

**Pima NRCO Comments on December 20, 2016 Draft Jaguar Recovery Plan  
Attachment 5**

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August 8, 2013

Public Comments Processing  
Attn: FWS-R2-ES-2012-0042  
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Arlington, VA 22203

Re: Arizona Game and Fish Department Response to 50 CFR Part 17 [docket No. FWS-R2-ES-2012-0042; 4500030114] Endangered and Threatened Wildlife and plants; Designation of Critical Habitat for Jaguar; **AGFD Log No. M13-07014705**

Dear Sir or Madam:

The Arizona Game and Fish Department (AGFD) has reviewed the U.S. Fish and Wildlife Service's (FWS) proposal to designate 858,137 acres in Pima, Santa Cruz, and Cochise Counties AZ and Hidalgo County, NM, involving six critical habitat units for the endangered jaguar. This is a revision of the previous proposed rule (August 20, 2012) to designate 838,232 acres of critical habitat in these same counties. We understand that the reason given for this revised proposal was because of recently revised habitat models for jaguar in the Northwestern Recovery Unit. We also understand that our previous comments will be fully considered in your evaluation of this revised proposed rule. All of the comments we submitted in response to the August 2012 rule apply to this revised proposed rule and for that reason we have attached our previous comments for your convenience. The comments below are intended to supplement our previous comments. Below, we address the proposed rule designating critical habitat, the Draft Environmental Assessment, and the Draft Economic Analysis.

*Critical Habitat*

Our position on designation of critical habitat for jaguar in the United States (US) has not changed; designation of critical habitat for jaguar is not justified because Arizona contains no habitat that is "essential" to the conservation of jaguars. Recovery of the jaguar is completely dependent on conservation within the 99% of its range that lie outside of the United States. Stating that habitat in the US is essential to jaguar conservation is contrary to the intent and purpose of the Endangered Species Act (ESA) and damages the integrity of the Act because it misinterprets what "essential" means in the context of the ESA. The Department is a strong supporter of the ESA and we fear that designation of critical habitat for jaguar will lead to erosion of current conservation efforts by confusing and alienating conservation partners who presently participate in jaguar conservation in Arizona and south of our border.

The proposed rule has identified six geographic units that it alleges contain some or all of the Primary Constituent Elements (PCEs) essential for jaguar conservation. Modeling was used to map the boundaries for these areas, but the maps and descriptions of those areas do not appear to provide evidence as to where in each unit the different PCEs are located. The definition of critical habitat requires the FWS to identify the 'specific areas' within the geographic area occupied that include these features. Simply stating that a unit contains these elements and providing a map is not sufficient.

In the proposed rule, the authors concede that the evidence that jaguar occupied AZ/NM is limited, and therefore alternatively analyzed whether the area designated as critical habitat is "essential" to the conservation of the jaguar as authorized under 16 U.S.C. § 1532(A)(ii). The FWS contends that the critical habitat is essential because (1) the jaguar has used this area since 1996; (2) the area contains features that comprise suitable habitat and it (3) contributes to the species' persistence in the United States, which is important to range expansion. The problem with this explanation is that it falls short of establishing that the area is essential to the conservation of the species. The proposed rule equates 'essential' with recovery; in other words, the designation of critical habitat in an area outside the area occupied by the jaguar must be necessary to the recovery of the jaguar. The record indicates that what happens in AZ/NM is unlikely to affect recovery of the species. Habitat in AZ/NM may be important for the few males who wander into Arizona, but is not 'essential' to conservation of the species.

Since jaguar was listed under the ESA, only a few male jaguars have been detected in US (see our previous comments for details) and there is no evidence that those males ever return to the closest confirmed breeding location, approximately 130 miles south of the US/Mexico border. Although AGFD agrees that parts of Arizona do provide marginal habitat for male jaguars (at the extreme northern edge of their range), it is difficult to see how these few males contribute to a jaguar population or are essential for jaguar recovery. As a state wildlife agency with a strong investment in conserving endangered species, we believe that those few jaguars in Arizona and New Mexico deserve all the protection afforded to them by their endangered status. Indeed, Arizona has protected jaguars from take by statute since 1969. But from a biological perspective, lone males that disperse from a breeding area to the edge of their distribution, occupy less than 1% of habitat available to the species, and are unlikely to breed are not essential to the persistence of the species. The proposal's assertion that habitat in Arizona and New Mexico is essential to jaguar recovery ignores basic biological principles of conservation. Rather than use a convoluted argument to maintain that habitat in Arizona is 'essential', it is more reasonable to conclude that the habitat used by jaguar in Arizona is not of sufficient quality to support a jaguar population. To be effective, jaguar conservation must occur in areas of their range where consistent breeding occurs.

Since so few jaguars have been detected in Arizona since the time of listing, the habitat defined in the proposed rule does not meet the definition of 'occupied'. The ESA defines critical habitat as 'the specific areas occupied by the species at the time it is listed...' For an area to be occupied, it has to be 'an area that a species uses with sufficient regularity that it is likely to be present during any reasonable time span'. The evidence for jaguar presence in Arizona at the

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time of listing was based largely on speculation that jaguars were likely present in the area although they were not detected. Further, since the time of listing in 1997, no more than 5 male jaguars have been detected in the area. Given that the proposed rule designates 858,137 acres, AGFD does not think it likely that the area proposed fits the definition of 'occupied'.

Although critical habitat may be designated outside the area occupied by a species, it can only be designated when '...a designation limited to its present range would be inadequate to ensure the conservation of the species' 50 CFR §424.12 (e). AGFD is unaware that the area occupied by jaguar outside of the US (99% of its range and population) has been determined to be inadequate to ensure the conservation of jaguar. Thus designating critical habitat in the US when that area does not fit the definition of occupied is contrary to the guidance for critical habitat designation.

Arizona has a long record of jaguar conservation and partnership in wildlife conservation with the FWS but we were not engaged in the critical habitat designation. Arizona and New Mexico formed the Jaguar Conservation Team in 1996 and codified that team with a Memorandum of Understanding (MOU) with the FWS as a cosigner in 2007. Because of our record and partnership, the FWS should have worked more closely with both AGFD and New Mexico Game and Fish Department (NMGFD) in evaluating whether critical habitat was prudent for jaguar in Arizona and New Mexico.

