

Responses to Public Comment on the Draft Conservation Assessment and Framework for the Jaguar in Arizona, New Mexico, and Northern Mexico

Arizona Game and Fish Department
and
New Mexico Department of Game and Fish

May 31, 2006

The Arizona Game and Fish Department (AGFD) and the New Mexico Department of Game and Fish (NMDGF) are drafting a *Conservation Assessment and Framework for the Jaguar in Arizona, New Mexico, and Northern Mexico*. The Framework is based on the states' 1997 *Conservation Assessment and Strategy for the Jaguar in Arizona and New Mexico*. Both the Framework and the Strategy reflect collaboration with signatory agencies and the public, under a 1997 Memorandum of Agreement (MOA) that serves as a guideline for the state-led Jaguar Conservation Team described therein.

Although the JAGCT presently includes more than 30 signatory state, federal, county, and other agencies, with a variety of informal organizational and individual partners from the public sector, the two state wildlife agencies (AGFD and NMDGF) are primarily responsible for the content of the Strategy and Framework and for guiding the conservation effort. They are also responsible for developing the MOA under which the conservation effort operates. They must ensure that the overall effort, and each component, satisfactorily reflects the statutory responsibilities each holds for wildlife conservation, and appropriately serves as a mechanism for furthering conservation of the jaguar in collaboration with other agencies, the public, and Mexico. The JAGCT is the forum in which the two state wildlife agencies seek voluntary partner participation and support. Depending on their level of agreement with the MOA, the Strategy/Framework, and the manner in which the conservation effort is conducted, agencies can choose to participate formally (i.e. as signatories), informally (i.e. as non-signatory participants), or not at all. Nongovernmental organizations and individual members of the public can opt to participate informally, or not at all. This is, above all, a voluntary effort.

This document provides AGFD and NMDGF responses to agency and public comment received in May 2006 on the draft *Conservation Assessment and Framework for the Jaguar in Arizona, New Mexico, and Northern Mexico* (hereafter the Framework). In total, 52 letters, emails, faxes, or comment forms were received. The Comments below represent the full range of comment received, and address each substantive question, issue, or concern that was submitted. Some Comments represent input from a single entity, but some (e.g. Comments 1 through 13) represent similar or duplicate input from multiple entities.

1. **Comment:** I/We support protecting the jaguars that wander into the United States from Mexico. However, jaguar protection should be done in a manner that is based on sound science and does not create an economic hardship on residents living in the priority borderlands conservation area. **Response:** This Comment did not result in changes to the draft Framework. The Framework emphasizes basing decisions on sound science, which

- includes using the best information available. The Framework focuses on voluntary conservation practices. Neither past nor projected future jaguar protection efforts have created economic hardship for residents of the borderlands conservation area.
2. **Comment:** A more appropriate name for the Conservation Framework would be: The Conservation Assessment and Framework for Jaguars Dispersing into Arizona and New Mexico. **Response:** The suggested name for the Framework is neither more appropriate than nor as accurate as the current name. Use of “dispersing” as a modifier implies that jaguars only disperse to but are not resident in Arizona or New Mexico. The best science available affirms that jaguars do occur in AZ and NM, but it does not yet definitely conclude whether they are resident here or whether they ever could be resident here. However, the Framework has tentatively been renamed “Jaguar Conservation Assessment and Framework for Arizona, New Mexico, and Northern Mexico.” Perhaps this will alleviate the concern inferred from the Comment.
 3. **Comment:** Any habitat fragmentation, barriers to jaguar movement, or conservation measures developed by the JAGCT to protect jaguars in the New Mexico and Arizona should be based on sound science and peer reviewed research. **Response:** This Comment did not result in changes to the draft Framework. The Framework emphasizes basing decisions on sound science, which includes the best available information. Although peer reviewed research is the most desirable foundation, when such information is lacking the best available information can and will be used as necessary to make decisions and further collaborative conservation of the jaguar.
 4. **Comment:** Based on current scientific understanding, the fate of the borderlands jaguar depends entirely upon the success of the population of jaguars in Mexico. All planning efforts should be based on this knowledge. As we work to develop this new Conservation Framework, I hope we all keep this in mind. Mexico is where the conservation effort must begin. **Response:** The fate of the borderlands jaguar rests largely, but not entirely, on the success of the population in northern Mexico. Management north of the border is also important to enabling jaguars to occur here. Habitats must remain sufficiently intact (and barrier-free) and otherwise suitable for jaguars to move freely back and forth across the border, and to allow them to travel and sustain themselves in AZ and NM. Moreover, protection against unlawful take is also essential to jaguar survival here, whether as transients or as residents. However, clearly the long-term fate of jaguars in AZ and NM is largely (i.e. not entirely) dependent on the population in Mexico. The best available science strongly suggests that now and for the foreseeable future the number of jaguars likely to occur in AZ and NM will not be sufficient to maintain itself without dispersal from Mexico. The Framework has been revised to reflect this clarification.
 5. **Comment:** Although little is known about jaguars living in Mexico, it appears “potential/suitable” habitat in Arizona and New Mexico is being prescribed without sufficient information to support this effort. **Response:** This Comment did not result in changes to the draft Framework. Perceptions vary widely about what is and is not “sufficient information. Moreover, when “sufficient information” is lacking, the best

available information can and will be used. The statutory obligation for state and federal agencies to make reasoned management decisions is not alleviated by lack of available (sufficient) information. “Best professional opinion” is an appropriate and accepted standard when hard data are lacking. Additionally, we wish to note that considerable information is becoming available on jaguars in Mexico and some of that information has already been published through peer review processes. For example: Medellin et al. (1999) includes a number of scholarly papers on jaguar ecology and distribution, and other aspects of jaguar conservation. Boydston and Lopez-Gonzalez (2005) and Hatten et al. (2005) both address jaguar distribution and habitat issues, as do, in a somewhat less technical vein, Brown and Lopez-Gonzalez (2001). All these publications underwent some form of rigorous peer review, and all are significant contributions to a significant and growing body of work that serves as a solid, if incomplete, foundation for conservation decisions.

6. **Comment:** New Mexico has had only 18 historical sightings of jaguar over the last 500 years. Arizona has only had 25-26 CREDIBLE sightings over the same period of time. These numbers hardly indicate jaguars ever existed in these states for any extended period of time. **Response:** This Comment did not result in changes to the draft Framework. The number of historical sightings in AZ and in NM is arguable, but the issue at hand is not whether there have been 18 or 25 or 50 sightings in either state or in both states. The issue at hand is how to best conserve the jaguars that are now known, based on very recent (post 1995) and very well documented records, to occur in the AZ-NM/Mexico borderlands. The Framework is intended to serve that purpose, which flows from a legal obligation that both states have under state and federal law.
7. **Comment:** Climatic conditions have changed over the last millennium. These changes need to be addressed in the Framework. **Response:** The Framework has been revised to address, in a very broad sense, the issue of climatic change as it relates to jaguar habitat and distribution.
8. **Comment:** A section needs to be added (see Page 9, Threats 3.1, second paragraph) explaining habitat loss from subdivision, why it is bad, and the need to keep ranchers/farmers on the land to prevent subdivision. **Response:** The Framework has been revised to clarify the importance of habitat loss (including fragmentation) through subdivision or other causes, relative to jaguar conservation. The Framework already emphasizes that rural agricultural practices are largely compatible with jaguar conservation, and that an economically and ecologically viable ranching industry can be an effective free-enterprise mechanism for stemming the rising tide of urbanization.
9. **Comment:** See Page 10, last paragraph. The status of jaguar in Northern Mexico has yet to be determined. A report must be forthcoming from Mexico before additional threats are increased, or recommendations for a natural recruitment plan in New Mexico and Arizona can be developed. **Response:** This Comment did not result in changes to the draft Framework. Although comprehensive current status information is badly needed for Mexico, just as it is for AZ and NM, inferences about threats can and will be made as

- (partial) information becomes available. Similarly, recommendations for management actions in AZ and NM will also be developed based on the best available information and best professional opinion (see Response 5).
10. **Comment:** Threats to jaguar habitat do not need to be expanded. The original threats, as listed in the Federal Register notice, are sufficient to protect any jaguars wandering into the U.S. **Response:** This Comment did not result in changes to the draft Framework. It appears that the commenter might have confused the need to identify and address any threats that might emerge over time with the obligation to satisfactorily address all threats that were identified in the referenced Federal Register notice re: listing. The two state wildlife agencies are obligated to identify and address threats to wildlife on an ongoing basis, to the extent necessary to conserve the species and within the constraints of available resources. This includes newly emergent threats as well as those previously enumerated. In this case, Federal listing carries additional impetus for jaguar conservation efforts, and threats identified in the Federal listing would be a vital part of the threat assessment called for in the Framework.
 11. **Comment:** Modeling efforts don't always indicate the best science has been used in the process. Based on lack of scientific information on the Mexico population, there is no need to develop a Population and Habitat Viability Analysis/Assessment (PHVA) for New Mexico and Arizona. **Response:** The Framework has been revised to clarify that the desire is to examine the feasibility of a PHVA, before determining whether to conduct one. As noted in the JAGCT public meeting (April 27-28, 2006) when this issue was discussed with many of the parties offering this comment, AGFD and NMDGF are well aware of the substantial body of scientific literature that questions the effectiveness of PHVAs and requirements for detailed life history data in order to obtain reliable results from a PHVA. If the JAGCT determination is that a PHVA would not be an effective tool in jaguar conservation in AZ and NM, it would not be conducted.
 12. **Comment:** A glossary of definitions needs to be included in the Conservation Framework. **Response:** As noted in the JAGCT public meeting (April 27-28, 2006) when this issue was discussed with many of the parties offering this comment, AGFD and NMDGF are committed to including an appropriate glossary in the Framework (as can be seen in the re-drafted version). Please note, however, that meanings of words that are not included in the Glossary are intended in the "plain English" sense. As such, their meaning and context can best be understood by consulting a current collegiate dictionary.
 13. **Comment:** Future JAGCT efforts should focus on:
 - a. Clearly defining how the JAGCT can advance protection for jaguar in the U.S. **Response:** This Comment did not result in changes to the draft Framework. This is indeed the primary focus of the Framework, and will remain so.
 - b. Developing achievable habitat protections. **Response:** This Comment did not result in changes to the draft Framework. This is indeed a focus of the Framework and will remain so, in terms of generally ensuring that jaguars are free to move

