minimize effects on federally protected species and their habitats within, adjacent to, and downstream of proposed project sites. Biologists will consider the protection of seasonal and spatial needs of federally protected species (e.g., avoiding or protecting important use areas or structures and maintaining adequate patches of key habitat components) during project planning and implementation.
- Pre-project surveys and clearances (biological evaluations/assessments) for federally protected species will be required for each project site before implementation. All applicable conservation measures will be applied to areas with unsurveyed suitable habitat for federally protected species, until a survey has been conducted by qualified personnel to clear the area for the treatment activity.
- As part of the mandatory fire briefing held prior to prescribed burning, all personnel (firefighters and support personnel) will be briefed and educated by resource advisors or

designated supervisors about listed species and the importance of minimizing impacts on individuals and their habitats. All personnel will be informed of the conservation measures designed to minimize or eliminate take of the species present.

- When rehabilitating important areas for federally listed species that have been damaged by fire or other fuels treatments, the biologist will give careful consideration to minimizing short-term and long-term impacts. Someone who is familiar with fire impacts and the needs of the affected species will contribute to rehabilitation plan development. Appropriate timing of rehabilitation and spatial needs of federally listed species will be addressed in rehabilitation plans.
- Burned area emergency rehabilitation (BAER) activities and long-term restoration activities should be monitored, and the results provided to the USFWS and AGFD. Section 7 consultations for BAER activities will be conducted independently, if necessary.
- Develop public education plans that discourage or restrict fires and fire-prone recreation uses during high-fire-risk periods. Develop brochures, signs, and other interpretive materials to educate recreationists about the ecological role of fires, and the potential dangers of accidental fires.
- Fire suppression and rehabilitation in riparian corridors will be coordinated with the resource advisor or qualified biologist approved by the BLM.
- Site-specific implementation plans that include project areas with federally protected aquatic or riparian-obligate species will specify fire management objectives and wildland fire-suppression guidance, taking into account the special concerns related to these species.
- Develop and implement restoration plans for affected riparian or aquatic areas, including long-term monitoring, to document changes in conditions in the riparian zone and watershed that maintain flood regimes and reduce fire susceptibility. Monitor stream water quality and riparian ecosystem health to determine effects of wildfire and fire management activities. Coordinate efforts and results with the USFWS and AGFD.
- Develop mitigation plans in coordination with the USFWS for fuels treatment projects (prescribed fire; vegetation treatments) that may adversely affect cactus ferruginous pygmy-owls or their habitat. Mitigation plans for prescribed fire shall limit to the extent practicable the possibility that fire would spread to riparian habitats. Mitigation plans will be approved by the USFWS.
- The following reasonable and prudent measures, terms, and conditions are necessary and appropriate to minimize take of Yuma clapper rail:
    - Minimize disturbance to Yuma clapper rails during prescribed fire activities.
    - To allow for a better estimate of the number of birds in the affected area, the BLM or their designated representative shall conduct surveys of the site to be prescribed burned during the breeding season prior to the burn. Since prescribed fires would be conducted during September to March, the surveys shall be done the preceding March to May.

- Instruct all crew bosses fire personnel (wildfire suppression, wildland fire use, prescribed fire, and vegetation treatments) in the identification of agave and columnar cacti and the importance of their protection.
- Known locations and potential habitat for plant populations will be mapped to facilitate planning for wildland fire use, prescribed fires, and vegetation treatments, and to ensure protection of these populations during fire suppression.
- The BLM will coordinate with USFWS to delineate buffer areas around plant populations prior to prescribed fire and vegetation treatment activities. The BLM will coordinate with USFWS during any emergency response and wildland fire use activities to ensure protection of plant populations from fire and fire-suppression activities.
- A mitigation plan will be developed by the BLM in coordination with the USFWS for prescribed fires or fuels management projects (mechanical, chemical, biological treatments) within 0.5 mile of bat roosts or in areas that support paniculate agaves or saguaros. The mitigation plan will ensure that effects on bat roosts and forage plants are minimized and will include monitoring of effects on forage plants. The plan will be approved by the USFWS.
- BLM personnel should examine concentrations of agaves (including shindagger [A. schottii]) within each proposed fuels treatment area, and blackline or otherwise protect from treatments any significant concentrations of agaves that appear to be amidst fuel loads that could result in mortality greater than 20 percent (greater than 50 percent for A. schottii). BLM personnel should use their best judgment, based on biological and fire expertise, to determine which significant agave stands are prone to mortality greater than 20 percent (greater than 50 percent for A. schottii) (see conservation measures FT-1 and FT-3).
- The BLM should continue to support and cooperate in the investigations of agave relationships to livestock grazing, and of the effects of prescribed fire on paniculate agaves.
- Coordinate invasive-species management, monitoring, control, and education efforts with the appropriate federal, state, county, municipal, and tribal agencies and other partners. Efforts will be coordinated through the Borderlands Cooperative Weed Management Area and other similar groups.
- Conduct floristic surveys and monitoring for populations of sensitive, candidate threatened, endangered, rare, or unique species (applicable to the three relinquished BGR parcels).
- Update the existing botanical resources database and vegetation map (applicable to the three relinquished BGR parcels).
- Adhere to the intent of the Arizona Native Plant Law, ESA, and all other applicable laws and regulations to protect vegetative resources.