We are concerned that this decision to designate critical habitat for jaguar is being made to avoid further litigation. The proposed rule specifically asks whether the FWS could improve or modify the approach used to designate critical habitat. We maintain that critical habitat is not being designated using the best science; science played little role in this decision. Instead, the two previous decisions that critical habitat designation was not prudent for jaguar were reversed because of a lawsuit and subsequent court order to reconsider those decisions (Center for Biological Diversity v. Kempthorne, CV 07-372-TUC JMR and Defenders of Wildlife v. Hall CV08-335 TUC JMR; D AZ March 30, 2012). Rather than reengaging with conservation partners and continuing dialogue with the conservation community, the proposal unilaterally declares US jaguar habitat "essential" and designates critical habitat without consulting with your most reliable and consistent conservation partners. As longtime partners in jaguar conservation, we are confused by this reversal of past FWS decisions. Past decisions to not designate critical habitat for jaguar were based on sound science. Nothing has changed regarding jaguar biology or distribution since those decisions were made.

The proposed critical habitat rule also proposes to exclude the Tohono O'odham Nation because the Tribe is preparing a jaguar management plan. The proposal should have explained why excluding other parts of Arizona under the jurisdiction of federal land management agencies was not considered. The proposal seems arbitrary and capricious, singling out tribal lands for exclusion while other jurisdictions within the proposed critical habitat were not given similar scrutiny.

*Draft Environmental Assessment (DEA)*

The analysis of significance of the critical habitat designation within the DEA is inadequate. Because so little specific information is known about jaguar habitat use in the US, the draft environmental assessment is based on a boilerplate, cut-and-paste exercise without any real analysis. For example, Council of Environmental Quality regulations (CFR 40 §1508.27[b]) require that the severity of the proposed action be evaluated for 10 criteria. The sixth of these is 'The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration'. The DEA concluded that this designation of critical habitat is not a precedent setting action because 'The agency has designated critical habitat for numerous other species'. We contend that designating critical habitat for an area where no breeding has been documented, with no known females for over 50 years, where only a few male individuals have been detected in the last 20 years, and which constitutes less than 1% of the distribution of the species at the extreme periphery of its range is, indeed precedent setting.

That precedent of designating critical habitat for jaguar has the potential to encourage additional critical habitat designations for number of subtropical species which occur as occasional individuals in the southern part of Arizona. Diverting limited management resources to consult on critical habitat for a species that cannot possibly be recovered by that action is not only time and money misspent, but also may erode public support for the ESA. The ESA has been a valuable tool for wildlife management. We believe that this is a misapplication of that conservation tool.

*Draft Economic Analysis*

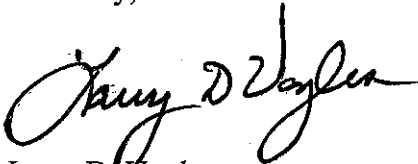
The Draft Economic Analysis clearly understates the actual costs of designating critical habitat for jaguar in southern Arizona. The analysis compares baseline costs (costs expected without critical habitat) against the costs estimated to occur because of the critical habitat designation. Although this method is often used in these types of analyses (the majority of the costs incurred by the public and agencies are ascribed to the listing rather than the critical habitat designation) it is not realistic in this case. Costs estimated for the critical habitat are low and all ascribed to minor costs of consultation (\$360,000 to \$420,000). Several scenarios whereby those costs may inflate into the billions of dollars are also presented. This large range in the estimated cost of critical habitat designation does little to inform the public of the possible costs due to designation of critical habitat for jaguar.

Our last objection to the proposed designation of jaguar critical habitat is based on common-sense. Dollars available for conservation are limited; they are not infinite, and spending valuable conservation dollars on paper exercises means those dollars cannot be spent on more meaningful conservation. We realize that some of the public would prefer we spend every conservation dollar available on their 'favorite' species. Our agency does not have that luxury; we must provide conservation for all of Arizona's wildlife. As an agency, we are painfully aware that budgets for conservation are presently shrinking, not expanding. AGFD has a long history of conservation for jaguar and other wildlife in the State of Arizona. It is our mission, and we take it very seriously.

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Designation of critical habitat for jaguar in AZ/NM is unwarranted because it is poor science, does not contribute to jaguar conservation, misapplies the definition of critical habitat in the ESA, establishes a poor precedent for future critical habitat designations, and erodes the credibility of decisions made by wildlife managers. AGFD has a long history of leading jaguar conservation in the Southwestern US and our record speaks to our enduring commitment towards that end. Our position is based on common sense and a keen awareness that conservation is at a crossroads. We have to make our limited financial resource go farther than ever before and we must allocate resource wisely. For that reason, we ask that the FWS withdraw the proposed rule to designate critical habitat for jaguar in Arizona and New Mexico.

Sincerely,



Larry D. Voyles  
Director, Arizona Game and Fish Department

MJR:mr

cc: AGFD Commission  
Governor Jan Brewer  
Benjamin Tuggle, Regional Director, USFWS  
Steve Spangle, Field Supervisor, USFWS  
James Lane, Director, NMGFD  
WMHB (PEP)

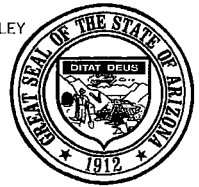




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October 19, 2012

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Re: Arizona Game and Fish Department Response to 50 CFR Part 17 [docket No. FWS-R2-ES-2012-0042] Endangered and Threatened Wildlife and plants; Designation of Critical Habitat for Jaguar. **AGFD Log No. M12-08204025**

The Arizona Game and Fish Department (AGFD) has reviewed the U.S. Fish and Wildlife Service’s (USFWS) solicitation (77 FR 161; August 20, 2012) for comment on its proposal to designate critical habitat for the jaguar (*Panthera onca*) in Arizona (AZ) and New Mexico (NM), pursuant to the Endangered Species Act (ESA) of 1973, as amended. We request that USFWS withdraw the proposed rule because habitat essential to the conservation of the jaguar as a species does not exist in either Arizona or New Mexico under any scientifically credible definition of that term.