- back and forth across the border and as widely as they wish to move in AZ and NM.
- c. Suggesting habitat improvements that can be made in the borderland area to conserve jaguars. **Response:** This Comment did not result in changes to the draft Framework. Voluntary habitat conservation measures are a primary focus of the Framework, and will remain so. See Response 13b.
 - d. Completing the survey of jaguars living in the U.S. This will allow us to know how many jaguars are actually inhabiting, or living in, the borderland region. **Response:** The Framework has been revised to clearly state that ongoing monitoring is essential to knowing how often, for how long, and how many jaguars occur in the AZ-NM/Mexico borderlands. Surveys of ranchers and other individuals personally familiar with the “back country” can also provide significant insight on those questions. However, it is essential to understand that, in such efforts, “how many” is almost never a discrete number. Rather, it is typically a range of numbers, with, when sample size is sufficient, a statistically valid confidence interval. Having such information informs the conservation effort, but conservation is needed even in the absence of “definitive” information. Note: surveys and monitoring can be firm commitments for public lands, but can only be conducted on privately owned lands with prior permission from the landowner or their authorized representative.
 - e. Exploring additional research possibilities, i.e. collaring a jaguar that might wander into the U.S. so the JAGCT can find out where it is living, through which corridors it is traveling and where it is going. **Response:** This Comment did not result in changes to the draft Framework. As noted in the JAGCT public meeting on April 27-28, 2006, the JAGCT signatory agencies have recommended that AGFD and NMDGF authorize and conduct radiocollaring of one or more jaguars as suggested. Both agencies are evaluating that recommendation, and will render decisions as quickly as possibly. Actual capture, if approved, would, however, be held in abeyance until a jaguar presented itself in circumstances conducive to successful capture and release (e.g. persistent presence in an area, favorable weather conditions, availability of personnel with appropriate expertise).
 - f. Exploring funding possibilities that would produce a valid habitat assessment based on any new information coming out of current research activities without guess work or “habitat modeling.” **Response:** This Comment did not result in changes to the draft Framework. As noted in the JAGCT public meeting on April 27-28, 2006, the JAGCT signatory agencies will be asked to provide or assist in securing funds necessary to implement all aspects of the final Framework in timely fashion. If a habitat assessment is among the activities undertaken by JAGCT, it would be addressed in accordance with the priority it is given.
14. **Comment:** The document is extremely disappointing and is not a reflection of all the time people have committed to the Conservation Team and the development of strategies

to assist in the conservation of an animal that visits our states from time to time. It is written with numerous inconsistencies and complete sections that are not clear to anyone. A number of these issues were discussed in detail at the Lordsburg meeting and I assume these comments have been forwarded to you. **Response:** This Comment did not result in changes to the draft Framework. However, we note that all detailed comment offered at the referenced Lordsburg meeting (May 17, 2006) has been incorporated into this document and is addressed on an issue-by-issue basis.

15. **Comment:** I have a huge concern that it is written to support an agenda rather than to be a working agreement document. It is based on a statement that there are populations of jaguars in New Mexico and Arizona which is a gross distortion of the facts or reality. In fact there is only a population in Mexico and we do not have enough data or science to know the specifics of this population. Furthermore, the document does not reflect the fact that there are conflicting and divergent opinions, from various experts, with regard to the science, data, prey base, suitable habitat etc. for the jaguar. I believe to ignore the above issues really compromises the integrity of this document and its usefulness as a planning tool for the Jaguar Conservation Team. Furthermore many of the terms are not clearly defined so that it is difficult to know the intent of many of the aspects of the agreement. **Response:** This Comment did not result in changes to the draft Framework. Although there certainly is disparate (conflicting) opinion among experts on many aspects of jaguar status and conservation, the common ground is far more substantive and informative. For example, there is clear “best science” consensus that: (a) jaguars occurred in the AZ-NM borderlands historically and still occur there today; (b) the primary conservation needs for jaguars in AZ-NM and in northern Mexico are ability to move (including dispersal) throughout the area of recent occurrence and perhaps even more broadly, subject only to natural limitations; (c) jaguars need protection from unlawful take and from inadvertent take potentially associated with other lawful activities; and (d) public outreach (information and education) is necessary to promote jaguar acceptance and appropriate conservation practices. There is equally clear scientific consensus that habitat fragmentation, degradation, or outright destruction, and depleted native prey populations in some local areas (whether due to current weather cycles or other factors), are not conducive to jaguar conservation. And, as a final example, there is clear scientific consensus that research is needed *in situ* to yield better information on all aspects of jaguar ecology, distribution, and status. Also, see Response 12 regarding a Glossary.
16. **Comment:** A further concern for me is that the background information totally ignores the cultural literature that is as valid as background information on the jaguar as other historical data cited in the document. Maybe this information is left out, because it gives extensive information with regard to the jaguar being a resident of Mexico and occasionally straying into the border areas of Arizona and New Mexico. **Response:** This Comment did not result in changes to the draft Framework. AGFD and NMDGF would consider any relevant cultural or other information for inclusion in the Framework. If anyone is aware of published or other documents that might help make the Framework a

- better foundation for jaguar conservation, please provide the appropriate citations or references.
17. **Comment:** I hope this was not written to generate a court challenge with the assumption that the impacted people are too poor to support a court case. **Response:** This Comment did not result in changes to the draft Framework. The concern expressed is not and never has been a consideration in this conservation effort.
 18. **Comment:** On page 9, final paragraph. When addressing international border issues and possible resulting effects on jaguars, illegal smuggling and immigration activities should be noted foremost as threats to jaguar activity. Abundant foot traffic, especially frequenting water sources, observably disrupts livestock and wildlife behavior. Homeland security measures that may disrupt jaguar travel are a direct result of the illegal actions taking place. I also object to using the term 'conservation' when 'movement' is described in line 4. **Response:** The Framework has been revised to note the threat that the referenced unlawful human activities pose to jaguar conservation.
 19. **Comment:** Page 19, paragraph 4.4.2.2, line 3 "including habitats of known and potential occurrence" should be changed to, "including points of known or reported occurrences, together with habitat types known to contain and sustain breeding populations of jaguars". **Response:** The Framework has been revised to address this Comment.
 20. **Comment:** Page 23, paragraph 4.4.6.5. Delete the final portion of the last sentence reading "and established timelines for achieving allowable population sizes via natural recruitment." One cannot set timelines for natural recruitment. **Response:** The Framework has been revised to address this Comment.
 21. **Comment:** In general throughout the document the terms cooperators, signatories and JAGCT members appear to be used interchangeably. We recommend that one term be used consistently. **Response:** The Framework has been revised to address this Comment.
 22. **Comment:** Section 4.3.1.1 Add southern Graham and Greenlee Counties. Consider referencing the habitat subcommittee report. **Response:** The Framework has been revised to address this Comment.
 23. **Comment:** Section 4.3.1.2 In BLM vernacular allotment management plans (activity level plans) are not at the same level as land use plans (RMPs). Suggest rewording similar to "Any JAGCT recommended changes to applicable planning documents and planning processes will occur through..." **Response:** The Framework has been revised to address this Comment.
 24. **Comment:** Section 4.3.1.3 Include southern Graham and Greenlee Counties. **Response:** The Framework has been revised to address this Comment.
 25. **Comment:** Section 4.4.1.2 Requests for money and labor for jaguar efforts need to come to the agencies in a timely manner. The BLM would need at least a year to budget funds and plan labor. Suggest adding wording that the request be done well in advance or in a timely manner. **Response:** The Framework has been revised to address this Comment.
 26. **Comment:** Section 4.4.6.1 Review the paragraph to insure consistency with the recommendations of the JAGSAG. Consider referencing the JAGSAG recommendations

- approved by the JAGCT. **Response:** This Comment did not result in changes to the draft Framework. We believe that the Framework passage referenced is consistent with the JAGSAG recommendations.
27. **Comment:** The current document is intended to build on the foundation of previous Jaguar Conservation Team (JAGCT) efforts under the 1997 “Conservation and Assessment and Strategy for the Jaguar in Arizona and New Mexico.” Unfortunately, it is a weaker document than the previous one considering what has transpired over the past 10 years. For example, the document lacks a jaguar recovery goal for the U.S. (even though several have been proposed and discussed within JAGCT), fails to recognize loss or degradation of habitat as a clear threat to the jaguar in the U.S. (even though this serious threat has been discussed on numerous occasions), and is less specific about conservation measures and without time schedules for implementation. Further, it does not build on important previous work (for example, on habitat conservation guidelines) but simply ignores it. In other instances, it just rehashes its call for tasks (for example, assessment of impacts to jaguar habitat) that were to have been completed many years ago. **Response:** This Comment did not result in changes to the draft Framework. As noted repeatedly in JAGCT meetings, JAGSAG advises that the jaguar is not a recoverable entity within the United States alone. The persistence and number of jaguars in the U.S. is dependent on the health, stability, and persistence of the northern Mexico core population, habitats sufficient to enable jaguar movements range-wide, and protection from unlawful take. Habitats in AZ and NM are by definition marginal at best for jaguars, and aside from management to address “movement impedance issues” such as border barriers, habitat protection or enhancement in these areas is not needed for jaguars. Perhaps this is best evidenced by presence of mountain lions and bears essentially throughout the area in question. Both habitat and prey base exist in sufficient quantity and quality in AZ and NM to sustain carnivores, including the jaguar. In regard to “rehashing” tasks that have not been completed as planned, if the tasks warranted completion in 1997 and still do, but have not been completed due to lack of resources, we believe they should be identified again and completed.
28. **Comment:** Ironically, while touting the “metapopulation concept for species persistence and an ecosystem approach for habitat conservation” the document ignores entirely the team’s failure to move toward applying these key concepts despite numerous efforts on the part of myself as a professional conservation biologist to encourage and assist the team in doing so. As you know, I have been an active member of the Habitat Subcommittee and attended many of the full JAGCT meetings over the past 10 years. As you are also aware, individual property rights and ranching advocates have been allowed under Arizona Game and Fish Department leadership to block implementation of habitat conservation goals and tasks agreed to in the 1997 document. This new “framework” adds insult to injury for those of us who had sincerely hoped that the initiative begun in 1997 would lead to actual on-the-ground conservation of key blocks of habitat and connecting corridors for the jaguar and perhaps other large carnivores of the American