- Focus invasive species monitoring efforts on likely vectors of invasion, such as linear features (roads, canals, railroads, utility corridors, etc.), disturbed areas (construction or development areas), and areas where water is available or may pond (water control structures, etc.).
- Control of noxious weeds required by law will not be subject to a benefit-cost analysis; however, the most economical and efficient method will be analyzed along with the safety of the proposed kind of treatment.
- Rehabilitation procedures will follow the Phoenix District Reclamation Plan.
- (Environmental Assessments) Conduct an environmental analysis at the time of the pretreatment survey. An interdisciplinary team will review any analysis needed on individual projects or group of projects.
- (Cost-Benefit Analysis) Subject land treatments proposed for livestock forage improvement to a cost-benefit analysis to ensure total benefits gained will equal or exceed the cost of the treatments.
- Develop effective interagency and community interactions and cooperation to meet wildland-fire and fuel-management strategies and landscape-scale resource condition objectives across administrative boundaries.
- Include wildfire hazard mitigation strategies in the Fire Management Plan for the Planning Area by identifying appropriate areas for prescribed fire and mechanical, manual, biological, or chemical treatments to reduce hazardous fuels to minimize the adverse effects of uncharacteristic wildland fires and meet resource objectives. The plan will also identify areas for exclusion from fire (through fire suppression), chemical, mechanical, and biological treatments.
- Protect human life (both firefighters' and the public) and communities, property, and the natural resources on which they depend. Firefighter and public safety are the highest priority in all fire management activities.
- Improve public awareness of the role of fire in ecosystem restoration, wildfire risk and mitigation strategies, and wildfire safe community, preparedness, and response planning.

WL-G- 3, Goal 3: (Sonoran Pronghorn): Protect and enhance Sonoran pronghorn habitat and manage suitable habitat so it is available for future occupancy based on recovery goals.

WL-O-3.1, Objective 3.1: Manage for no net loss in currently occupied Sonoran pronghorn habitats. Protect the creosote-bursage, desert washes (xeroriparian), and palo verde mixed cacti communities which provide nutritious forage species that encourages fawn recruitment, provides thermal cover, enables predator avoidance, and provides for growth and survival to the extent practicable. Protect areas that provide for chain-fruit cholla production.

WL-3.1.2: The pronghorn habitat area south of Ajo (see **Map 2-4e**) [PRMP/FEIS] would be closed to the public for general recreational use during pronghorn fawning between March 15 and July 15 or as determined annually by the Sonoran pronghorn recovery team. Minor non-linear LUAs would also be prohibited unless deemed necessary by the authorized officer. Federal, state and local government employees and BLM permit holders operating within the scope of their authorizations would be exempt from the closure.

WL-3.1.3: Portions of the Lower Sonoran would be identified as potential reintroduction sites for an experimental/nonessential population of Sonoran pronghorn. (See **Map 3-15,** Sonoran Pronghorn Classification Areas) [PRMP/FEIS].

WL-3.1.4: Sonoran pronghorn experimental/nonessential populations would be managed to achieve recovery goals. Mitigation could be required for activities that may impede movements or otherwise disturb the species or habitat.

WL-0-3.1, Objective 3.2: Manage to maintain or improve habitat for future populations of experimental/ nonessential Sonoran pronghorn within the SDNM.

WL-3.2.1: Sonoran pronghorn habitat within the SDNM would be managed to achieve recovery goals.

WL-3.2.2: The Monument would be identified as a potential reintroduction site for an experimental/nonessential population of Sonoran pronghorn.

WL-G-4, Goal 4: (Southwestern Willow Flycatcher and Yellow-billed Cuckoo): Manage habitats for the Southwestern willow flycatcher and yellow-billed cuckoo so they are maintained and/or improving.

WL-O-4.1, Objective 4.1: Protect, maintain, and restore southwestern willow flycatcher and yellow-billed cuckoo habitats and prevent actions that could harm individuals of the two listed species.

WL-4.1.1: Southwestern willow flycatcher and yellow-billed cuckoo habitats in the Fred J. Weiler Green Belt would be maintained and/or restored in coordination with USFWS and AGFD.

WL-4.1.2: Recreation activities will only be allowed outside of ½ mile of occupied or found to be occupied habitat when birds may be present (breeding season of April 1 – September 30).

WL-4.1.3: Vegetation treatment projects adjacent to occupied or found to be occupied habitat will only be conducted when willow flycatchers are not present (October 1 – March 31).

WL-4.1.4: Avoid surface disturbing activities that would result in fragmentation or a reduction in habitat quality for both species.

WL-G-13, Goal 13: (Priority Species Management Guidance): Manage wildlife habitats so they are maintained and/or improved.