In the course of jaguar conservation efforts since 1996 (including recovery planning in 2010-2012), AGFD has repeatedly stated its belief that designation of critical habitat for the jaguar in AZ-NM is not consistent with the ESA standard of “essential to the conservation of the species” and that it will not provide significant, measurable conservation benefits or recovery potential for the species. AGFD has diligently led jaguar conservation efforts in AZ-NM since 1996 and has affirmed that it would work with USFWS to develop a legally-sound proposal that is informed by science. It was, and continues to be, AGFD’s contention that a legally-sound proposal would not include the designation of critical habitat in the U.S. We further believe that designating critical habitat for the less than 1% of historic jaguar range which occurs in the U.S. would jeopardize the credibility and long-term viability of the ESA, and lead to the erosion of public support for jaguar conservation activities in AZ. The USFWS proposal also fails to meet the Service’s own operational ESA-implementation standard of a population consisting, at a minimum of occupancy by a breeding pair for at least two consecutive years. By that standard, occurrence records for recent history (i.e. post 1850s) fail to show that AZ and or NM has ever been occupied by a jaguar “population.”

AGFD concurred with decisions by USFWS in 1997 and 2006 that designation of critical habitat for the jaguar would not be prudent (62 FR 39147, July 22, 1997 and 71 FR 39335; July 12, 2006). We considered the justification presented then to be logical and solidly based on science



and law. As such, we were disappointed that USFWS chose not to reinforce those arguments when a court order entered in *Center for Biological Diversity v. Kempthorne*, CV 07-372-TUC JMR and *Defenders of Wildlife v. Hall*, CV08-335 TUC JMR (D. Ariz., Mar. 30, 2009) directed USFWS to determine whether designation of critical habitat for the jaguar is prudent by January 8, 2010. In this ruling, the court ordered USFWS to focus on the principal biological constituent elements within the defined area that are essential to conservation of the species. However, instead of attempting to return to the court with a refined analysis, USFWS determined that designation of critical habitat for the jaguar in AZ-NM would be beneficial to the species (75 FR 1741; January 13, 2010) and include the areas of AZ-NM in which jaguars have been documented since 1996. The current proposal uses information from 1962 until present (a 50-year time-frame), which is not consistent with the 2010 notice.

AGFD believes that, in the spirit of the 2008 MOU between our agencies regarding Roles and Responsibilities for Implementing the Endangered Species Act in AZ, the USFWS should have worked more closely with our staff in an effort to evaluate the arguments whether or not critical habitat is prudent prior to making any determination to propose critical habitat. AGFD submitted comments to USFWS Acting Director Rowan Gould on March 12, 2010 in response to the USFWS's solicitation (75 FR 1741; January 13, 2010), where we stated that we "looked forward to applying our expertise to help analyze the available information and craft the proposal."

While AGFD has participated in the USFWS-assembled jaguar recovery team, we have not been engaged in the USFWS's effort to develop the critical habitat proposal. Therefore, we provide additional information in direct response to the solicitation below. In the current federal register notice (notice), the USFWS solicits public comments from government agencies, the scientific community, industry, and other interested parties, asking commenters to focus on the following topics:

**(1) The reasons why the USFWS should or should not designate habitat as "critical habitat" under section 4 of the Act including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether that increase in threat outweighs the benefit of designation such that the designation of critical habitat may not be prudent.**

The habitat "occupied" by jaguars in AZ-NM does not meet the definition of critical habitat as described by the ESA and should therefore not be designated. Under the ESA, critical habitat can only be designated for the U.S. However, this represents less than 1% of the entire (rangewide) habitat for the species. As is acknowledged in the notice, recovery of jaguar is entirely reliant on conservation action in the 99+% of its habitat found south of the international border. The less than 1% of potential jaguar habitat in the U.S. does not and cannot contribute substantially to recovery of the species.

Occurrence information in the U.S. is best for 1962 to 2011. During that 50-year period, the numbers of different individuals that were documented in any given year were as follows: 0 in 35

years; 1 in 8 years; 1+<sup>1</sup> in 4 years; 2 in 2 years; and 2+ in 1 year. In the 14 years in which occurrence was documented, 10+ different jaguars were identified, 2+ of which were seen multiple times in some (but not all) years (AGFD records).

Thus, between 1962 and 2011, only 10 (possibly 12) different individuals (10 or 11 males; sex unknown for one animal) were documented in AZ and/or NM. Assuming a rangewide population of about 30,000 jaguars, in 35 of the 50 years since 1962 the U.S. has had 0 percent of the population and in 15 years from 0.003 to 0.01 percent. Further study documenting the role AZ jaguars play in the overall population is needed before any habitat in AZ should be considered as potential critical habitat. At this time, it is not biologically sound or justifiable to designate less than 1% of habitat that accounts for less than 0.003 to 0.01% of the population. Moreover, AZ-NM has never been documented to hold a breeding pair of jaguars. There is no evidence that jaguars in AZ-NM contribute offspring to the rangewide population in a manner that outweighs mortality in the area of dispersal or that they provide some other biological benefit (e.g. novel genetic traits) for the population. Research should be conducted to examine if the jaguars observed in AZ-NM represent a dispersal sink, where individual jaguars and their genetics are lost to the population, or if they are in fact still interacting with the nearest jaguar population (roughly 140 miles to the south in Mexico).

The proposal states that potential jaguar habitat in the U.S.-Mexico borderlands “is part of the secondary area of the Northwestern Management Unit” within the Northwestern Recovery Unit for the jaguar. However, the stated rationale in the proposal’s section titled *Jaguar Recovery Planning in Relation to Critical Habitat* does not support a determination that the secondary area is *essential for the conservation of the species*.

Specifically, the proposal states: *Because such a small portion of the jaguar's range occurs in the United States, it is anticipated that recovery of the entire species will rely primarily on actions that occur outside of the United States; activities that may adversely or beneficially affect jaguars in the United States are less likely to affect recovery than activities in core areas of their range (Jaguar Recovery Team 2012, p. 38)*. This accurate statement refutes the need to establish critical habitat in the U.S. Jaguar presence in the U.S. cannot contribute to any ecological mechanism that will compensate for jaguar population failure south of the border.