- Southwest. Instead, today we see an ecological landscape further degraded and without conservation planning, and a socio-political landscape littered with broken promises and growing distrust of your agency. It is time to end the political (and public relations) charade and develop a genuine recovery plan and team for the jaguar in the American Southwest. **Response:** This Comment did not result in changes to the draft Framework. We understand your concerns, but respectfully disagree with both the causes to which you attribute them and your suggested course of action.
29. **Comment:** 2.4 Distribution-Historical and Current. Page 6, second paragraph, next to last sentence. The most recent jaguar photograph by the Borderlands Jaguar Detection Project was taken in May 2006. **Response:** The Framework has been revised to address this Comment.
30. **Comment:** 3.2 Conservation Efforts and Research in the United States. Page 11, last paragraph. Borderlands Jaguar Detection Project. Should read: To date, the Borderlands Jaguar Detection Project has documented 62 jaguar events inside the state of Arizona since its initiation in 2001 (McCain et al. 2006). This includes 42 photographs, 12 sets of tracks, and 10 scat/fecal samples. (The scat/fecal samples have not been confirmed by DNA.). **Response:** The Framework has been revised to address this Comment.
31. **Comment:** 3.3 Conservation and Research Efforts in Mexico. Page 12 next to last paragraph. Naturalia has obtained a 3-year option to purchase the ranch bordering the 10,000 acres already purchased. **Response:** The Framework has been revised to address this Comment.
32. **Comment:** It was stated that the 10 scat/fecal jaguar samples were identified (page 11). It was mentioned at the recent Lordsburg meeting that the samples were not jaguar. This needs to be verified. **Response:** The Framework has been revised to address this Comment.
33. **Comment:** Page 16 – insert APHIS in the middle of USDA Wildlife Services. **Response:** The Framework has been revised to address this Comment.
34. **Comment:** Recommend listing individuals and/or organizations represented on the Jaguar Scientific Advisory Group (page 17). **Response:** This Comment did not result in changes to the draft Framework. Although JAGSAG membership (consisting entirely of recognized experts in jaguar research and conservation) has been remarkably stable thus far, membership is dictated by individual expertise and willingness and availability to serve. Thus, the potential for change (through turnover or addition) suggests that listing the current individual members and/or their agencies of affiliation would not be meaningful.
35. **Comment:** The Conservation Team should encourage Native American Tribes to be signatory and not just provide them with technical support (page 18). **Response:** The Framework has been revised to address this Comment.
36. **Comment:** Eliminate section 4.4.5.1 (Trapping) for the following reasons:
- a. Section 4.3.1.2 – “The JAGCT is not a regulatory entity, and it is fundamental that the needs of the jaguar must be met in the context of a wide spectrum of other

wildlife needs and a variety of land uses on federal, state, and private lands.”

Response: The Framework has been revised to address this Comment.

- b. Regulatory mechanisms for the protection of jaguars are already identified in section 2.7 especially the Endangered Species Act which would include consultation with the USFWS by federal agencies. **Response:** The Framework has been revised to address this Comment.
 - c. The goal (section 4.2) is to “Provide coordination and conservation measures to public and private natural resource managers...” **Response:** The Framework has been revised to address this Comment.
 - d. It is not clear to us why trapping by Wildlife Services and other cooperators is singled out as the primary threat to jaguars, when it could be arguable that border issues such as illegal immigrants, drug smuggling and fence building along the border may have a larger impact on jaguars in addition to other threats such as habitat loss and poaching as they are identified in section 3.1. **Response:** The Framework has been revised to address this Comment.
 - e. Wildlife Services has been an active participant in the JAGCT, a signatory agency on the MOU, and uses its resources to protect endangered and threatened species as outlined in the Endangered Species Act. **Response:** The Framework has been revised to address this Comment.
 - f. There may be a time when we want to target a depredating jaguar in order to haze or radio-collar the animal. **Response:** The Framework has been revised to address this Comment.
37. **Comment:** Page 20, 4.4.4.1- Range expansion implies breeding populations north of the border, which implies reintroduction or at the least re-colonization. Reintroduction efforts are not supported by the JAGSAG. **Response:** This Comment did not result in changes to the draft Framework. Range expansion is an inclusive phrase that covers natural expansion of seasonally or transiently occupied habitats, as well as habitats occupied for breeding purposes. However, the commenter is correct in asserting that JAGSAG does not support jaguar reintroduction in AZ or NM. However, neither does JAGCT, as is documented in the original jaguar conservation strategy under which JAGCT currently operates, and in this draft Framework.
38. **Comment:** As County Assessor (Hidalgo County NM), I see properties that are taken off the "market" by being encumbered with easements. This would be one more easement that might prevent a landowner from selling his or her property on the open market. **Response:** This Comment did not result in changes to the draft Framework. Easements are a voluntary means by which a landowner can protect their assets. In some cases, they clearly do result in an owner taking a property off the open market and retaining it for (partial) personal use. However, voluntary easements, such as conservation easements (which we assume, perhaps erroneously, are at the heart of this Comment), are authorized by state law, and recognized under federal law, as a legitimate part of our free enterprise system. Thus, both AGFD and NMDGF see easements as legitimate components of a

- voluntary jaguar conservation program, to the extent allowable under state and federal law.
39. **Comment:** I see in your public meeting notice that the comment deadline is the same day as the public meeting, a meeting to be held at 6pm on a Friday evening. I infer from these facts that you are attempting to minimize public awareness, public input and public involvement. **Response:** This Comment did not result in changes to the draft Framework. The public meetings in AZ and NM were announced in the April 27-28, 2006 JAGCT public meeting. The need for a brief comment period was also discussed in that meeting. The meetings were also announced in the standard JAGCT electronic newsletter (*Endangered Species Updates*, which is distributed via self-subscription through the AGFD website (<http://www.azgfd.gov/signup>)). There was no desire or intent whatsoever to minimize public awareness, public input, or public involvement. There simply were, and are, deadlines that must be met.
40. **Comment:** Page 15, 4.3.1.2: Suggest last sentence of paragraph, "Any JAGCT recommended...Title 43 1901) be deleted; Appears to overstep bounds of a non-regulatory organizational document. **Response:** The Framework has been revised to address this Comment. The passage in question was inserted in the Conservation Strategy on which the Framework is based, at request of the USFS. Since this request for deletion is also from the USFS, we have no objection to deleting it.
41. **Comment:** Page 15, paragraph after 4.3.1.3, "To the extent that the Framework applies... and oversight by Mexico;" Suggest that this sentence/paragraph be rewritten so that it is understandable to the reader or just deleted; Not able to make any suggestions as to the rewrite since had no idea what was being said. **Response:** The Framework has been revised to address this Comment.
42. **Comment:** Page 16, paragraph 4.3.2.1; Suggest that "(e.g. the U.S. Forest Service ... and New Mexico) be deleted; It is well explained. **Response:** The Framework has been revised to address this Comment.
43. **Comment:** Also, since this paragraph [4.3.2.1] is stating that 2-signatory reps will now be appointed, what is the Region's game plan for that? Currently there is only one rep per signatory. One from the RO & one from the Coronado? **Response:** This Comment did not result in changes to the draft Framework. It addresses an issue the USFS must resolve internally.
44. **Comment:** Page 18, paragraph 4.3.5.1: Members or participants to the Trilateral Committee need to be explained or identified a little better than just saying that the Committee is comprised of the United States, Mexico, and Canada. That's a pretty big group. Just who are we talking about here? **Response:** The Framework has been revised to address this Comment.
45. **Comment:** Page 21-22, paragraph 4.4.5: Suggest changing objective heading to "Promote Protection of Jaguars in the United States." **Response:** The Framework has been revised to address this Comment.

46. **Comment:** Also, since paragraphs 4.4.5.1.1, 4.4.5.1.2., 4.4.5.1.3 & 4.4.5.1.4 refer to direction covered by ESA, consultation/BO with/from USFWS and other state legislation, these paragraphs may be summarized in a single, descriptive paragraph instead of 4-paragraphs of very specific "direction" from a non-regulatory organization's strategic plan. Or actually, these paragraphs could be deleted because paragraph 4.4.5.1.5 states the essence of this objective. **Response:** The Framework has been revised to address this Comment.
47. **Comment:** Page 23, paragraph 4.4.7.0 appears to be somewhat verbose/wordy/over-explained. Suggest that a rewrite be considered. The first and the last 2 sentences cover the topic reasonably well; and [comment ended abruptly, as represented herein]. **Response:** The Framework has been revised to address this Comment.
48. **Comment:** Page 24, paragraph 4.4.7.2.3: Suggest the following edit: "The JAGCT will, at a minimum, produce and distribute jaguar conservation information through annual hunting..." vice "The JAGCT will, at a minimum, produce and distribute jaguar conservation information for distribution through annual hunting... **Response:** The Framework has been revised to address this Comment.
49. **Comment:** If you read the text cold, especially the parts quoting scientific papers, one gets the feel that the work is trying to support a defensive position. I don't think this is good. JAGCT is a fact, jaguars in the U.S. is a fact, and the objectives are fact. I haven't talked to anyone who is against the jaguar conservation goal, just those with different ideas as how to achieve that goal. **Response:** This Comment did not result in changes to the draft Framework.
50. **Comment:** Page 4, "Population Status and Trends." This section confuses current information with historic and should be divided. As it is, it sounds like a justification for reintroduction. It would read better if the last paragraph was the first paragraph, and replace "however" with "documented." **Response:** The Framework has been revised in ways that might alleviate some of the concerns expressed in this Comment. However, as noted previously in this document, and repeatedly in JAGCT discussions, reintroduction is not and has not been under consideration. JAGCT (including both state wildlife agencies) and JAGSAG are opposed to jaguar reintroduction. It would be an extremely costly, and likely unproductive, approach to a legitimate conservation issue.
51. **Comment:** Page 5, Distribution. This section is too long and again sounds like an unneeded justification. A short summary for the US and Mexico sections would suffice. **Response:** The draft Framework was revised to address this Comment, in terms of deleting the information for Texas. Disagreement over historical, recent, and current distribution of jaguars in AZ and NM has been present throughout this conservation effort since its inception. Public comment addressed elsewhere affirms that some interested and affected parties still advocate that jaguars are not a scientifically legitimate element of the conservation landscape in AZ and NM. Abbreviating the Distribution discussion would likely only exacerbate the problem.

52. **Comment:** Page 7, Habitat. The last two sentences are irrelevant because they serve no function supporting the facts. Again just unneeded justification. **Response:** This Comment did not result in changes to the draft Framework.
53. **Comment:** Page 15, Implementation. Under 4.3.1.3 the first sentence is unnecessary and controversial. The last sentence in that paragraph gets the point across better and should be moved to front. **Response:** The Framework has been revised to address this Comment.
54. **Comment:** Page 19, 4.4.2. The last sentence of the second paragraph is unclear and poorly worded. What does “inappropriately constrained” mean? I think this sentence should read; “The JAGCT will educate landowners and public land managers as to possible problems with known barriers to the jaguar’s natural movements.” **Response:** The Framework has been revised to address this Comment.
55. **Comment:** Page 20, 4.4.4.3. I have two problems with this paragraph, “conserve key habitat linkages”, and “range expansion.” I am not convinced that jaguars can overcome the major obstacles, such as interstate highways and subdivisions and move between small parcels of habitat. Range expansion implies breeding populations north of the border, which implies reintroduction. Even with major land protection efforts, the chance of “natural” permanent occupation is slim to none. This paragraph is politically antagonistic at best. **Response:** This Comment did not result in changes to the draft Framework. Major obstacles, including interstate highways, will never be removed for jaguars, but at least a few jaguars do seem to be overcoming them, to the extent that jaguars have occurred repeatedly in AZ and NM over the past decade. We do not share your concern about range expansion implying reintroduction (see Response 37), and nowhere in the Framework or its predecessor Strategy has “permanent residency” ever been considered an actual or even a potential objective of this conservation effort. AGFD and NMDGF are committed to conserving jaguars in AZ and NM, and to allowing the jaguars to determine whether their occupancy is seasonal or permanent.
56. **Comment:** Page 21, Trapping. The first four paragraphs should start with “JAGCT recommends...” Predator control by private land owners on private land in New Mexico is virtually unregulated by state or federal laws. Incidental trapping or killing of Jaguars could happen. Threats or disincentives do not work. Education, cooperation, and assistance with predator problems is the correct route to conserve jaguars. Stopping all predator control work 25 miles from a jaguar take is impossible to enforce and unnecessary. This kind of pseudo-regulation makes no sense to those on the ground. Of course those who trapped or killed a jaguar will stop and reevaluate what they are doing, but no one will have the time and maybe even the authority to enforce a 25 mile stop work zone for six months. **Response:** See Response 36.
57. **Comment:** Page 23, 4.4.6.3. Suggested rewording: AZGFD and NMGFD will maintain a database of jaguar sightings. Sightings will include all information collected from all reports and will be ranked using the following procedure: 1. All sightings that have.....2.3. **Response:** The Framework has been revised, in response to previous Comments, in ways that might also be responsive to this Comment.