WL-O-13.1, Objective 13.1: Manage habitats for wildlife species so they are maintained and/or improving to meet the needs of wildlife in general.

WL-13.1.3: Acquisitions of non-federal lands and disposals of federal land that have, or potentially have, priority species or habitats would include the potential to:

- Enhance the conservation and management of threatened, endangered or special status species habitat, riparian habitat, desert tortoise habitat, key big game habitat;
- Improve the overall manageability of wildlife habitat;
- Improve habitat connectivity in and around the WHA and wildlife movement corridors.

The BLM would not transfer (dispose of) from federal ownership the following:

- Designated or proposed critical habitat for a listed or proposed threatened, endangered or special status species;
- Lands supporting listed or proposed threatened or endangered species if such transfer would be inconsistent with recovery needs and objectives or conservation measures or would likely affect the recovery of the listed or proposed species, and lands supporting federal candidate species if such action would contribute to the need to list the species as threatened or endangered.

Retain Category I and II tortoise habitat unless it is in the general public interest to dispose of them, and losses in habitat quality and quantity can be mitigated.

Exceptions to the above could occur if:

- The recipient of the lands agrees to protect the species or critical habitat under the ESA, such as disposal to a non-federal governmental agency or private organization;
- If conservation of the habitat would still be achieved and ensured; or
- In a land exchange if a net gain in the value of species habitat or protection is achieved.

WL-14.1.1: Maintain and re-develop existing and develop additional wildlife waters in cooperation with AGFD. Increase the density and/or restore the distribution of wildlife waters throughout the Planning Area to sustain and enhance native wildlife populations across their range. All existing wildlife waters would be maintained or improved as needed to maintain the presence of perennial water for native wildlife. New wildlife waters would be built when needed to maintain, restore, or enhance native wildlife population numbers or distributions.

WL-AA-1, *Administrative Actions for Wildlife and Special Status Species*

- Work in partnership with AGFD to manage wildlife and wildlife habitat to achieve AGFD's wildlife population goals. Cooperatively develop HMPs to meet Sikes Act requirements and address site-specific habitat management objectives consistent with other natural resource objectives. Wildlife management activities administered by AGFD include, but are not limited to surveys, telemetry, transplants, water management, vegetation restoration and enhancement, invasive species control, research, law enforcement activities, setting and administering hunting permits, and other wildlife or

habitat management projects as identified in the Master Memorandum of Understanding (MOU) between the Arizona Game and Fish Commission and the BLM.

- Work in partnership with AGFD to manage wildlife and wildlife habitat to achieve AGFD's wildlife population goals and other activities as identified in the Master MOU between AGFD and the BLM.
- Work with other land owners within wildlife movement corridors to maintain or improve vegetative connectivity and prevent actions that would obstruct the movement of wildlife through the areas.
- Emphasize maintaining and restoring ecological connectivity through land acquisition, partnerships with local landowners, and vegetation resources. If opportunities for wildlife movement cannot be adequately maintained, then mitigation to maintain isolated wildlife populations will be adopted.
- Eliminate unauthorized grazing by cattle, sheep, goats, burros, and other non-native animals and construct wildlife-passable fences where unauthorized use is a problem.
- Livestock waters will provide safe, usable water for wildlife, where possible. As funding and opportunities permit, existing facilities will be modified for safe wildlife use. The above ground height of livestock troughs and tanks will not exceed 20 inches. The BLM will install wildlife escape ladders in each facility and provide ramps for small bird and mammal access as funding permits. Storage tanks will be configured to reduce evaporation and prevent wildlife from drowning.
- The BLM will contact the appropriate FWS biologist as soon as practical once a wildfire starts and a determination is made that a federally protected species or its habitat could be affected by the fire or fire-suppression activities.
- The FWS will work with the BLM during the emergency response to apply the appropriate conservation measures.
- If conservation measures cannot be applied during the suppression activities, the BLM will consult with the responding agency after the fact on any suppression actions that may have affected the federally protected species or its habitat.
- If conservation measures are adhered to, the BLM will report on the actions taken and the effects to the species and its habitat following the fire, but no further consultation on that incident will be required.

<u>Threatened and Endangered Species</u>

- The BLM will initiate formal Section 7 consultation with USFWS on all actions that may affect federally listed threatened and endangered species or critical habitat as required by the ESA.
- The ESA of 1973, as amended, provides for the protection of threatened and endangered and proposed threatened and endangered species of plants and animals. Specifications of the ESA pertain to both the Lower Sonoran and SDNM Decision Areas. BLM Manual 6840 prescribes conservation measures for threatened and endangered species, including conservation measures for fire management activities and species-specific

conservation measures. To a large extent, these measures have been built in to the RMP alternatives evaluated in this FEIS.

- Monitor existing populations and inventory for additional populations of threatened and endangered species as funding permits.