The proposal goes on to say: *However, the portion of the United States is located within a secondary area that provides a recovery function benefitting the overall recovery unit (Jaguar Recovery Team 2012, pp. 40, 42). For example, specific areas within this secondary area that provide the physical and biological features essential to jaguar habitat can contribute to the species' persistence and, therefore, overall conservation by providing areas to support some individuals during dispersal movements, by providing small patches of habitat (perhaps in some cases with a few resident jaguars), and as areas for cyclic expansion and contraction of the nearest core area and breeding population in the Northwestern Recovery Unit (about 210 km*

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<sup>1</sup> Use of “+” indicates at least 1 record could not be identified as a specific individual, i.e. that animal could have been a “known” (counted) jaguar or an “unknown” (new) individual. Since the total “+” jaguars represent at most 1 additional animal, the maximum number of different jaguars documented since 1962 would be 12 and the minimum 10.

*(130 mi) south of the U.S.-Mexico border in Sonora near the towns of Huasabas, Sahuaripa (Brown and López González 2001, pp. 108-109), and Nacori Chico (Rosas-Rosas and Bender 2012, pp. 88-89)). Independent peer review cited in our July 22, 1997, clarifying rule (62 FR 39147, pp. 39153-39154) states that individuals dispersing into the United States are important because they occupy habitat that serves as a buffer to zones of regular reproduction and are potential colonizers of vacant range, and that, as such, areas supporting them are important to maintaining normal demographics, as well as allowing for possible range expansion. As described in the Recovery Outline for the Jaguar, the Northwestern Recovery Unit is essential for the conservation of the species; therefore, consideration of the spatial and biological dynamics that allow this unit to function and that benefit the overall unit is prudent. Providing connectivity from the United States to Mexico is a key element to maintaining those processes.*

The referenced Recovery Outline is still in draft form. Thus, AGFD's Jaguar Conservation Assessment for AZ, NM and Northern Mexico (2011) represents the most complete assessment of jaguar conservation needs and the arguments, pro and con, regarding the population status and critical habitat designation controversy surrounding jaguars within the borderlands region and the U.S. While AGFD identified similar areas in AZ for jaguar management as the proposed critical habitat for our state, our intent was to identify an area where conservation efforts might and should be focused to benefit jaguars that might occur here in the future. With numbers of jaguars remaining somewhat consistent over the last 30 years, it is probable that current habitat management framework of the area is sufficient for purposes of jaguar conservation.

The notice also states that although the U.S. and northwestern Mexico represent the northernmost extent of the jaguar's range, "peripheral populations" generate future evolutionary diversity, as well as maintaining "connectivity to Mexico". (77 FR 50222). The closest known breeding population in northern Mexico is about 140 miles south of the international border. There is little evidence supporting movements back-and-forth to the suspected core breeding population within northern Mexico, and then only at the periphery of that core. Recently observed AZ-NM jaguars are most likely dispersing members, possibly inter-acting members, of this population (Johnson et al. 2011; Johnson and Van Pelt *in press*). Warshall (2012 Biodiversity & Management of the Madrean Archipelago III conference) presents a simple model of the likelihood of naturally dispersing female jaguars into the U.S. (AZ) at greater than 40 years, based on productivity, known dispersal distances of males versus females, and the currently known breeding population, which suggests that a breeding population is not likely to occur in the near future based on dispersal from the currently known Mexico population. If the individual (male) jaguars occurring occasionally in the U.S. do not interact with breeding females within the Northwestern Recovery Unit, then they do not contribute to the population and recovery as a whole. If their genetic stock remains lost because of a lack of movement back to the breeding area or dispersal of breeding females to them, then they are not essential for persistence. Maintaining potential for dispersing females and movement of individual males back to the core area is more important for jaguar conservation than identifying and designating critical habitat in the U.S.

Critical habitat is defined in section 3 (16 U.S.C. 1532) of the ESA as follows:

(5)(A) The term "critical habitat" for a threatened or endangered species means—(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological

features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. (B) Critical habitat may be established for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph. (C) Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species.

Each of the parameters explicit in that ESA definition is examined below in response to question 2 in your solicitation.

**(2) Specific information on:**

**(a) The amount and distribution of jaguar habitat;**

The ESA defines primary constituent elements as those physical and biological features of a landscape in the appropriate quantity and spatial arrangement that a species needs to survive and reproduce. The USFWS proposal provides ample, accurate gross information (i.e. vegetation/biotic community level) on the primary constituent elements of proposed critical habitat in AZ-NM. How much that gross understanding can or should be refined or applied in modeling is arguable. The data sets for AZ-NM are extremely limited and subject to interpretation. First, though, no argument can be made by USFWS that habitat in AZ-NM provides constituent elements “that a species [jaguar] needs to survive and reproduce” because over the timeframe analyzed, 1962-2011, no jaguars have met that standard of “reproduce;” i.e. no females, let alone reproducing females, have been documented here over that span. Second, AGFD has previously stated its views on habitat and constituent elements to the USFWS (see Voyles letter of 2010). From a science-based perspective, Rabinowitz (1999) stated “the more open, dry habitats of the southwest are marginal for the jaguar in terms of water, cover, and prey density.” Later, Rabinowitz (2006) identified the following landscape features as those that most affect jaguar presence and movement rangewide: (1) habitat type [vegetation and topography], (2) percent of tree and shrub cover, (3) elevation, (4) human densities, (5) human settlements and (6) roads. He also commented that “We know what jaguars need: occasional access to water, some degree of forest cover, and prey species that can range from peccaries to armadillos. We also know that jaguars can live close to people, but they generally avoid large open areas and sites of high human density.” Rabinowitz, probably the leading world authority on jaguar conservation, appropriately focuses the wide-ranging species’ habitat needs and preferences at a course, landscape level.