58. **Comment:** Page 23. 4.4.6.5. What drives the need for a PHVA? This needs to be made clear. Maybe JAGCT should first explore the research needs and funding possibilities that would produce a valid habitat assessment, including the evaluation of habitat protection and habitat improvement efforts on existing jaguars in the U.S. We don't need more literature search/GIS "research papers." We need to clearly outline how JAGCT plans to truly advance the science of habitat evaluation for jaguars. **Response:** See Response 11 re: PHVAs.
59. **Comment:** In science, asking the right questions is the first step in solving any problem. **Response:** This Comment did not result in changes to the draft Framework. However, we note that the "scientific method" assumes the need to repeatedly refine, if necessary, the questions asked. This reflects the fact that seldom is the right question asked the first time; trial and error and corrective adjustments are part and parcel of science, learning, and adaptive management.
60. **Comment:** I am a student at a middle school in Vail, Arizona. I am writing in regards to the scientists who want to capture jaguars and follow their every move.
- a. I feel that wild animals need to be left alone. Even if the jaguars are in their own habitat they will not act the same when people are observing them. **Response:** This Comment did not result in changes to the draft Framework. Although we agree that in general wild animals should not be harassed, active management is sometimes necessary to ensure survival of the population as a whole. Moreover, modern technology often enables biologists to observe wild animals unobtrusively, sometimes even without actually seeing them. Radiotelemetry collars are a good example. They must be placed on the animal, but once there they can provide information via satellite relay to biologists many miles away.
 - b. Jaguars are not meant to be in captivity. **Response:** This Comment did not result in changes to the draft Framework. Although temporary capture (holding) is sometimes a necessary component of wildlife management, the focus of this Framework is on effecting conservation actions on the ground that assist in sustaining a wild population of jaguars in northern Mexico and the adjacent AZ-NM borderlands.
 - c. They have been killed because of being captured. **Response:** This Comment did not result in changes to the draft Framework. The information provided to you or your school may not have made clear that the two capture mortalities referenced occurred in Mexico, under conditions that were vastly different than those that would occur if a jaguar were captured and radiocollared in AZ or NM. However, it is a fact that when wild animals are captured, death can occur. The challenge is to determine when the potential benefits of capture significantly outweigh the possible loss of life, and to diligently ensure that to the best of your ability you have minimized the chances of death occurring.

- d. I hope the Arizona Game and Fish will not approve this idea. **Response:** This Comment did not result in changes to the draft Framework. AGFD has not made a decision, but will do so after reviewing all the relevant available information.
61. **Comment:** Everyone I have ever talked to regarding jaguar conservation in Arizona and New Mexico supports conserving the jaguars that wander into the United States from Mexico, if it is done in a reasonable manner. No doubt we can all agree, including the Center for Biological Diversity, on this point. However, our differences of opinion seem to center around what kind of conservation measures we can develop to protect jaguars roaming into our states, and what constitutes “reasonable.” **Response:** This Comment did not result in changes to the draft Framework. See Response 1.
62. **Comment:** It has always been my personal objective that all conservation measures the JAGCT develops should be based on the best available science and scientifically defensible. Although I am not a signatory to the MOA, I, personally, can only support conservation measures that use the best available science, have realistic, achievable goals and incorporate common sense into these protection efforts. **Response:** This Comment did not result in changes to the draft Framework. See Responses 1, 3, 4, and 5.
63. **Comment:** Page 3, paragraph 1 of the Draft Conservation Assessment and Framework states; “the fate of the borderlands jaguar depends entirely upon what happens to this (jaguar) population in Mexico.” As we work to develop this new Conservation Framework, I hope we all keep this in mind. Mexico is where the conservation effort must begin. **Response:** The Framework has been revised in ways that might address this Comment. See Response 4.
64. **Comment:** Since Mexico is a sovereign nation with its own laws, we need to recognize our values can not be imposed upon them. However, the JAGCT does support and encourage their efforts. If the population in Northern Mexico does not prosper and multiply, any conservation measures we develop for Arizona and New Mexico will be meaningless until Mexico succeeds in its effort. **Response:** This Comment did not result in changes to the draft Framework. However, we agree with the Comment and we believe the Framework accurately and adequately addresses this issue.
65. **Comment:** Since we have not completed the survey by landowners living in Southwest Arizona and New Mexico, as recommended in the Jaguar Conservation Assessment and Strategy - 1997, it would be irresponsible to assume jaguars live in the U.S. We also need to keep in mind Alan Rabinowitz's, JAGSAG, comments to AZG&F on April 2, 1999: *“In response to your last e-mail about jaguar habitat, there is not much to say other than to sit and wait and watch what happens with additional jaguars. I’ve said this before, but I will repeat myself for the sake of clarity. ‘Habitat’ is most commonly defined as: 1) a place where a plant or animal naturally lives or grows; 2) the typical place of residence; 3) the place where something is commonly found. I have yet to see or hear about any place in the U.S. that meets the criteria of ‘jaguar habitat’. What you have proven is that there are corridors which jaguars have used to enter the U.S. The only important questions now are: where are they coming from, why don’t they stay around, and where*

do they go when they leave? Pursuing any other issues than these at this time is premature. Defining 'jaguar habitat' in the U.S. at this time is biologically incorrect."

Response: This Comment did not result in changes to the draft Framework. We disagree with the assertion that it is irresponsible or inaccurate to assume that jaguars live in the U.S. As noted elsewhere (e.g. Response 15), a rational, science-based case simply cannot be made that jaguars do not ever occur in the U.S. They do occur here, at least occasionally and perhaps with more regularity and for longer periods than has been documented thus far. The primary scientifically-legitimate questions are how often they occur, where they occur, for how long they occur, and what if anything meaningful can and should be done to facilitate their occasional or persistent occurrence. Those are basic questions that are as yet not answered to anyone's satisfaction. In our opinion, the Rabinowitz quote offered in this Comment refers to jaguar habitat in terms of long-term persistence. He has said, and we have always agreed, that from a scientific perspective there is no habitat (whether historical, current, or potential) in the U.S. that is biologically crucial to range-wide conservation of the jaguar. Nor is there hard evidence or even reasonable likelihood that habitats in Arizona, historically or currently, were/are of sufficient quality to sustain a true population of resident (breeding) jaguars rather than individuals and/or the occasional breeding pair. Rabinowitz' extensive, unquestioned expertise supports the contention that habitats here are simply too marginal, and naturally so, to sustain jaguars in the long-term, perhaps even as individuals but certainly as a breeding population, without periodic influx from Mexico. We agree. However, we do not agree that habitats used by naturally occurring jaguars, even in a short-term sense, are not in any sense "jaguar habitat." But, again, we do not believe that is what Rabinowitz intended in the quoted passage.

66. **Comment:** It is recognized, by the wildlife biologists on the JAGSAG, that the jaguars we have been seeing in southern Arizona and New Mexico over the last 10 – 150 years are, "regular, albeit infrequent, visitor(s) to a small area of the borderlands region." Based on this information, the Conservation Assessment and Framework should be renamed: *The Conservation Assessment and Framework for Jaguars Dispersing into Arizona and New Mexico and Jaguars in Mexico.* **Response:** See Response 2.
67. **Comment:** Page 2; Para 1 – It is very presumptuous to state, "habitat fragmentation and barriers to cross-border movement could prevent jaguars from using previously inhabited areas in the U.S." when research in Mexico has not been completed and we have no studies that support this hypothesis. This statement needs to be deleted. **Response:** See Responses 1, 3, 4, and 5.
68. **Comment:** Page 3; Para 4 – Any "foundation" that is developed to conserve jaguars in the U.S. must be based on the best available science, regardless of any prior strategy developed by the JAGCT before sufficient scientific information on habitat requirements and use by the Northern Mexico jaguar population was available. Since this information and report have not been forthcoming, this section needs to be clarified. **Response:** See Responses 1, 3, 4, and 5.

69. **Comment:** Page 4; Para 2.1 – Jaguars are not the only species of cat to have melanistic (black) offspring. Melanistic pumas/mountain lions are also commonly reported and documented. This fact needs to be included in this paragraph. **Response:** The draft Framework was revised to address this Comment, although the referenced passage was accurate as written. There was no real need to reference melanistic mountain lions specifically, although awareness of their occurrence should always be considered when classifying sightings.
70. **Comment:** Page 4; Para 2.2 – Taxonomy – According to an article written by Alan Rabinowitz, “Connecting the Dots: Saving the Jaguar Throughout Its Range;” Wildlife Conservation Society Magazine, January/February 2006; page 29: “My thought went back to 1997, when a study of the skull characteristics used for nearly a hundred years to separate jaguars into eight subspecies found that jaguars are, in fact, structurally alike throughout their range. Two years later, at the time of our (WCS Jaguar Conservation Program) workshop, DNA research conclusively showed that jaguars had not yet diverged into any discrete subspecies.” This section needs to be updated to include this new information. **Response:** The Framework has been revised to address this Comment.
71. **Comment:** Page 4, Para 2.3 - Population Status and Trends – This discussion does not address changing climatic conditions, i.e., drying trend over the last 500 years. Nor does it address mountain lion/cougar conflicts as discussed by the JAGSAG – October 25, 2000. “*The northern limit of jaguars was reduced to southern New Mexico and Arizona during the Recent Epoch, and this distribution has been considered a relict population of the once widely distributed Holarctic (sic) jaguar form (Kurten and Anderson 1980, Seymour 1989). Restriction of range to the continent’s neotropical forests coincided with a reduction of body size and limb length (Seymour 1989). Turner (1997) has proposed that the jaguar was likely driven from the more open habitat in the northern part of its range by the late appearance of the lion (Panthera atrox) in North America.*” **Response:** The Framework has been revised in ways that might address this Comment.
72. **Comment:** In addition, referring to the jaguar in the U.S. as a “resident” appears to contradict Dr. Rabinowitz’s comments in his trip report of the Southwest June 21-26, 1997: “*For at least the last century, the jaguar has been a regular, albeit infrequent, visitor to a small area of the borderlands region....If there were resident breeding populations of jaguars in the past, they were very small, probably short-lived, and not viable.*” (Emphasis added). This section also confuses current information with historic information and should be clarified. **Response:** The Framework has been revised in ways that might address this Comment.
73. **Comment:** Page 5, Para 1 – The 64 jaguars quoted as killed in Arizona needs to be checked for accuracy. According to Adele L. Girmendonk’s report, AZ Game and Fish Department (1994), AGFD had “*81 jaguar reports from Arizona and one in Sonora from 1848 to March 1994. Twenty-six (26) of the total observations were evaluated as credible accounts, but only 17 were confirmed reports.*” **Response:** This Comment did not result in changes to the draft Framework. The referenced passage was accurate as written.