Wildlife Species

- Maintain and develop a proactive public education program on the desert tortoise and its habitat requirements, including participation in public events with tortoise habitat information.
- Continue to work with and support other agencies and public entities in desert tortoise conservation.
- Coordinate invasive animal species control and education efforts with AGFD.
- Follow management prescriptions for livestock grazing allotments in the Woolsey Peak and Signal Mountain wilderness areas as provided in the wilderness management plans or, if different, as described in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration evaluations.
- Design fences to reduce adverse impacts to wildlife movement. Specifications in BLM Manual 1741 and in local BLM directives will be used. The BLM will consult with AGFD on the design and location of new fences. Where existing fences in wildlife habitat do not meet BLM specifications, they will be modified according to BLM Manual 1741 when they are scheduled for replacement or major maintenance as funding permits. Special consideration will be given to placement, type, and installation of fences in Category I and II desert tortoise habitat to facilitate desert tortoise movement, dispersal, and protection. Before installing facilities, the BLM will conduct a site evaluation for special status and state-protected animals and will develop mitigation to protect these species and their habitats. Such mitigation might include project relocation, redesign, and abandonment.
- Inventory for federally listed, proposed, and candidate species. Implement monitoring programs on known populations of listed, proposed, and candidate, species and other special status species (as defined in BLM Manual 6840) to document population levels and status. Where monitoring finds threats to these populations, actions will be taken to protect the species and their habitats.
- Standardize desert tortoise management throughout its habitat. Management would be consistent with the following documents:
    - Desert Tortoise Habitat Management on Public Lands: A Range wide Plan (BLM 1988b).
    - Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona, Instruction Memorandum No. AZ-91-16 (BLM 1990a)
    - Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise, Instruction Memorandum No. AZ-92-46 (BLM 1992)

  - Instructional Memorandum No. 94-018 Ephemeral Grazing Policy in Desert Tortoise Habitat Supplemental Guidance for Desert Tortoise Compensation, Instruction Memorandum No. AZ-99-008 (BLM 1999).
- Desert Tortoise Mitigation Policy, Instruction Memorandum No. AZ-2009-010 (BLM 2009)
- Establish additional desert tortoise study plot(s) or other monitoring methods, as necessary. Read plots at 5-year intervals, or as necessary, and as funding permits.

LR-1.1.1: Utility-scale renewable energy development LUAs would be excluded on lands that fall under the "prohibited" area (refer to **Map 2–5e** and **Appendix N [**PRMP/FEIS], Analysis for Renewable Energy Sensitivity.

LR-1.2.4: Eight 1 mile wide multiuse utility corridors would be designated, in which all compatible major linear utility LUAs (as defined in **Table 2-14**, Acres of Lands Managed to Protect Wilderness Characteristics by Alternative) would be allowed unless otherwise specified by the authorizing official. The corridors are listed below; also see **Map 2-6e [**PRMP/FEIS]:

- El Paso Natural Gas (*section from Ajo, AZ to the Tohono O'odham Nation would be removed*).
- Palo Verde-Devers
- San Diego Gas and Electric
- Palo Verde-Kyrene
- Liberty-Gila Bend
- *Gila Bend-Ajo would be removed*
- *Gila Bend-Santa Rosa would be removed*
- Interstate 8
- Tucson Electric Power *(section from Ajo, AZ to Tohono O'odham Nation would be removed)*
- Interstate 10LR-1.2.5: Major linear LUAs (as defined in **Table 2-14**, Acres of Lands Managed to Protect Wilderness Characteristics by Alternative) may be authorized on case-by-case basis outside designated multiuse utility corridors if they are due and necessary in connecting a generating facility to the closest designated multiuse utility corridor.

LR-1.3.1: Proposed minor linear and nonlinear LUAs would be prohibited in areas designated as LUA Exclusion Areas, unless they allow for:

- Access to private property in holdings when there is no other reasonable access alternative across non-federal land,
- Authorized emergency, public safety and administrative uses, and
- Authorized emergency, public safety and administrative uses, and
- Uses that would further enhance the goals and objectives of the allocation, as permitted by the authorizing official.

Exclusion areas for minor linear and nonlinear LUAs include:

- The SDNM,
- Designated wilderness areas,
- The Juan Bautista de Anza National Historic Trail,
- The Fred J. Weiler Green Belt (PLO 1015 lands),
- Sentinel Plain (military land relinquished to the BLM with restrictions related to public safety),
- ACECs),
- VRM Class I lands and
- LR-1.3.2: Proposed minor linear and nonlinear LUAs would be strongly discouraged in areas designated as LUA Avoidance Areas, unless they allow for / or are:
- Authorized emergency, public safety, and administrative uses.
- Uses that are compatible with the purpose for which the allocation was designated by meeting the restrictions set forth by the underlining program area allocation, an
- Are not feasible on lands outside the avoidance area.

LUA Avoidance Areas for minor and nonlinear LUAs include:

- Anza NHT Management Areas
- Developed campgrounds and recreation sites
- BLM threatened and endangered species habitats, including Sonoran desert tortoise habitats
- Lands managed to protect wilderness characteristics (in Alternative E),
- VRM Class II lands,
- Fred J. Weiler Green Belt (non-PLO 1015 lands),
- Cultural sites allocated to a use category (such as public and conservation use sites),
- High-potential segments of the Butterfield Overland Stage Route (Alternative E)

LR-2.1.5: Land interests disposed of through the R&PP Act would be evaluated on a case-by-case basis. (Current R&PP leased lands are identified on **Map 2-7e**) [PRMP/FEIS].