**(b) What areas, that were occupied at the time of listing (1972) (or are currently occupied) and that contain features essential to the conservation of the species, should be included in the designation and why;**

In our 2010 letter, AGFD provided information supporting the transitory presence of jaguars in: (a) the Peloncillo Mountains of southwestern NM (Hidalgo County) and southeastern AZ (Cochise County), and (b) the portion of southcentral AZ bounded on the west by the Baboquivari Mountains (Pima County) and on the east by the Atascosa and Tumacacori

mountains (both in Santa Cruz County). Since that time, 1+ jaguar has been documented in the Whetstone and the Santa Rita Mountains.

Critical Habitat: (5)(A)(i)

In its current proposal, USFWS has appropriately determined that the area of AZ-NM where jaguars have been observed since 1962 is restricted to six distinct yet partially connected areas of the two states. With minor exception, the proposal accurately portrays documented jaguar occurrence records since 1962 that AGFD has previously compiled and provided to USFWS. In terms of gross habitat description, the USFWS proposal also accurately summarizes the physical or biological features within those six areas that are key traits of the habitat where jaguars have been documented. However, an accurate description of the habitat in which a species has been documented does not automatically imply that the habitat is essential to conservation of the species. As previously stated in this letter, since 1962, no female jaguars or cubs (kittens) have been documented or verifiably reported in AZ-NM. Warshall (2012 Biodiversity & Management of the Madrean Archipelago III conference) presents a simple model of the likelihood of naturally dispersing female jaguars into the U.S. at greater than 40 years based on productivity, known dispersal distances of males versus females, and the currently known breeding population, which suggests that a breeding population is not likely to occur in the near future based on dispersal from the currently known Mexico population.

Critical Habitat: (5)(A)(i)(I)

The USFWS proposal appears to discount whether “conservation of a species” within an area being proposed for critical habitat designation should rise to the level that the area must contribute to conservation of the species as a whole (i.e. rangewide). Clearly, as affirmed in both the proposal and the extensive literature cited therein, conservation of the jaguar species as whole (i.e. recovery and subsequent delisting) is not at all reliant on conservation of few sparsely and erratically occurring jaguars in AZ-NM. Jaguar occupied-range in AZ-NM (since 1962) is clearly peripheral to the current and historical distribution of the species in Mexico, let alone the species rangewide, and is at best insignificant in extent and marginal in quality and potential. Although the USFWS proposal notes the value of peripheral populations, with supporting literature citations, it weakly explores the available literature countering that argument in terms of investing conservation funding (see discussion in TB Johnson, WE Van Pelt and JN Stuart. 2011. *Jaguar Conservation Assessment for Arizona, New Mexico and Northern Mexico*. Arizona Game and Fish Department and New Mexico Department of Game and Fish).

The ESA defines, in section 3(3), “conserve,” “conserving,” and “conservation” as using and the use of “all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.” Remarkably, the ESA does not define in section 3 what recovery means, but surely “delisting” marks both the point at which recovery has occurred and the point at which “the measures provided pursuant to this Act are no longer necessary.” Thus, the question of whether conservation of jaguars in AZ-NM is “necessary to bring” the species to that delisting/recovery point is germane to decisions about the propriety, under both law and science, of the USFWS proposal to designate critical habitat in those states. This question should be more fully considered and the ensuing USFWS position should be supported by written legal opinion, not by reference to a single court decision that USFWS chose not to contest.

Critical Habitat: (5)(A)(i)(II)

As is evident in the USFWS proposal and supporting literature, the six areas identified as proposed jaguar critical habitat in AZ-NM require neither special management (for the jaguar) nor protection. Jaguars such as may occur in the area, are or would be fully protected by federal and state law. The vast majority of the proposed acreage is already under federal land management jurisdiction or federally-approved conservation plans. Management of these lands and the included and associated private lands is focused on ensuring viable, sustainable populations of jaguar prey species and of large carnivores that occupy the landscape in ways that are grossly similar to jaguar occupancy (i.e. while moving or occurring in seemingly less transient manners).

Critical Habitat: (5)(A)(ii)

None of the six areas proposed by USFWS for designation as critical habitat of the jaguar in AZ-NM is substantially outside the geographical area occupied by the species at the time of listing. We emphasize “substantially” because the connectivity “corridors/areas” between Unit 3 (Patagonia) and Unit 4 (Whetstone) are inferred rather than documented. That they probably represent actual jaguar movement corridors is plausible (based on post-1962 records), but also arguable and subject to future verification. Even so, the available historical and recent information on jaguar occurrence in the AZ-NM/Mexico borderlands and occupied areas to the south suggests strongly that all six proposed critical habitat areas rely strongly, if not entirely, on dispersal of jaguars from Mexico directly into the four discrete Units (1, 2, 5 and 6) and probably into the conjoined Units 3-4 (entering the latter through the western portion).

Critical Habitat: (5)(B)

The USFWS proposal applies this criterion appropriately. The jaguar was listed as endangered south of the U.S. in 1972 (listing superseded by ESA listing in 1973) and the listed range was extended to the U.S. (including AZ and NM) in 1997. To date, no critical habitat has been designated by USFWS for the jaguar in AZ-NM.

Critical Habitat: (5)(C)

AGFD believes this section’s language justifies exclusion of potential habitat in AZ-NM from critical habitat designation.

Many biodiversity and conservation management papers asserting the importance of peripheral ranges to at-risk species, including some used in the notice (e.g. Channell, R. and Lomolino, Mark V. 2000; Lesica, P. and Allendorf, F.W. 1995), indicate that the importance of such is at the population level. Upon examination of all the historical and recent occurrences, jaguar distribution within the U.S. represents less than 1% of the total occupied range. This percentage is even smaller (1:30,000 or 0.003%) when looking at the number of animals represented in AZ relative to the rangewide population. There is strong argument to suggest that the U.S., and AZ-NM, rarely (if ever) contained a breeding population of jaguars, even in historical times; and certainly not during the last half century. Most records in AZ have been, and continue to be, lone males and do not represent a reproducing and sustainable jaguar population.