74. **Comment:** In Technical Report 203, “Characterizing and Mapping Potential Jaguar Habitat in Arizona” (January 2003), by the Arizona Game and Fish Department, it was reported: *“Two factors that complicated our analysis and mapping efforts were: 1) vagueness in site descriptions, and 2) most occurrence records reported the locations where jaguars were taken and not necessarily the area being used by the jaguar. To improve our mapping effort, jaguar sites were plotted with GIS that displayed digital topographic maps, satellite imagery, hydrography, and shaded relief maps to visualize terrain. To reduce positional error and create the most specific habitat suitability model, we used only the most reliable and spatially accurate records (25). The 32 leftover occurrences were not suitable for accuracy assessment, but we did overlay them and examine their proximity to potentially suitable habitat.”* Although this report does not site “credible reports” as a reason to exclude the 32 leftover sightings, it appears the 25 “accurate records”, are more closely aligned to Ms. Girmendonk’s 26 “credible accounts” of sightings in Arizona. As you are aware, mapping the “historical” sightings has been one of the most contentious issues during the 9 years of the JAGCT existence. The more recent information should replace Dr. Brown’s, 1991 report on sightings. **Response:** This Comment did not result in changes to the draft Framework. Perhaps we do not understand your point, but insufficient spatial accuracy does not negate a record’s value in terms of confirming an instance of a jaguar being killed.
75. **Comment:** Page 5, Para 2 – Other factors contributing to the jaguar’s decline need to be discussed here also, i.e. climatic factors and conflicts with lions. See comment # 5 – Page 4, Para 2.3. **Response:** This Comment did not result in changes to the draft Framework. The inference re: resident was the cited author’s and is accurately portrayed in the Framework.
76. **Comment:** Page 5, Para 3 - Assuming the jaguars reported in the U.S. were “resident” to this area is highly speculative. See comment #5 - Page 4, Para 2.3. **Response:** The Framework has been revised in ways that might address this Comment. See also Comment and Response 73.
77. **Comment:** Page 5, Distribution 2.4 – This section is too long and sounds like unneeded justification for a reintroduction/recolonization effort. A shorter, more accurate summary limited to Arizona, New Mexico and Mexico would suffice. **Response:** The draft Framework was revised to address this Comment. The referenced passage was accurate as written, but the information for Texas was deleted as irrelevant. See also Response 51.
78. **Comment:** Page 7, Habitat 2.5 – Although the discussion in this section admits “little is known about the characteristics of habitat used by jaguars in the northern extent of their range”, it appears “potential/suitable” habitat in Arizona and New Mexico is being prescribed without sufficient information to substantiate this effort. The last two sentences are irrelevant because they serve no function supporting the facts. This section is a discussion based on assumptions and personal comments that can not be scientifically substantiated, nor has it been peer reviewed. This discussion needs to be limited to information that has been documented. **Response:** See Response 52.

79. **Comment:** Page 7, Para. 3 - Sierra Institute Report – This report contains a reintroduction/recovery plan that was not supported by the JAGSAG. This fact needs to be included when referencing this report. **Response:** This Comment did not result in changes to the draft Framework. The Institute report’s advocacy of a reintroduction or recovery plan is not relevant to the referenced discussion. Citing the report for one element does not constitute endorsement or advocacy of any other.
80. **Comment:** Page 7, Pertinent Biological and Ecological Factor 2.6 and/or Page 8 Para 1, Referencing only Brown and Lopez-Gonzalez (2001) statement that “home ranges of jaguar are highly variable” is misleading. Rabinowitz comments in his February 12, 2006 email that the “so-called borderland jaguars on the Mexico side” are in desperate straits, mostly because of prey issues” and if “these animals do not survive or stabilize in numbers” (and he is not convinced they can) “nothing else in the region is likely to happen in terms of jaguar settlement” needs to be included in this discussion. Although a “male niche” might include areas into which males occasionally disperse, the next sentence would appear to eliminate New Mexico as a potential habitat since “female jaguars” have different “environmental requirements” than males. **Response:** The Framework has been revised to address this Comment by integrating the personal communication from Rabinowitz. However, we note that Brown and Lopez-Gonzalez (2001) were cited correctly, and the referenced passage was correctly placed in context in a longer paragraph that appropriately cites other relevant information.
81. **Comment:** Page 8, Para 2, Regulatory Mechanism 2.7 – CITES Act - The status of jaguars was changed administratively when, in 1972, U.S. Fish and Wildlife Service listed the jaguar as an endangered species in accordance with the Endangered Species Conservation Act of 1969 (ESCA). Pursuant to the ESCA, two separate lists of endangered wildlife were maintained, one for foreign species and one for species native to the U.S. The jaguar appeared only on the List of Endangered Foreign Wildlife. In 1973, the Endangered Species Act superseded the ESCA. The foreign and native lists were replaced by a single “List of Endangered and Threatened Wildlife” - September 26, 1975 – 40 FR 44412-44429). This should be discussed in this paragraph. **Response:** The Framework has been revised to address this Comment by integrating the referenced information. However, the changes provide only additional background, as the 1969 listing and the 1975 “re-listing” have, for AZ and NM, been superseded by the 1997 listing pursuant to the Endangered Species Act (ESA) of 1973, as amended.
82. **Comment:** Page 9, Para 2 - Higher penalties for killing a jaguar in New Mexico need to be subject to the species’ delisting as federally endangered just as it has been done in Arizona. No one needs to be put in double jeopardy if they accidentally “take” a jaguar. Killing jaguars for the pelts may still occur in Mexico; however, there are no documented cases of this occurring in either Arizona or New Mexico. **Response:** This Comment did not result in changes to the draft Framework. An increase in state penalties in New Mexico to make them commensurate with Federal penalties upon delisting (i.e. without

“double jeopardy”) is an objective in the Framework and has been an objective in the Strategy since 1997.

83. **Comment:** Page 9, Para 3 –The original threats, as outlined in the Federal Register when listing the species as endangered, are sufficient. These threats, included below, should be discussed and included in this section: “The Service believes that, based on the best available information, the following actions will not result in a violation of Section 9 (Prohibited Acts), provided these activities are carried out in accordance with any exiting regulations and permit requirements:
- a. Normal ranching activities, except predator control targeting large cats which result in inadvertent trapping or mortality of a jaguar.
 - b. Habitat clearing, except in areas where jaguars are known to exist or have been known to exist.
 - c. Fencing or other property delineation.
 - d. If, when using dogs a jaguar is inadvertently chased and/or treed by the dogs, so long as the dogs are called off upon realization that a jaguar is being chased.

The following activities would likely violate section 9 of the ESA.

- 1) Any activity specifically prohibited by the ESA (e.g. shooting, hunting, trapping, etc.)
- 2) Intentional clearing or destruction of habitat known to be occupied by jaguars.
- 3) Any activities that fall within the definition of harass and harm. USFWS has defined the terms harass and harm as follows: Harass means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm has been defined as an act which actually kills or injures wildlife. Such acts may include significant habitat modifications or degradation when it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding or sheltering.
- 4) Predator control activities targeting large cats that trap, kill, or otherwise injure jaguars.

Response: The Framework has been revised to address this Comment.

84. **Comment:** Page 9, Para 4 – Although there is a long discussion on how Border Patrol activities have increased in recent years and concludes that this “creates a potential impact to the jaguar and other wildlife by increasing human activities in areas that traditionally had little disturbance”, it fails to recognize that “human activity” had already increased with the presence of thousands of illegal aliens crossing these “remote” areas long before the INS increased their efforts. This has been well-documented and needs to be addressed. **Response:** The Framework has been revised to address this Comment.

85. **Comment:** Page 11, Northern Jaguar Project, Para 2 – A report from the wildlife biologists studying the jaguars in Mexico is very critical to any planning efforts that are developed for Arizona and New Mexico. The work Dr. Raul Valdez, JAGSAG, and his student are doing in Mexico, as well as their success in getting rancher cooperation in jaguar conservation, needs to be included here. **Response:** We were unable to obtain a copy of a report providing such information in time to revise this draft of the Framework. We will endeavor to get one in time to revise the final version.
86. **Comment:** Page 13, Para 2 – The Metapopulation concept does not apply (is challenged) based on Alan Rabinowitz’s article, “Connecting the Dots”, in which he states: *“Simulation models show that, in a population of only 10 mammals, genetic exchange from just a few outside individuals per decade is enough to increase the probability of that population’s survival. The same experiment showed that in a population of 50 jaguars, genetic exchange from only one jaguar every 100 years preserved genetic integrity better than did a single, isolated population of 100 jaguars. Clearly, a few dispersing jaguars over a long period of time could maintain genetic continuity and prevent isolation between the populations.”* **Response:** The Framework has been revised in ways that address this Comment.
87. **Comment:** Page 17, 4.3.2.8 – Chairmanship for the JAGCT should not be limited to the two state wildlife agencies, but expanded to include any signatory to the MOA. **Response:** This Comment did not result in change to the Framework. The two state wildlife agencies, AGFD and NMDGF have undertaken this conservation effort with a desire for participation by as many stakeholders and interested parties as possible. However, it is a state-led conservation effort, and will remain so.
88. **Comment:** Page 20, 4.4.4.3 – There is no scientific basis to support the need for jaguars to “overcome” the “major obstacles, such as interstate highways and subdivisions”, or their inability to move between small parcels of habitat. If this has been documented, I would appreciate a copy. Range expansion implies breeding populations north of the border, which implies reintroduction, or at the least recolonization. Reintroduction efforts are not supported by the JAGSAG. Based on Dr. Rabinowitz’s comments of February 2006, even with major land protection efforts in Arizona and New Mexico, the chance of “natural recolonization” is very slight. **Response:** See Response 55 regarding “major obstacles,” “range expansion,” and “reintroduction.” With regard to the reference to Rabinowitz’ personal (email) communication to AGFD in February 2006, we agree that natural recolonization is impeded by some current and projected land uses and other human activities in northern Mexico and along the U.S.-Mexico Border. However, characterizing the chances as slight, or anything else, is conjectural and does not rule out the contrary possibility. It is also possible that, with considerable (major, perhaps even unprecedented) conservation effort, landscape-level changes will occur that will facilitate natural recolonization and persistence in outlying areas.
89. **Comment:** Page 21, Trapping 4.4.5.1- There should also be a discussion on the predator control activities that have already been prohibited in Arizona and south of I-10 in New