Preferred Alternative for Livestock Grazing (GR)

Table 2.11 Proposed Livestock Grazing Allocations for Lower Sonoran Decision Area Alternative E

Allocation by Decision Area	Alternative E (BLM acres and AUMs)
Available Acres	830,200
Unavailable Acres [1]	100,000
Total Acres	930,200
Total AUMs	17,541 AUMs
1-Cameron allotment closure, Fred J. Weiler Green Belt, Sentinel Plain, Ajo parcels, lands leases, and other areas currently unallocated or unavailable to grazing within the Decision area.	

GR-G-1, Goal 1: Manage livestock grazing to provide forage for multiple uses while maintaining healthy ecosystems.

GR-O-1.1: Livestock grazing use and associated practices will be managed in a manner consistent with other multiple use needs and other desired resource condition objectives to ensure that the health of rangeland resources and ecosystems are maintained or improved. Management will achieve, or make significant progress toward achieving, Land Health Standards and produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and functional watersheds.

GR-1.1.1: Public lands would be allocated and available for livestock grazing as shown in **Table 2-23.**

GR-1.1.6: All allotments that are currently available to grazing will remain open to grazing under their current classifications and permitted AUMs as reflected in **Table 2-23**. (also see **Appendix P**, Grazing Allotment Information).

GR-1.1.11: All existing water developments will be evaluated, and modified as necessary, to provide the maximum benefit and minimum impact to priority wildlife and special status species.

GR-1.1.12: Grazing management on allotments categorized as "Maintain" and "Improve" may include rest rotation, deferred rotation, deferred, seasonal, short duration or other management practices to be implemented where needs are identified through monitoring. On "Custodial" allotments, grazing systems or season of use would be coordinated with the permittee, Arizona State Land Department, and/or Natural Resource Conservation Service.

GR-1.1.14: Allotments may be classified as ephemeral in accordance with the Special Ephemeral Rule published December 7, 1968 through Rangeland Health Assessments during the permit renewal process. The BLM has established criteria and SOPs (see **Appendix H**, Best Management Practices and Standard Operating Procedures) based upon the Special Rule through which allotments can be classified and managed as ephemeral. These criteria include:

- Rangelands are within the hot desert biome;
- Average annual precipitation is less than eight inches;
- Rangelands produce less than 25 pounds per acre of desirable perennial forage;
- The vegetative community is composed of less than five-percent desirable forage species;
- The rangelands are generally below 3,500 feet in elevation;
- Annual production is highly unpredictable and forage availability is of a short duration;
- Usable forage production depends on abundant moisture and other favorable climatic conditions; and
- Rangelands lack potential to improve existing ecological status and produce a dependable supply of forage through intensive rangeland management practices.

GR-1.1.15: The Arizona Guidelines for Grazing Administration, as approved in the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (1997), would apply where appropriate to all livestock grazing activities (**Appendix L**).

GR-1.1.16: Land not allocated for livestock use would remain unallocated for this use and its forage and other vegetation will be reserved for wildlife and non-consumptive uses.

GR-1.1.17: If an evaluation of land health standards identifies an allotment where land health standards cannot be achieved under any level or management of livestock use and where current grazing use has been identified as the causal factor, then decisions identifying those areas as available for livestock grazing would be revisited

MM-G-1, Goal 1: Provide opportunities for exploration and development of energy and mineral resources

MM-O-1.1, Objective 1.1: Utilize mineral potential determinations (high, medium, and low) during the evaluation of all proposed actions for all resources. Reduce or mitigate hindrances to mineral development, particularly in areas of moderate to high potential. Mitigate impacts to other resource values.

MM-1.1.1: Minerals activities would be managed to provide maximum protection for other resources while attempting to allow sufficient mineral development to occur to meet public demand.

MM-1.1.2: Should lands now closed to mineral activity be opened, these lands, including the mineral estate, would be managed to be consistent with the decisions made in this plan.

MM-1.1.5: The following areas would remain closed to all forms of mining including locatable mineral entry under the mining laws, mineral leasing and mineral material disposals for the life of the plan (**Maps 2-9e**)[PRMP/FEIS]:

- Designated wilderness areas,
- Fred J. Weiler Green Belt RCA (PLO 1015 lands),
- Painted Rock Dam power site withdrawal area,
- Sentinel Plain withdrawal area,
- Bureau of Reclamation withdrawn lands
- Lands leased under the R&PP Act including San Tan Mountains Regional Park

MM-1.1.7: All BLM-administered lands would be open to locatable mineral entry under the mining laws except the following areas which would be recommended for withdrawal for all alternatives unless otherwise noted (**Maps 2-9e**)[PRMP/FEIS]:

- Juan Bautista de Anza National Historic Trail and Management Area,
- Select high potential route segments of the Butterfield Trail,
- Painted Rock Campground and Petroglyph Site,
- Quartz Peak trailhead,
- Sundad and Butterfield West proposed Public Use Sites (not more than 5 acres each),
- Gunsight Wash Campground (Alternative E),

MM-1.1.10: All BLM-administered lands not withdrawn or segregated from minerals actions would be open for mineral leasing in accordance with resource-management objectives except the

following areas which would be closed for all alternatives unless otherwise noted (**Maps 2-10e**)[PRMP/FEIS].