Any designation of critical habitat for jaguar in AZ is precedent setting. There are a number of other listed species, mostly birds, which occasionally occur in AZ without portions of habitat in AZ identified as critical habitat. For example, brown pelicans routinely occur in desert habitats,

but this does not mean that desert habitats are essential for brown pelican populations. In the case of jaguars, the very low numbers of individuals over time, plus the fact that most are males, suggests that jaguars are merely visitors to our state as are brown pelicans.

Based on the best scientific data available, a species occupies an area when it is likely to be present in the area. "Determining whether a species uses an area with sufficient regularity that it is 'occupied' is a highly contextual and fact-dependent inquiry." Arizona Cattle Growers' Assoc. v. Salazar, 606 F.3d 1160, 1164 (9th Cir. 2010). Factors to consider are (1) how often the species uses an area; (2) the necessity of area for the species' conservation; (3) species biological characteristics that affect its mobility or migration, and (4) any other relevant factors. Id. "A species need not be present continuously for habitat to be considered 'occupied'. Id. at 1165.

Throughout this letter, AGFD has provided information that (a) indicates very limited jaguar use of the proposed area (factor #1), (b) refutes that the habitat in the U.S. is necessary for conservation of the species (factor #2), (c) questions the biological value of jaguars seen in AZ to the population approximately 140 miles south of the international border in Mexico (factor #3), and (d) also addresses other considerations for factor #4.

**(c) What period of time surrounding the time of listing (1972) should be used to determine occupancy and why, and whether or not data from 1982 to the present should be used in this determination;**

The definition of critical habitat states that it is determined, in part, by "the specific areas within the geographical area occupied by the species, at the time it is listed" and that "specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species".

The USFWS listed the jaguar as endangered in 1972 under the Endangered Species Conservation Act of 1969, when it was believed to be extirpated from in the U.S. After numerous delays and lawsuits, the USFWS published a final rule in 1997 clarifying that the endangered status for the jaguar extended into the U.S. (77 FR 50219). The USFWS is using the date that jaguar was listed in accordance with ESCA (March 30, 1972) as the date of listing. (77 FR 50233). However, the proposed designation includes areas in which reports of jaguars existed by considering records back to 1962, based on the 10-year lifespan of the animal, and including reports up to 1982, 10 years after the listing date. The issue is whether any area in the U.S. was "occupied" by the species, based on what appears to be a record of only a few documented reports prior to 1982.

The USFWS acknowledges that at the time the jaguar was listed in 1972, the species had declined to such an extent as to be "effectively eliminated." (77 FR at 50220). The Service's explanation for the lack of sightings was that at the time of listing (1972) the jaguar was rare within the U.S., "making those individuals that may have been present more difficult to detect." The Service also acknowledges the lack of jaguar surveys at the time of listing. This "finding" that the jaguar occupied the proposed critical habitat appears to be grounded in speculation, not the best available science. No justification is given for including "specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the

provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.”

**(d) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change;**

None needed; see above.

**(e) What areas not occupied at the time of listing are essential for the conservation of the species and why.**

None of the areas in AZ-NM is essential. The response to this question, and to others in the proposal, is made more difficult by the fact that neither the ESA, nor USFWS regulation, nor policy, properly defines the difference between occupancy and occurrence. Ecologically and from a conservation perspective there is both a difference and a distinction between the two. AGFD believes that, from a federal perspective, the proposed critical habitat areas must include all areas that should be *considered*, under the Service’s interpretations of the ESA, for designation as critical habitat. Again, upon consideration of the best available science, AGFD believes there are no areas in AZ-NM that are “essential for the conservation of the jaguar” from a rangewide population perspective. See additional information provided in our response to item #1.

**(3) Land use designations and current or planned activities in the subject areas;**

The debate regarding jaguar “habitat” in the U.S. has been evident since well before the 1997 ESA listing and the inception of the AZ-NM Jaguar Conservation Team in 1996-97. Although not signatories to the Conservation Agreement establishing that Team, the USFWS has been an active participant in the Team since its beginning. As a participant, the Service consistently acknowledged that it did not plan to designate Critical Habitat for jaguars in the U.S. portion of the range. Continuous changeover of personnel and an inability to maintain consistent application and interpretation of the ESA has resulted in distrust and reluctance of landowner participation in implementation of important conservation efforts. The ramifications imposed by the designation of critical habitat for jaguars, whether real or perceived, will likely result in denial of access to lands for jaguar conservation and research efforts, fewer observation reports and timeliness of such reports, and an increased likelihood of the illegal activities which undermine threatened and endangered species management. It will also represent a change from current voluntary and publically supported conservation efforts to a perceived regulatory emphasis. Other than maintaining species focus and recovery commitments within the U.S., these increased threats outweigh the benefits such designation might provide.

In light of the history and data provided, proposing the designation of critical habitat appears to be a politically motivated action that will not result in the implementation of a meaningful jaguar conservation measure and will prove to be imprudent because it will cause an impediment to collaborative conservation action for jaguars.

**(4) Information on the likely impacts of climate change on the jaguar and proposed critical habitat.**



Lacking data or accurate down-scaled climate modeling, it is inappropriate for the Service to address climate change within the construct of proposed critical habitat for the jaguar in AZ-NM (or for any animal in the Southwest).

**(5) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation;**

AGFD understands that the proposal will be reopened upon announcement of the availability of the draft economic and draft environmental assessment and we may provide additional input at that time. Therefore, we request that no decision on designation of critical habitat be predetermined prior to those assessments, unless the USFWS determines that critical habitat designation is not legally and scientifically sound regardless of economic impact. Thus, the USFWS proposal should be withdrawn.

AGFD is also concerned that designation of critical habitat could be used to limit some traditional game management and recreational activities, such as hunting and our ability to manage wildlife, including mountain lions. While we are not aware of any legal means for this to occur directly, we are uncertain if designation would be used in any type of litigation leading to USFWS settlements or court orders that could impact game management activities. Impacts to hunting would have a direct financial impact to the agency and an economic impact to local communities.

Public-lands grazing permittees will certainly incur costs associated with permit compliance, increased protests and litigation by entities opposed to public lands grazing, and costs associated with the inevitable permit delays, appeals, etc. These are real costs for permittees and in a weak economy those increased costs will almost certainly affect (for some) their willingness to support jaguar conservation.