- Mexico. **Response:** The Framework has been revised, in response to previous Comments, in ways that address this Comment.
90. **Comment:** Page 23, 4.4.6.3 – Re: database of jaguar sightings. The ranking protocol for sightings should be reviewed and included here. **Response:** This Comment did not result in changes to the draft Framework. The ranking protocol is subject to change (in fact, revision is slated for 2006), and as such should not and will not be included in the Framework.
91. **Comment:** The need for a PHVA should be deleted until further research has been completed in Mexico. Future “modeling” efforts should be based on the best available science, not speculation. In my opinion, there is no need for more literature searches, GIS “research papers” or “habitat modeling.” They prove nothing. **Response:** See Response 11 regarding a PHVA. All modeling efforts should be based on the best available science, and all by their very nature include speculation. This is true of all JAGCT-related modeling to date, and will remain true in the future. Additional literature searches, GIS and other research papers, and modeling will continue to be used as necessary to provide the information on which reasoned decisions must be based. As noted in Responses 1, 3, and 5, in conjunction with (and in the absence of) “hard facts” professional judgment will also continue to be used to make decisions necessary to meet our obligations for jaguar conservation.
92. **Comment:** Because words can create confusion, a glossary of definitions needs to be included in the Final Conservation Framework, including words like: critical habitat, habitat, potential habitat, inhabit, live in, occupied range, occupied habitat, etc. **Response:** See Response 12. However, critical habitat is a Federal designation that neither JAGSAG nor the JAGCT supports. Thus, it is not discussed in the Framework, nor will it be included in the Glossary.
93. **Comment:** We are disappointed that the Jaguar Conservation Team (JCT), in its draft of a new charter document, has abandoned substantive commitments to conservation that were detailed (though not acted on) in its old charter, the 1997 *Conservation Assessment and Strategy for the Jaguar in Arizona and New Mexico*. The title of the two documents provides a hint at the JCT’s retreat from conservation goals between 1997 and 2006. In substituting the word “Framework” for “Strategy” the new document announces its abdication of specific goals. *Strategy* connotes a means to reach an end. In contrast, *Framework* implies something to contain – it is not action-oriented. Furthermore, the new title, by expanding the charter to include northern Mexico, downgrades the importance of jaguars in the United States. **Response:** This Comment did not result in changes to the draft Framework. We disagree with the narrow interpretation assigned to *Framework*. A Strategy and/or Framework are nothing more and nothing less than people make of them. We fully intend to use the final Framework to accomplish the objectives set forth in the 1997 Strategy, as revised based on the experience and the knowledge gained since 1997.
94. **Comment:** In several significant respects, the present draft abandons key commitments stipulated in the 1997 Conservation Strategy that have been under attack by the livestock

industry within the JCT and at least one of its subcommittees. As of April 27, 2006, the livestock industry has taken even greater control of the JCT through installing 21 New Mexico soil and water conservation districts [and an AZ County] as new voting signatories to the Team (in contravention of civic procedure as detailed in *Robert's Rules of Order*). They need hardly have bothered: The draft Framework reflects the neutering of the JCT as even a potential conservation entity. The decisive statement of purpose in the second paragraph of the 1997 Conservation Strategy promised action: The Service's 1994 listing proposal described various threats to the jaguar. The purpose of this Conservation Assessment and Strategy is to address those threats by providing for conservation for the subspecies of jaguar occurring in Arizona and New Mexico, consistent with the intent of the [Endangered Species] Act. The program described herein will be accomplished through actions to gather relevant information to identify and eventually coordinate protection of jaguar habitat, and carry-out any other appropriate conservation actions. (P. 1). **Response:** This Comment did not result in changes to the draft Framework. Although the sudden addition of 22 new voting signatories was appropriate under the existing MOA, it was not consistent with the original AGFD-NMDGF intention that no single block of interests be allowed to dominate process or outcomes. As stated in the April 27, 2006 JAGCT public meeting when the new signatories were accepted on voice vote, we were seriously concerned about the manner in which the new cooperators had been approached by a representative from JAGCT signatory agency to convince them of the need to join the effort and form a voting block. Acceptance of additional substantive partners is always a desired outcome, but all signatories must be fully committed to the objectives and approaches set forth in the document to which they become signatory. Rather than question motives, we opted (in full accordance with the current MOA) to accept the new signatories on face value, and see what resulted. However, this issue will be addressed in the forthcoming redraft of the MOA, and entities that have objections or alternatives to offer will have an opportunity to do so before final decisions are made.

95. **Comment:** The intent of the Endangered Species Act is “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved” and “to provide a program for the conservation of such endangered species and threatened species.” Thus, use of the word “program” in the Conservation Strategy mirrors its use in the Endangered Species Act. And “conservation” in the Act means “to use 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.” In other words, by invoking the Act's central goals of ecosystem protection and endangered species recovery, as well as promising a program to coordinate protection of jaguar habitat, the Conservation Strategy proposed to use whatever methods and procedures might be necessary to achieving these goals, absent the regulations necessitated by the Act. **Response:** This Comment did not result in changes to the draft Framework.

96. **Comment:** The threats that the Conservation Strategy referred to in citing the Fish and Wildlife Service’s Federal Register rule are several: “Clearing of habitat, destruction of riparian areas, and fragmentation or blocking of corridors” is listed first in the final rule listing the jaguar as an endangered species. “[P]redator control associated with the settlement of land and development of the cattle industry,” is described next, followed by “killing of jaguars for the commercial sale of their furs.” Thus, in pledging to establish a program to address those threats through information gathering, identification of habitat, and protection of habitat, the Conservation Strategy promised to carry out conservation. (The actual record, as described below, has been a very different story.). **Response:** This Comment did not result in changes to the draft Framework.
97. **Comment:** In contrast, the draft Framework’s two statements of purpose equivocate and back away from carrying out actions: [T]his Conservation Framework has been developed to summarize conservation efforts in place for the jaguar in Arizona and New Mexico, to focus attention on needed jaguar conservation efforts in the United States and Mexico, and to assist with efforts to ensure connectivity and movement across the International Border. In addition, it identifies information gaps that must be addressed to implement long-term management strategies that will help ensure presence of jaguars in the United States and long-term persistence in Mexico. (P. 3) **Response:** This Comment did not result in changes to the draft Framework.
98. **Comment:** In this iteration, the action phrases are *to focus attention* and *to assist with efforts* – considerably more passive than the previous goal of carrying out a conservation program. Absent here is the 1997 commitment to “coordinate protection of jaguar habitat.” The next iteration is more formal and succinct, but obfuscates with equal verve: Goal: Provide coordination and conservation measures to public and private natural resource managers in the United States and Mexico that will contribute to maintaining a viable northern jaguar population.” (P. 14) **Response:** This Comment did not result in changes to the draft Framework.
99. **Comment:** Yet, the Framework defines the “northern jaguar population,” as jaguars living in a vast swath of northern Mexico as well as “individual jaguars occurring in Arizona and New Mexico.” (P. 3) Thus, the primary geographic goal has shifted southward between the 1997 and 2006 documents, from Arizona and New Mexico to Sonora and Chihuahua. **Response:** This Comment did not result in changes to the draft Framework. The primary goal has not shifted southward. From the outset (1997), both AGFD and NMDGF recognized that successful conservation effort in Mexico would have more positive effect on jaguar occurrence and persistence in AZ and NM than anything north of the US-Mexico Border, except the equally important task of ensuring to the maximum extent possible that jaguars north of the border are not killed unlawfully, or unintentionally in conjunction with otherwise lawful activities. Since then, the most significant change in the physical landscape has been emergence of an increased level of environmental destruction resulting from illegal immigration, and an increased level of governmental counter-measures to stem both the flow and the destruction. Although

significant jaguar work can and must be done north of the border, the most important work clearly must be done in Mexico (Note: such work is well underway). The Framework recognizes that Mexico is developing jaguar conservation strategies that must eventually be integrated with the AZ-NM effort. Neither the U.S. nor the ESA has unilateral control over the issues at hand, and regulatory solutions are not the mechanism by which to elicit the necessary level of local (private) support. The intended outcome of this process is to find meaningful ways to work within the JAGCT to accomplish enhanced, voluntary conservation of jaguars in AZ, NM, and northern Mexico.

100. **Comment:** Abandonment of the goal of habitat conservation is the greatest weakness of the draft Framework – and follows the wholesale failure of the JCT to carry out its habitat protection pledges. The 1997 Conservation Strategy had included the following task: “Identify, maintain, and promote existing and other suitable jaguar habitats.” (P. 16) As part of that assignment, within the first year the JCT was to “Provide each land management agency cooperators with guidelines for conducting an assessment of the impacts of its current and planned actions on the jaguar” in four border counties in New Mexico and Arizona. And these agencies as well as wildlife agencies were to “evaluate the potential impacts on jaguars and jaguar habitat of each new project” proposed to be carried out in these counties. (P. 17) These tasks were never completed. **Response:** The Framework has been revised in ways that might alleviate these concerns.
101. **Comment:** Furthermore, within two years (i.e. by April 1999) habitat suitable for jaguar occupancy, or that might become suitable, was to be mapped – followed by “protection and enhancement agreements for suitable jaguar habitat with federal and state land managers and willing private landowners” – spearheaded by AGFD and NMGFD (p. 18). The mapping was actually completed in 2006, and no such agreements have been developed or agreed to. Instead, at the April 27, 2006 JCT meeting, when the habitat subcommittee (which includes conservationists and ranchers with widely divergent views) delivered four final maps and an accompanying report with two unanimously derived recommendations, the JCT formally rejected one of the recommendations. The rejection came in the form of a motion discussed but then not acted upon until after 21 New Mexico soil and water conservation districts plus Greenlee County, Arizona were added as voting signatories to the six pre-existing signatory members. Following that instantaneous 467% growth in the voting membership of the JCT, the motion to reject the habitat subcommittee’s recommendation, which had been held in abeyance, received a vote. The 22 new members voted as a bloc, along with two of the pre-existing members – but opposed by four of the pre-existing members – to reject the subcommittee’s unanimous recommendation. But even if that recommendation had been accepted, the draft Framework omits the Conservation Strategy’s unfulfilled commitments to conservation of jaguar habitat. **Response:** See Responses 94 and 100. The negative JAGCT vote on inclusion of areas of New Mexico (e.g. at least a portion of Grant County and perhaps part of Catron County) in the JAGCT emphasis area was appropriate under the rules of engagement at that time. Whether signatory agencies took unfair advantage of