- Lands with existing segregations or withdrawals (see MM-1.1.5),
- Painted Rock Campground,
- Gunsight Wash Campground SRMA (Alternative E),

MM-1.1.12: Leases would be issued for fluid energy minerals with appropriate stipulations. Site-specific actions would be addressed such as geophysical exploration, approval or disapproval of applications for permit to drill (APDs), well siting, tank-battery placement, and pipeline routing would be addressed on a case-by-case basis and include appropriate restrictions or conditions of approval.

MM-1.1.13: Mineral-use authorizations for non-energy leasables would be issued for prospecting permits, exploration licenses, preference-right leases, competitive leases, lease modifications, and use permits subject to appropriate restrictions and stipulations to protect other resources.

MM-1.1.14: All BLM-administered lands not recommended for withdrawal or segregated from minerals actions would be open to discretionary mineral materials disposal via sales or free-use permits on a case-by-case basis in accordance with resource-management objectives. Those lands unavailable for mineral materials disposal for all alternatives unless otherwise noted are as follows (for specific acreages for each alternative see **Table 2-28**; see also **Maps 2-11e**) [PRMP/FEIS]:

- Lands with existing segregations or withdrawals (see MM-1.1.6),
- Juan Bautista de Anza National Historic Trail and Management Area,
- Select high potential route segments of the Butterfield Trail,
- Painted Rock Campground and Petroglyph Site,
- Quartz Peak trailhead,
- Sundad and Butterfield West proposed Public Use Sites (not more than 5 acres each)
- Gunsight Wash Campground,
- Lands managed to protect wilderness characteristics,
- Portions of the Gila River Terraces and Lower Gila Historic Trails SCRMA and ACEC,
- Cuerda de Leña, Saddle Mountain and Coffeepot ACECs
- Desert tortoise Categories I and II habitats (Alternative E [if no-net loss stipulation is not met]),
- Within ¼ mile of known active cactus ferruginous pygmy-owl nest site from February 1 through August 31 (Alternatives E)

***MM-1.1.15*:** Common-use areas and community pits would be established. Exploration for, and disposal of, mineral materials would also be allowed through exploration permits, free-use permits, and competitive and noncompetitive sales subject to appropriate restrictions and stipulations to protect other resources.

RM-1.2.1: The Gunsight Wash SRMA would be designated (T14S, R5W, Sections 2-4 and 9-11; 2,500 acres) to provide visitors RV and primitive camping, social gathering and hiking experiences with sightseeing/touring, photography and wildlife viewing on the adjacent BLM-administered and other federal lands. The physical, social and administrative recreation settings would be managed as 100% Front Country.

RM-1.2.4: The camping stay in the Gunsight Wash SRMA would be limited to no more than a period of 14 days within any period of 28 consecutive days. All other rules and restrictions pertaining to this standard camping rule would apply.

RM-1.2.7: The Gunsight Wash SRMA would be closed to locatable minerals exploration and development, leasable minerals, seismic exploration, and mineral material disposals. Public lands would be recommended for withdrawal to all mineral location and entry.

RM-1.2.10: Standard and expanded amenity infrastructure would be provided at the campground such as restrooms, ramadas, picnic tables, individual campsites with fire pits and improved road systems.

RM-1.2.12: The SRMA would be an exclusion area for utility scale renewable energy developments and major linear LUAs.

RM-1.2.13: The SRMA would be an avoidance area for minor linear and all non-linear LUAs.

RM-1.2.14: In the Gunsight Wash SRMA, competitive motorized speed events would be prohibited.

RM-O-2.1, Objective 2.1 (Ajo ERMA): To provide local and seasonal residents of Ajo close-to-home recreational destination opportunities on BLM-administered lands in the Lower Sonoran desert. The Ajo ERMA aka Ajo Block is surrounded by the US Air Force Barry M. Goldwater Range, Cabeza Prieta National Wildlife Area, the Organ Pipe Cactus National Monument and the Tohono O'odham Nation. A sense of freedom is provided the residents in comparison to the other land use agencies that require permits or formal requests. The area contributes to the residents' quality of life, the local economy, and management support of the surrounding sensitive natural and cultural resources. The ERMA is divided into two recreation management zones with discreet management focus and uses. Through the life of the plan, at least 85% of sampled visitors indicated they were satisfied with their recreational experience in the area.

RM-2.1.1: The Ajo ERMA would be designated (177,700 acres) for local recreation opportunities that highlight the surrounding BLM-administered lands.