**(6) Whether lands owned and managed by Fort Huachuca should be considered for exemption**

Fort Huachuca lands have not demonstrated value to jaguar conservation.

**(7) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act**

All of the major lakes in southeastern AZ (Patagonia, Pena Blanca, Arivaca, and Parker Canyon) fall within the proposed critical habitat. If critical habitat is designated, exceptions should be made for maintenance and repair of existing infrastructure including roads, dams and associated recreational use.

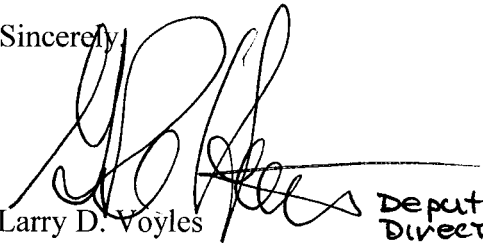
**(8) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.**

AGFD requests that USFWS withdraw its proposed rule because habitat essential to the conservation of the jaguar as a species does not exist in either Arizona or New Mexico under any

scientifically credible definition of that term. In the future, USFWS should allow for more communication at all stages, including more transparency in the early stages of critical habitat proposals, and should provide for a full opportunity for State (and Tribal) wildlife agencies to participate actively in analyzing the available information and in shaping the Draft Proposal that is released for public comment. AGFD and the other states have been discussing this very issue with USFWS for more than 15 years. State-Federal work groups have collectively and repeatedly identified the need for constructive change. Such a work group is now working again (at the national level) on this issue and other federal bureaucratic obstacles (some policy, some procedural, few legal) that impede collaboration between states and USFWS (and NOAA) in implementing the ESA for greater efficiency and effectiveness (more conservation return at lower cost). Question #8 above has been posed repeatedly by USFWS; however, no substantive action for improvements and modifications has been implemented.

In conclusion, AGFD did not have a voice in the settlement agreement discussions between USFWS and the litigants that preceded the final (2009) court decision that set aside prior USFWS decisions about critical habitat prudency, nor has it received a comprehensive briefing from USFWS on either the settlement discussions or the final court decision and the consequent USFWS decision not to appeal. AGFD remains convinced that critical habitat designation for the jaguar in AZ-NM is inappropriate under the ESA or necessary to conform with the court decisions that USFWS assures us drives it in that direction.

Sincerely,

  
for Larry D. Voyles Deputy Director  
Director, Arizona Game and Fish Department

ESG:eg

cc: AGFD Commission  
Governor Jan Brewer  
Benjamin Tuggle, Regional Director, USFWS  
Steve Spangle, Field Supervisor, USFWS  
James Lane, Director, NMDGF  
WMHB (PEP)

**From:** [REDACTED]  
**Sent:** Thursday, January 27, 2011 4:03 PM  
**To:** Terry Johnson  
**Subject:** Re: Jaguar: Conservation Assessment

Wow, Terry, I never knew you were so involved with jaguar records and jaguar conservation! It took me all day to read these 82 pages and the table! Damn your hide!!!

I don't know about a lot of the contents as much of it involves meetings and goings on outside of my involvement. As for what I do know, I saw nothing that gave me any major heartburn. When you came to a contentious statement you carefully presented both viewpoints and you put the various observations et al in good context.

We could discuss conservation strategies until the cows come home and that would be a fun exercise. That, however, would result in an ever greater length to an already too lengthy report (e.g. the black jaguar discussion). My only suggested changes therefore are to modify the statement that Arizona conservation actions began in 1996 with the Glenn episode and mention that John Russo actually began the conservation process when he recommended and succeeded in getting the jaguar a protected species in Arizona in 1969. I would also drop ALL Prock assisted records from the table as the animals taken were bogus by his own admission. These are recorded in blue on your table and should be just dropped.

I agree that other animals may not be valid. You have handled the Culbreath and Penrod jaguars well in this regard as these records CANNOT be discounted based solely on suspicion. There are several other jaguar records from the White Mountains and the Indians have a Tiger Mountain and report these animals as "formerly present." There are other questionables--the cubs in the Chiricahuas may have been lions as kittens of both species are spotted. The point, however, is that I only included records that were documented in writing and published in Brown and Lopez 2001. And, unlike other recorders we personally interviewed all those folk that killed jaguar, who were still available (Farley, McGee, Penrod, Culbreath, etc.). The records in Brown and Lopez 2001 are therefore all vetted in as far as possible even though the possibility remains that there are some "iffy" contributors. Neither Culbreath nor Penrod nor any one included was guided by Prock or anyone else, however. I also agree with you completely that the jaguars taken in Arizona do not represent a known resident, breeding population. The answer to that is *quien sabe?*

Someday I would like to work up a list with you of Texas jaguars (I have 5 in front of me). My thinking is that state has got off the hook unfairly because their jaguars disappeared first. They actually had a more substantial population and should be mired down in jaguar recovery to a greater degree than Arizona. Heck, they have more habitat and more game to feed them.

David

-----Original Message-----

**From:** Terry Johnson <TJohnson@azgfd.gov>  
**To:** Dave Brown <[REDACTED]>  
**Sent:** Thu, Jan 27, 2011 8:56 am  
**Subject:** RE: Jaguar: Conservation Assessment

These should work. If not, I have exhausted my technical expertise.

Thx, Terry B. Johnson  
Endangered Species Coordinator  
\*\*\*\*\*  
Tel 623-236-7707; Fax 623-236-7366  
Email [teebeej@azgfd.gov](mailto:teebeej@azgfd.gov)  
Website <http://azgfd.gov/>  
\*\*\*\*\*

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**From:** [REDACTED]  
**Sent:** Thursday, January 27, 2011 8:12 AM



◀ Border fence/Ben Franklin quote

Border fence... ▶

## David E. Brown Q&A

I'm very pleased to post the following Q&A with David E. Brown, who (with Carlos Lopez Gonzalez) literally wrote the book on Southwest jaguars. Their work, [Borderland Jaguars/Tigres de la Frontera](#) is required reading for anyone hoping to understand jaguars in the US and Northern Mexico. David has been a working biologist in the Southwest for over 40 years and he is a faculty member at Arizona State University (Go Devils!). I thank David very much for answering my questions. His responses are below in blue.