- a process flaw to obtain a desired result is an ethical, rather than a legal, question. As such, it might warrant further discussion and consideration. Regardless, in the April 27-28, 2006 JAGCT meeting, the rules of engagement per the MOA were adhered to.
102. **Comment:** Even the habitat subcommittee's information, compiled over eight years of work, has been disregarded in the development of the draft Framework. The Framework includes extensive discussion of the results of a study (by Boydston and Lopez-Gonzalez) that the habitat subcommittee decided not to include as part of its report. That study is based on limited data that does not include many of the jaguar occurrences documented by the subcommittee. The draft Framework also cites T.B. Johnson, one of the Framework's authors and the chairman of the JCT, in personal communication for a statement pertaining to jaguar occurrence in coastal habitats – though there is no reason to believe that Mr. Johnson has first-hand information about jaguars in coastal habitats. Yet the draft Framework ignores the JCT habitat subcommittee's own reports. **Response:** This Comment did not result in changes to the draft Framework. Regarding the Boydston and Lopez-Gonzalez study: Failure to abide by all the decisions of the Habitat Subcommittee should not be misconstrued as entirely disregarding its information and work. The study apparently did not meet muster for the Habitat Committee to reference it in its report, but elements of the study were appropriately referenced in the Framework because they were valid and relevant. With regard to T.B. Johnson: His personal communication was based on 2 continuous years of personal experience as a conservation ecologist employed by Colombia (South America) and working in north (Caribbean) coastal montane forests, lowland jungles, mangrove swamps and estuaries from 1971 to 1973. During his tenure in that area, jaguars still occurred (in unknown numbers) in the coastal mangrove swamps and estuaries between Santa Marta and Barranquilla, Magdalena Province. Johnson injected the personal communication to correct an apparent implication in the draft Framework that jaguars nowhere occur in coastal settings. In fact, Johnson asserts that the northern Colombia coastal settings were, in 1971-1973, remarkably similar ecologically to some coastal settings in Sonora, Mexico, including parts of the Colorado Delta (in which jaguars did occur historically).
103. **Comment:** The Framework states that “[F]rom 1996 through February 2006, four jaguars were documented in the United States.” (P. 6) The habitat subcommittee documented two Class 2 sightings (defined as those by an experienced and reliable observer) during this period in addition to the four Class 1 sightings (those accompanied by verifiable physical evidence) that the Framework evidently intended. (Furthermore, two 1990 Class 2 sightings, one of which was observed by two professional biologists in the Gila National Forest, should have been mentioned; there is no reason to limit the summary of recent documented sightings to the past ten years given that jaguars can potentially live for sixteen years.). **Response:** The Framework has been revised to address this Comment.
104. **Comment:** In the same vein, the Framework states that “no black jaguars have been documented in the northern population” (p. 4) despite the subcommittee's compilation of information pertaining to (1) a sighting and plaster cast of a large black cat in 1999 south

of Silver City, New Mexico, rated by the subcommittee as a Class 2 jaguar sighting; (2) a black “Mexican jaguar” spotted near the Little Hatchet Mountains of New Mexico in 1916; and (3) a 2004 photograph of a melanistic jaguar alongside a tributary canyon of the El Fuerte River near the border of Chihuahua and Sinaloa – within the region defined as encompassing the northern jaguar population. (In addition, the NMGFD, which failed to follow up on the 1999 sighting, has a 1973 record that was not made available to the habitat subcommittee during its deliberations of a very large black cat in today’s Malpais National Monument in New Mexico that was closely observed by a geology professor and his students out on a field trip. The cat was emerging from a lava tube – a subterranean habitat more closely associated with jaguars than mountain lions. The professor stated he believes it to be a jaguar.). **Response:** This Comment did not result in changes to the draft Framework. There are no verified records of melanistic jaguars in the area covered by the Framework. Although plaster casts of a large felid (cat) were taken in 1999 near Silver City NM, three individuals personally familiar with jaguar tracks could not conclusively confirm the track was a jaguar, thus the Class 2 ranking, which does not mean the sighting is conclusively a jaguar. A Class 2 ranking gives more weight to the sighting than a Class 3 would, because of partial physical data or because a person trained in detailed observations saw the animal and can provide a detailed description. For example, the 1916 sighting was first identified as a mountain lion by the observer. Another individual, who might not have actually seen the animal, later labeled it, based on the description of the color of the animal, a “Mexican jaguar.” Neither observer was trained in making detailed observations. It appears that a felid was observed, but the type is in question. Thus, in light of all that information, the 1916 sighting would be placed in Class 3 (possible jaguar). Finally, although the 2004 photograph from Mexico is of a melanistic jaguar, its validity has been questioned by several experts. In particular, the condition of the animal appears to be of one that has lived in captivity. Releases of captive wildlife occur all too frequently, whether unintentionally or otherwise.

105. **Comment:** In summary, the draft Framework is a wholly inadequate document well suited to a faux-conservation team. Neither the Framework nor the JCT and its record of unfulfilled promises suffice to meet the Endangered Species Act’s mandate for conservation of jaguar habitat and development of a jaguar recovery plan. That legal responsibility will have to be met in a different venue. And it will be. **Response:** **Response:** This Comment did not result in changes to the draft Framework.
106. **Comment:** While we support conserving Jaguars that occasionally disperse into the United States from Mexico, we also believe that all conservation measures for this large cat must be based on sound, objectively verifiable, and relevant scientific information and implemented in a manner that does not impose economic hardship on residents living in the priority borderlands conservation area. Review of the draft framework, however, reveals insufficient specific assurance that all conservation measures implemented on behalf of the Jaguar will be based on sound, objectively verifiable and relevant scientific

information. This shortcoming is especially apparent in several sections of the draft framework. **Response:** This Comment did not result in changes to the draft Framework. Sound science and economic hardship aspects were addressed in Responses 1, 3, and 5. The closing criticism is addressed in Response 107.

107. **Comment:** First, while section 4.3.4.1 states the goal of the Jaguar Scientific Advisory Group (JAGSAG) as continuing “to work toward providing an improved and sound scientific basis for jaguar management and an avenue for enhanced technical information exchange,” draft at p. 17, there is no requirement that the members of its “non-cooperator affiliated JAGSAG have any scientific training whatsoever. This shortcoming is critical because the purpose of JAGSAG is to review the scientific validity of JAGCT’s survey and research findings and management recommendations. In order to do so, the members of JAGSAG must be well-versed in scientific methodology, the proper application of such, and the objectivity and relevance of the findings or management recommendations reached thereby. Thus, to promote both the integrity and credibility of scientific review (and ultimately the integrity and credibility of the JAGCT), all members of JAGSAG must, at the least, have a bachelor’s degree in a pertinent area of scientific discipline – biology, mammalogy, ecology, botany, range, etc. – to qualify for appointment to JAGSAG by the JAGCT. Accordingly, we submit that this statement of requirement should either replace the language of section 4.3.4.2 in the draft framework or be included in its own section immediately following section 4.3.4.1. **Response:** This Comment did not result in changes to the draft Framework. The existing and revised selection criteria have been sufficient for JAGCT to convene a JAGSAG comprised of members with impeccable credentials in jaguar research and management. JAGSAG members include several preeminent jaguar scientists, as well as emerging scientists who will with time replace the older ones. Their collective presence in the peer-reviewed and other scientific literature is extensive. Their expertise and participation need no defense, nor does JAGCT need more explicit criteria to sustain that level of advisory expertise when inevitable turnover occurs.
108. **Comment:** Second, section 4.4.6.5 is a source of serious concern to us because it places the cart inappropriately before the horse. More field study is necessary in northern Mexico to identify, let alone define, the conditions that currently support viable jaguar populations in that region. Without further and sufficient field study, there simply is not enough information available at the current time to justify evaluating the feasibility of a “Population and Habitat Viability Analysis/Assessment” (PHVA) for the “northern jaguar” population. Given such lack of necessary scientific information, any PHVA for the “northern jaguar” population would be subject to serious challenge because it would have to be derived from modeling based on information that is scientifically insufficient for this purpose. Such modeling based on inadequate scientific information, while likely to be abused and misused by those philosophically inclined to do so, is not a scientifically credible means of defining the conditions under which a viable northern jaguar population can be maintained. Nor is it a scientifically credible means of projecting

potential population numbers of Jaguars in Arizona and New Mexico (where no breeding records for the Jaguar exist) or northern Mexico (where considerably more baseline information is needed). Accordingly, such modeling cannot possibly serve, at this juncture in time, as a scientifically credible means of establishing timelines for achieving allowable (viable?) population sizes of jaguars via natural recruitment in Arizona, New Mexico, or northern Mexico. Thus, to avoid any question of the scientific credibility and integrity of the JAGCT, section 4.4.6.5 should be struck in its entirety, or in the alternative, redacted to read: “JAGCT will evaluate the feasibility of a Population and Habitat Viability Analysis/Assessment (PHVA) for the northern jaguar population in northern Mexico utilizing peer-reviewed methodologies and analyses.” Draft at p. 23. **Response:** The Framework has been revised in ways that might alleviate these and similar concerns (see Comments and Responses 11 and 91), to affirm that a feasibility assessment is what is intended as a first, and perhaps last, step in considering a PHVA for AZ and NM. This intent was stated quite clearly at the April 27-28, 2006 JAGCT public meeting, as was the need to revise the Framework to clarify that intent.