RM-O-2.1.1, Objective 2.1.1 (Ajo Gateway RMZ): Provide local and seasonal residents of Ajo open natural spaces to enjoy recreational activities predominately for motorized activities, as well as non-motorized opportunities, on BLM-administered lands bordering the Ajo community. Activities include motocross bike riding, mountain biking and hiking in a system of primitive roads and trails just outside of town.

RM-2.1.1.3: Visitor and management infrastructure would generally be moderate in scope and scale, but may include developed facilities which would include a system of primitive roads and trails that meet the desired recreation setting.

RM-2.1.1.7: In the Ajo Gateway RMZ, competitive motorized and non-motorized speed events, including motorcycle enduros and equestrian endurance rides, would be considered on a case-by-case basis and the recreation and resource objectives of the area must be retained.

RM-2.1.2.8: In the Ajo Desert RMZ, competitive motorized speed events would be prohibited. Competitive non-motorized speed events, such as equestrian endurance rides would be considered on a case-by-case basis and the recreation and resource objectives of the area must be retained.

RM-2.5.6: In the Lower Gila Historic Trails ERMA, competitive motorized speed events would be prohibited. Competitive non-motorized speed events such as endurance rides, would be analyzed on a case-by-case basis and the resource and recreation objectives of the area must be retained.

RM-2.7.3: Utility-scale renewable energy development would be prohibited in all Back Country recreation settings within RMAs.

RM-2.7.4: SRMAs would be high sensitivity conflict areas (avoidance areas) for utility-scale renewable energy developments in all recreation settings other than Back Country. Projects would only be considered and evaluated if no other option exists and potential impacts could be mitigated to ensure recreation outcomes are retained.

RM-2.7.5: ERMAs would be moderate sensitivity conflict areas (avoidance areas) for utility-scale renewable energy developments in all recreation settings other than Back Country. Projects may be considered and evaluated if potential impacts could be mitigated to ensure recreation outcomes are retained.

RM-3.1.18: Certified weed-free feed would be required for all equestrian and stock animal uses authorized under SRPs.

RM-4.2.23: Certified weed-free feed would be required for all equestrian and stock animal uses authorized under SRPs.

TM-1.1.3: No areas will be allocated for open motorized vehicle use.

TM-1.3.2: The 40-acre parcel in T12S, R6W, Sec.4 used for motocross riding would be managed the same as the surrounding area where motorized and mechanized vehicles would be restricted to designated routes and maintain the ”motocross experience” area. Local partners would be obtained to monitor use and provide training in environmental stewardship to users of the area and provide on-site management.

TM-1.3.4: Same as Alternative C except motorized use of 839,100 acres would be limited to existing roads and trails until such time route designations are completed, at which time motorized travel would be restricted to designated roads, primitive roads and trails.

TM-1.3.6: The use of motorized or mechanized vehicles off designated routes would be prohibited in OHV areas designated as limited to designated routes, closed for motorized vehicles, and in all travel-management areas designated for non-motorized vehicles except as noted below:

- Per Arizona BLM policy, motorized vehicles would be allowed to pull off 100 feet on either side of the centerline of a designated route for vehicle passing, emergency stopping parking or camping as long as soils, drainages, and woody vegetation are not damaged. This use shall be monitored on a continuing basis. If monitoring results show effects that exceed limits of acceptable change, motorized vehicles will not be allowed to pull off a designated route 100 feet on either side of the centerline.

- Outside of wilderness, hand-powered, non-motorized wheeled game carriers would be allowed to travel cross-country for the purpose of retrieving downed game.

- Motorized cross-country use will only be permitted with written authorization from the BLM authorized officer, or when necessary for emergency situations involving public health and safety.TM-1.3.7: Retrieval of downed game by cross-country motor vehicle use is prohibited.

TM-1.3.3: Routes within washes would be closed from April 15-August 31 during the travel management route designation process to address the forage, shelter, breeding, and thermal cover protection provided by washes as a component of wildlife habitat. In Alternative E, this management action would apply to routes 8013, 8018 and 8019.

TM-2.1.3: Criteria to guide route designations would be established based on management actions for recreation wildlife, vegetation, cultural resources, lands/realty, mining, and other resources or resource uses as appropriate. (See administrative actions section for a listing of criteria).

TM-5.1.1: Technical vehicle use sites or other specialized recreation sites would be delineated through activity level planning.

TM-5.1.2: Technical vehicle use sites would be evaluated and established on a case-by-case basis with community and user input. Sites would be developed as needed to ensure visitor safety, meet enthusiast needs, improve recreation experiences, and increasing recreation opportunities. Site plans would establish limits of acceptable change indicators and standards. All sites would be compatible with social and managerial recreation settings and VRM standards; would satisfy biological and ecological land health standards; would protect or mitigate cultural resources; and would meet water-quality standards for influenced drainages and watersheds.