1. How did you come to be interested in the jaguars of Arizona and New Mexico? I first became interested in Southwest jaguars when Bill McGee brought one in from the Patagonia Mountains. Who cannot become interested in jaguars on seeing such a specimen!
2. Do you have any other jaguar research planned? No, I am not much interested in working on someone else's agenda. I would like to get a better handle on the status of jaguars in the Sierra Bacatete, however.
3. For people who have not read your book [Borderland Jaguars/Tigres de la Frontera](#) can you give us a brief synopsis of what you and Carlos Lopez Gonzalez found out about jaguars in Sonora? We documented the probable source of jaguars entering the U. S. between 1960 and 2004.
4. How do you answer people who say the US never had a breeding population of jaguars? They may be correct. The data are somewhat ambiguous on this, and one could argue for both hypotheses. I honestly do not know the answer to this.
5. Do you believe jaguars were present in the US (particularly AZ) during the time there were no sightings from the 60's on (i.e. 1965-1971, 1971-1986, 1986-1996)? Individual animals could very likely have slipped in during this time.
6. Do you think that the jaguars seen in the past few years in Arizona and New Mexico are residents or transients from Mexico? My opinion is that these animals are males in search of females and a territory. An adequate prey base allows them to employ a "waiting" or patrolling strategy.



7. What do you believe are the chances that wild jaguars will breed in the US? Very slim without the introduction of one or more wild females.
8. What's your opinion of the proposed border fence? The border issue is such that such a structure is becoming inevitable.
9. What are your thoughts on the designation of critical habitat for jaguars in the US? Critical habitat designation without a breeding population is moot.
10. What do you see as the future of jaguars in the US and what steps need to be taken to ensure that future? My personal opinion is that a population of jaguars might become established (re-established?) if one or more females were introduced. No agency or commission is going to do so, however, due to the possibility of tort claims. Waiting for a female to arrive on her own from 140 miles away strikes me as an extremely dubious proposition, although one favored by agency personnel. Hence, the future of jaguars in the U.S. will remain nonexistent or perilous at best.
11. As a slight digression, do you foresee ocelots ever becoming more common in the Southwest US? Given ongoing climatic trends, I could well visualize as ocelots as becoming established in the Southwest at some future date. I don't know if they would ever become common, however.
12. Anything you'd like to add? Contemplating jaguars in Arizona and New Mexico is an enjoyable form of recreation, but don't get your hopes up. The obstacles to a population becoming established are formidable.

This entry was posted on August 21, 2007 at 7:17 pm and is filed under [jaguars](#), [Q&A](#). You can follow any responses to this entry through the [RSS 2.0](#) feed. You can [leave a response](#), or [trackback](#) from your own site.

ARIZONA JAGUARS  
(REVISED TO JUNE, 1966)

<u>BY WHOM</u>	<u>WHEN</u>	<u>WHERE</u>
Unknown (3)	1890	Grand Canyon (mother & two kittens)
J. C. Riggs	1901	Dos Cabezas Mts.
Unknown	March 16, 1902	Rincon Mts. *
Monroe Copelen	1902	Catalina Mts.
Unknown	Oct. 1903	Atascosa Mts.*
Geo. Winslow	Oct. 1910	Chevelon Canyon
Cowboy	1910	Chiricahua Mts. (Fly Peak) (Morrow)
Bozarth & Contreras	1912	65 mi. N.W. of Prescott
Frank Hand	Jan. 12, 1912	Chiricahua Mts.
Lon King (2)	Feb. 1912	S.W. of Winslow
Unknown	1912	Santa Catalina Mts. (Vorhies)*
Unknown	1912	Rincon Mts. (Vorhies)*
Unknown	1913	Tortolita Mts. (Goldman)*
E. J. O'Doherty	May 11, 1917	Helvetia (Santa Rita Mts.)
Unknown	1918	Santa Rita Mts. (Young)*
Lee Parker	Apr. 22, 1919	Greaterville (Santa Rita Mts.)
Unknown	Jan. 1920	Rincon Mts. (Holbrook Observer)*
Unknown	1920	W. Side of Santa Rita Mts. (Bailey)
Jack Funk	April 12, 1924	Cibecue (former World Record)
Fred Ott (2)	Nov. 1926	Cerro Colorado Mts.
Clyde Miller	Dec. 1926	Santa Maria Mts. (N.W. of Prescott)
Unknown	1932	Grand Canyon Village*
Frank Colcord	1933	Cerro Colorado Mts.
Rancher	1933	Estrella Mts. (S.W. of Phoenix)
Frank Hibben	1934	Altar Mts. (N.W. of Nogales)
Trapper	1939	Bloody Basin (75 mi. N. of Phoenix)
Red Harris	1941	Ruby (N.W. of Nogales)
Unknown	1947	Atascosa Mts. (W. of Nogales)
Ray Harshman	1948	Patagonia Mts. (N.E. of Nogales)
Walter Moon	Nov. 13, 1949	Cerro Colorado Mts.
John Nutt **	Apr. 21, 1958	Pena Blanca Lake (N.W. of Nogales)
Jack Herter**	Jan. 4, 1959	Patagonia Mts. (N.E. of Nogales)
Ed Scarla **	May 5, 1959	Patagonia Mts. (East of Nogales)
Harry Barnett	July 26, 1961	Cienega Ranch (N.E. of Sonoita)
Terry Penrod	Sept. 28, 1963	Big Lake (9000')
<u>(Varmint call)***</u>		
Russ Culbreath (Trap)	Jan. 16, 1964	Black River (Fort Apache)

\* From the files of the U. S. National Museum, Washington, D.C.

\*\* Questionable

\*\*\* This cat was probably released in front of a hunter and got away -  
teeth were worn

27 of the 39 jaguars have been taken within 75 miles of the Arizona-Mexico border.

Compiled by: Bob Householder, Box 6428, Phoenix, Arizona 85005