109. **Comment:** Third, and finally, while section 4.4.1.2 provides that Jaguar occurrence information from AGFD and NMDGF will be submitted to at least three experts in the field for evaluation as to accuracy and importance, so too should be all other information, findings and management recommendations considered by the JAGCT. Thus, section 4.3.2.5 should include the following additional sentence: “The JAGCT will also submit all information provided by any party, including alleged Jaguar sign, to at least three experts in the field for evaluation as to accuracy and importance.” Draft at p. 16. **Response:** This Comment did not result in changes to the draft Framework. Although AGFD and NMDGF are willing and able to commit to such a high standard of cross-checking, individual (non-governmental) researchers involved might not be, due to concerns about protecting unpublished, preliminary results, intellectual property (e.g. unique methodologies), etc. Moreover, JAGSAG exists in part to provide “resident” expert opinion on the quality and relative importance of JAGCT-related information, management recommendations, and findings. We believe this is sufficient to address any rational concerns about objectivity, accuracy, and credibility.
110. **Comment:** National security is more important than protecting the outer fringe of the jaguar’s range or connectivity to it. For that matter, the border fence and increased border security measures would reduce the vast numbers of illegal border crossers, which, no doubt, disrupt the jaguar’s habitat, and save the jaguar from illnesses contracted by eating trash. **Response:** See Responses 13b, 18, 27, 36d, and 100 re: threat assessment. Whether the national security will be protected without regard for wildlife considerations is a prime issue in Congress and with state and federal resource agencies in the U.S. and Mexico. Although reduction of flow and impacts of illegal immigration via foot or vehicle border crossings would no doubt benefits many species of wildlife, it remains to be seen whether Congress will ensure that wildlife values are considered in determining what, if any barriers (physical or otherwise) will be used to accomplish that. However,

- we are not aware of any data supporting a statement that jaguars suffer from or might suffer from illnesses contracted by eating trash deposited by illegal immigrants.
111. **Comment:** Under Section 3.2: Add a summary of additional data from a University of Arizona graduate student project monitoring presence of jaguars in Los Pavos, Mexico, through camera trap and scat collection. Her study includes genetic analysis to verify scats deposited by jaguars. Another research project is monitoring the Nogales AZ area, including collecting scats for genetic analysis at the University of Arizona. To date, analysis of 125 scat samples from the Nogales area and 29 from Los Pavos has not yielded a confirmed jaguar sample from either study area. However, the project is ongoing, with more samples yet to be analyzed. **Response:** The draft Framework has been revised in ways that partially address this Comment. With regard to the Nogales area project, preliminary results indicate that of 123 scat samples from which DNA was extracted in January-April 2006, only 62 had mitochondrial DNA present. Of those 62, 32 were mountain lion, 20 were bobcat, 3 were coyote, 2 were javelina, and one was domestic cow. None were jaguar. Due to inability to extract DNA from the other 61 samples precluded determination of the source species. Thus, based on those results, although one can safely say that jaguars did not produce 62 of the 123 scats but one cannot say whether jaguars produced any of the other 61 scats. However, as noted, the project is ongoing and further analysis will hopefully help hone the techniques and shed further light. Note: the samples identified as javelina and domestic cow might have been carnivore scats where the DNA of the animal consumed by the predator was amplified instead of the epithelial cells of the host species.
112. **Comment:** A JAGCT goal should be 100 percent communication of what each agency is doing at all times. The Mexican government must be a part of this. **Response:** This Comment did not result in changes to the draft Framework. We believe the need for effective communication at all levels and in all directions, among all parties, including Mexico, is adequately addressed in the Framework.
113. **Comment:** JAGCT must work with the Border Patrol and the AZ and NM legislatures to keep all wildlife movement corridors open, and usable by many species, including the jaguar. Just say “No” to the fence. That’s the way to protect wildlife and habitat. Congress’ plan will only trash more habitat. Game and Fish has to pressure against the fence. **Response:** See Responses 13b, 18, 27, 36d, 100, and 110 re: threat assessment.
114. **Comment:** There should be no collaring/drugging of jaguars. It’s too dangerous (for jaguars). We should be more sophisticated by now, and use less mind-altering methods for tracking wildlife movement. Drugs are dangerous and effects last longer than we think. **Response:** This Comment did not result in changes to the draft Framework. The framework provides for either or both to occur, when and if circumstances warrant. Ensuring adequate safeguards for both the jaguar and the humans involved would be a prerequisite for any capture or collaring effort. Also, see Response 60.

115. **Comment:** Game and Fish has purchased land for various reasons. Partner with agencies and NGOs to purchase and protect wildlife habitat – movement corridors. **Response:** The draft Framework was revised to address this Comment.
116. **Comment:** P. 22 of the Framework, Section 4.4.5.1.4 states that capture methods will cease within 25 miles of jaguar take via that method of capture. Recent information from camera study has shown that “Macho B” has traveled over 12 miles in 30 hours, making a 25 mile radius over a six month period woefully insufficient. Radius should be increased to at least the 50 mile radius used by the habitat committee, using the current research to update this document. **Response:** See Response 36.
117. **Comment:** Add to the Framework how current and future research will affect it. **Response:** This Comment did not result in changes to the draft Framework. The Framework clearly states that as additional information becomes available, it will be used to inform all aspects of jaguar conservation. Also, see Responses 1, 3, and 5.
118. **Comment:** The biggest flaw in this document is the lack of detail in the conservation goals. They are just broad happy statements (e.g. collaborate with Mexico; conserve habitat). They need implementation steps, details, and timelines. These kinds of vague statements haven’t moved recovery forward in 10 years and they won’t work now. **Response:** This Comment did not result in changes to the draft Framework. The Framework is strategic in nature, not a detailed implementation plan.
119. **Comment:** Page 12. The document should include cooperation with Mexican agencies to prevent obstruction of connectivity, including SEMARNAT, PROFEPA, CONANP, and state agencies in Sonora and Chihuahua (Secretaria de Ambiente in both states). Cooperative agreements should prevent obstruction of connectivity and enforce existing, stringent regulations. Cooperation with Mexican agencies for research and management would benefit jaguar conservation. **Response:** This Comment did not result in changes to the draft Framework. The Framework clearly emphasizes the need to work with Mexico on all aspects of jaguar conservation, which includes threat assessment and appropriate mitigation measures. Also see Responses 4, 5, 44, 63, and 64 re: cooperation with Mexico
120. **Comment:** Expand Section 3.2 to include other projects that have been conducted or that are underway. For example: a study is underway on the east side of the Rio Aros, in Mexico, and the National Park Service “Border Cats Project” is preparing a report on use of non-invasive techniques to detect wild cats in 4 southern Arizona park units. **Response:** The Framework was modified to address this Comment, to the extent that information on the two referenced studies was available to us.
121. **Comment:** Identify specific threats to connectivity and corridors between NM and AZ and Chihuahua and Sonora, especially potential impacts of the proposed Border Fence/Wall (to stop illegal immigration), Border Patrol activities, National Guard presence, and border lighting. **Response:** See Responses 13b, 18, 27, 36d, 100, 110, and 113 re: threat assessment

122. **Comment:** P. 11. Update information on the Northern Jaguar Project to include “expansion of the Northern Jaguar Reserve to include the adjacent 33,000 acres is anticipated.” **Response:** The Framework was modified to address this Comment.
123. **Comment:** The JAGCT continues to display a peculiar bias toward the jaguars that inhabit, for various lengths of time, the U.S. In the third sentence of the 27-page Assessment, the reader is assured that there is no evidence of a breeding population of jaguars here. Although this is technically true, the jaguars in AZ and NM are at this point so poorly known and described that this is similar to saying that there is no evidence of a spleen in a toad glimpsed from 20 yards away. This bias is also evident on page three, where the geographic range of the northern jaguar population is described as being entirely within Mexico, despite the fact that the paragraph ends by assigning the jaguars that occur in AZ and NM to this population. Obviously, if the population ranges into the U.S., the U.S. is part of the range. **Response:** The draft Framework has been revised in ways that might alleviate the concerns expressed in this Comment.
124. **Comment:** The Habitat section of the Assessment is remiss in not discussing the importance of populations at the periphery of their range. (See Channell and Lomolino, 2000. Dynamic biogeography and conservation of endangered species. Nature 403:84-86.) This work argues that populations persist longest at the extremes of their range, and that these populations may in fact deserve greater conservation focus than do “core” populations. To put it plainly, the northern-most jaguars may be vital to the survival of the species as a whole, yet the current conservation efforts of the JAGCT fall short. This is most egregiously reflected on page three in the rationale for not developing a recovery plan. **Response:** The draft Framework was revised to address this Comment. However, little more was done than insert the concept to serve as a placeholder to stimulate discussion and further consideration in JAGCT.
125. **Comment:** Point (1): The fact that there is no known breeding population in the U.S., and that the areas which used to host females (see historic range) may no longer do so argues even more forcefully for USFWS to develop a recovery plan for the U.S. Endangered species which are no longer able to reproduce in our country are in urgent need of formal recovery planning and rapid implementation of recovery actions. **Response:** This Comment did not result in changes to the draft Framework.
126. **Comment:** Point (2): The business of USFWS is to recover species in the U.S. The fact that the species also occurs elsewhere is irrelevant. Depending on other countries, particularly those which have fewer resources, to take responsibility for species within the U.S. is not logical and abrogates the responsibility of the USFWS under the ESA. If a conservation framework can be developed, then there is no reason why a recovery plan cannot. **Response:** This Comment did not result in changes to the draft Framework.
127. **Comment:** Point (3): We also believe that voluntary conservation approaches and incentives are valuable, but this point is a non sequitur because, at least according to USFWS and some courts, recovery plans themselves are entirely non-regulatory. Thus, the idea that development of a recovery plan is somehow incompatible with existing,

- voluntary incentive-based conservation approaches is baseless. **Response:** This Comment did not result in changes to the draft Framework.
128. **Comment:** The conservation goals of the Assessment read as though the JAGCT is a new endeavor. In fact, the JAGCT has been working for ten years, and in that time has produced a bibliography, a list of research priorities, some habitat maps which for political reasons ignore most of New Mexico, a capture risk assessment, an educational curriculum and a brochure. The effect of these products on the recovery of the jaguar is negligible. In many circumstances, we support the work of stakeholder groups in support of endangered species, but only when these groups actually contribute towards recovery. The JAGCT has had ten years to meet this standard, and it has failed. In these ten years, there has not been a single JAGCT discussion of what would actually constitute recovery of the jaguar; the case cannot be made that the JAGCT is a suitable surrogate for a recovery team. We ask USFWS to accept its responsibility under the ESA, convene a recovery team, develop a recovery plan and begin the real work of recovering the jaguar. There may be a place for the existing JAGCT as a stakeholder group in the implementation phase of the recovery plan, but a plan based in the best science, with goals, timelines and criteria for eventual delisting must be developed first and foremost. **Response:** This Comment did not result in changes to the draft Framework.
129. **Comment:** Federal oversight is also needed to bring significant players to the table. The voluntary nature of the JAGCT agreement has meant that Texas, with significant potential habitat available, has been able to opt out of jaguar recovery work. Similarly, although border security infrastructure and actions and illegal immigration are arguably the largest current threat to northern jaguars, the Department of Homeland Security and the Border Patrol have been able to opt-out of participation in jaguar conservation. **Response:** This Comment did not result in changes to the draft Framework. However, we note that Texas Parks and Wildlife “opted out” of jaguar conservation discussions in 1997, when the USFWS determined that the jaguar listing in the U.S. would not include Texas. Regardless, Texas is beyond the scope of the draft Framework.
130. **Comment:** In closing, we appreciate the opportunity to comment on the Assessment and the efficacy of the JAGCT. Jaguars have now been eliminated from two thirds of their historic range and are currently considered endangered throughout their range. Habitat fragmentation is rampant throughout the central and southern portions of their range, which, along with findings on the importance of peripheral populations, increases the importance of jaguars in the northern portion of the range. Given trends in population growth in Mexico, the importance of the U.S. range is likely to increase. We send these comments with no disrespect toward the team or its members, or the lead agencies. The JAGCT is simply an experiment that has failed. **Response:** This Comment did not result in changes to the draft Framework.