TM-5.1.6: Establish the travel system as an asset and consider its values when authorizing land-use actions and other activities. All land-use authorizations, permits, and other activities would be required to use designated routes. The BLM would authorize new roads or cross-country use for land-use authorizations only as a last resort.

AC-G-1, Goal 1: Provide increased protection for resources of substantial significance and value, which include specific cultural resources, outstanding and scenic features, and priority and special status species while continuing to provide the public access to enjoy these resources.

AC-1.1.1: All public lands within the ACEC would be retained and private and state lands would be acquired as parcels become available and funds allow, on a willing seller, willing buyer basis.

AC-1.1.2: Core roadless areas would be maintained for wildlife while new facilities, including motorized routes, non-motorized trails, and trailheads that concentrate or increase use in these areas would be avoided.

AC-1.1.3: Maintaining and managing the biological, geological, and cultural resources would be emphasized and given priority.

AC-1.1.7: Treatments of invasive species would be allowed within the ACECs if they can be designed to have a minor or negligible impact to resource values within the ACEC.

AC-1.1.8: The construction of non-motorized trails would be permitted if they are consistent with ACEC and resource objectives and do not conflict with botanical resources or wildlife and T&E management.

AC-1.1.10: ACECs would be exclusion areas for utility-scale renewable energy development and exploration, and multiuse utility corridors.

AC-1.1.13: ACECs would be open to all locatable and leasable minerals exploration and development unless otherwise restricted. (For leasable minerals only, Lower Gila Terraces and Historic Trails ACEC is open with No Surface Occupancy and Cuerda de Leña is closed February 1 to September 15)

AC-1.1.14: ACECs would be closed to mineral material disposals, including free use permits, except for the former free use site in the Saddle Mountain ACEC (see AC-1.1.46).

AC-1.1.19: The route system would be designed to minimize impacts to the relevance and importance values for which the ACEC was designated. Motorized vehicle routes that conflict with the values described in the Importance and Relevance descriptions would be closed, limited, or mitigated. New route construction would not be allowed except as needed for resource protection, public safety, emergency or other administrative uses as determined by the authorized officer.

AC-1.1.27: An area of 58,500 acres would be designated as the Cuerda de Leña ACEC. Its purpose would be to protect the endangered Sonoran pronghorn; habitat for other wildlife species, including the cactus ferruginous pygmy-owl; and to protect cultural resources (**Map 2-16e**) [PRMP/FEIS].

AC-1.1.28: In addition to the exclusions addressed in the common to all section, the ACEC would be closed to the public for general recreational use during pronghorn fawning between March 15 and July 15 or as determined annually by the Sonoran pronghorn recovery team. Minor non-linear LUAs would also be prohibited unless deemed necessary by the authorized officer. Federal, state and local government employees and permit holders operating within the scope of their authorizations would be exempt from the closure.

AC-1.1.31: Tertiary, single-track, and reclaimed vehicle routes that fragment habitat would be closed; however, access would be provided for administrative use and public safety.

AC-1.1.33: An area of 82,500 acres would be designated as the Lower Gila Terraces and Historic Trails ACEC.

AC-1.1.37: Public use sites would be allocated if they could be designed to have negligible or minor impacts.

AC-1.1.38: The ACEC would remain open to all leasable minerals actions but any lease would contain a No Surface Occupancy stipulation.

AC-1.1.39: Portions of the ACEC would be closed to seismic exploration and mineral material disposals. The remaining portion of the ACEC would be open to mineral material disposals however surface disturbance would be minimized where possible through mitigation measures and special stipulations.

GB-G-1, Goal 1: The Fred J. Weiler Green Belt would be a productive and functioning riparian system supporting healthy, diverse, and abundant populations of wildlife and riparian dependent wildlife and plant species with an emphasis on migratory birds.

GB-O-1.1, Objective 1.1: Manage the Fred J. Weiler Green Belt to support migratory birds and other native wildlife and plant species.

GB.1.3: The use of mechanical, chemical, and biological treatment methods would be coordinated with AGFD and USFWS to remove invasive plants such as tamarisk in the Green Belt for the purpose of restoring ecological conditions and function and reducing fuel hazards.

GB.1.4: The Green Belt would be managed with an emphasis on protection and restoration, and treatments would focus on reestablishment of willows and cottonwoods, as well as other riparian vegetation, to support migratory game birds and other wildlife species.

GB-1.6: The Green Belt would be closed to mineral leasing and mineral material disposals including sales and free use permits. The three inactive free use community pits (Buckeye Hills in T1S, R3W. Secs. 20 and 30; T1S, R4W, Sec. 25) would be terminated, and the former free use site (Narramore Pit in T1S, R3W, Sec. 24) would not be available for reauthorization.

GB-1.7: The Green Belt would be an exclusion area for utility-scale renewable energy development and exploration, and multiuse utility corridors.

GB-1.8: The Green Belt would be an avoidance area for minor LUAs and utility-scale renewable energy development and exploration, and multiuse utility corridors.

GB-1.9: The Green Belt would be an exclusion area for utility-scale renewable energy development and exploration and major linear LUAs (multiuse utility corridors).