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BY ELECTRONIC AND REGULAR MAIL

Mr. Paul Cornes, Refuge Manager
U.S. Fish and Wildlife Service
Kofa National Wildlife Refuge
356 W 1st Street
Yuma, AZ 85364

Dear Mr. Cornes:

On behalf of the combined memberships of the Animal Welfare Institute (AWI) and the Animal Defense League of Arizona (ADLA), I submit the following comments on the Draft Environmental Assessment for the Opening of Mountain Lion Hunting on the Kofa National Wildlife Refuge (hereafter "Draft EA"), the Draft Mountain Lion Hunting Plan for the Kofa National Wildlife Refuge (hereafter "Draft Plan"), and the Draft Compatibility Determination for Mountain Lion Hunting on the Kofa National Wildlife Refuge (hereafter "Draft CD").

AWI and ADLA strongly oppose the proposal to open the Kofa National Wildlife Refuge (KNWR) to mountain lion hunting due to the failure of the U.S. Fish and Wildlife Service to comply with the requirements of the National Environmental Policy Act (NEPA) and other federal laws and the complete lack of scientific evidence to justify the proposed action. Indeed, implementation of the proposed action, as written, could lead to the extirpation of mountain lions on the KNWR. If the FWS intends to go forward with a proposal to open the KNWR to lion hunting it must, preferably, evaluate the full range of environmental impacts of such an action in an Environmental Impact Statement (EIS) or, at a minimum, prepare a far more substantive Draft EA.

Contrary to the FWS's assurance that the proposed action is consistent or compatible with the mission and purposes of the National Wildlife Refuge System and the KNWR, the available evidence and existing statutes, regulations, and policies clearly demonstrate that the FWS has erred in making this determination. In other words, should the FWS finalize this action it will do so in violation of federal law and its own regulations and policies relevant to hunting on national wildlife refuges. Instead of blatantly violating federal law to placate a single user group, we encourage the FWS to preferably rescind the Draft EA, Draft Plan, and Draft CD or, at a minimum, delay any decision on this

matter pending the collection of additional scientific information, the reanalysis of the environmental impacts of the proposed action and its alternatives in a legally sufficient Environmental Impact Statement or Environmental Assessment, and compliance with other relevant federal laws (i.e., National Historic Preservation Act).

As an initial matter, AWI and ADLA reiterate their request that the FWS reopen the comment period for the Draft EA, Draft Plan, and Draft CD to ensure that the public, regardless of their opinion about the proposed actions, have an adequate opportunity to meaningfully participate in this decision making process. AWI and ADLA submitted a request dated December 22 to the FWS asking it to extend the deadline for public comments on these documents by, at a minimum, 30 days. Attachment 1. To date, we have received no response from the FWS either agreeing with our request or providing a rational explanation for why the extension could not be granted. While we offered several reasons why an extension was warranted, we are particularly concerned that by setting a deadline for comments during the traditional holiday week the FWS has, perhaps purposefully, limited public input into what it must recognize is a highly controversial proposal. We also note, as further explained below, that the FWS's failure to provide a sufficient opportunity for the public to participate in this decision-making process violates the intent of NEPA.

If the FWS has decided not to extend the comment deadline in order to facilitate Arizona Game and Fish Department (AGFD) planning for the 2007-2008 fall hunting season as we suspect is the case, the FWS must advise the AGFD that it cannot propose to allow lion hunting on the KNWR (Game Management Units 45A, 45B, and 45C) until and unless the FWS amends its refuge-specific hunting regulations (at 50 CFR 32 et seq.) to legally open the KNWR to lion hunting (see 50 CFR 32.22). Indeed, since the federal refuge-specific rulemaking process is intended to provide the public with an opportunity to provide its views on whether the KNWR and/or other identified refuges should be open to hunting and/or to evaluate or propose refuge-specific hunting conditions or policies, until a final rule is published the KNWR will not be legally open for lion hunting. Since this rulemaking process can result in a determination by the FWS not to amend the refuge-specific hunting regulations to open a refuge to hunting and/or to expand refuge hunting opportunities, any presumption by the AGFD that the KNWR will be open to lion hunting is blatantly premature and will undermine the integrity of the federal rulemaking process. Therefore, assuming the FWS issues a Finding of No Significant Impact on the Draft EA, finalizes the Draft EA and other draft documents, prevails in any potential litigation challenging its decision, and completes the refuge-specific rulemaking process, the earliest the AGFD can begin to plan for a lion hunt on the KNWR would be for the 2008-2009 hunting season. This is yet another reason why the FWS should reopen the comment period on the Draft EA, Draft Plan, and Draft CD.

The remainder of this comment letter will discuss the legal and scientific deficiencies in the Draft EA, Draft Plan, and Draft CD. The bulk of this discussion will focus on the Draft EA though critiques of the Draft Plan and Draft CD will be included either as part of the evaluation of the Draft EA or as a separate component of the analysis. In addition,

other deficiencies in the analysis of the impacts of the proposed action will be disclosed and discussed.

National Environmental Policy Act.

NEPA is the basic national charter for the protection of the environment. 40 CFR §1500.1(a). Council on Environmental Quality (CEQ) regulations implementing NEPA, which are applicable to all federal agencies, specify that agencies “must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” *Id.* at §1500.1(b). The information provided “must be of high quality.” *Id.* In addition “accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” *Id.* In regard to this latter requirement, the CEQ regulations mandate that federal agencies “encourage and facilitate public involvement in decisions which affect the quality of the human environment.” *Id.* at §1500.2(d).

Agencies must also “integrate the requirements of NEPA with other planning and environmental review procedures,” *id.* at §1500.2(c), “identify and assess the reasonable alternatives to the proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment,” *id.* at §1500.2(e), and “use all practicable means ... to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.” *Id.* at §1500.2(f). Indeed, the NEPA process “is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” *Id.* at §1500.1(c).

An Environmental Assessment is intended to “briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or finding of no significant impact,” *id.* at §1508.9(a)(1), “aid an agency’s compliance with (NEPA) when no environmental impact statement is necessary,” *id.* at §1508.9(a)(2), and to “facilitate preparation of a statement (EIS) when one is necessary.” *Id.* at §1508.9(a)(3). In order to meet these standards, an EA must logically include the same components as an EIS which includes a brief discussion of the “need for the proposal, of alternatives, ... (and) of the environmental impacts of proposed action and alternatives,” *id.* at §1508.9(b), though an EA is generally less comprehensive than an EIS.

While an EA can satisfy an agency’s NEPA obligations, it also is intended to be used by an agency to determine whether to prepare an environmental impact statement. *Id.* at §1501.4(c). In making this determination, an agency is required to consider both the scope of the proposed action (*see* 40 CFR §1508.25) and the significance of the impacts of its actions by considering both the context in which the action is to take place and the intensity or severity of those impacts. *Id.* at §1508.27.

More specifically, in order for an EA to aid an agency’s determination as to whether an EIS is necessary and to facilitate the preparation of an EIS when appropriate, an EA must

include a statement that specifies “the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action,” *id.* at §1502.13, “rigorously explore and objectively evaluate all reasonable alternatives,” *id.* at §1502.14(a), “include reasonable alternatives not within the jurisdiction of the lead agency,” *id.* at §1502.14(c), “include the alternative of no action,” *id.* at §1502.14(d), “identify the agency’s preferred alternative or alternatives,” *id.* at §1502.14(e), “succinctly describe the environment of the area(s) to be affected ...” *id.* at §1502.15, and include a discussion of the “environmental impacts of the alternatives including the proposed action,” *Id.* at §1502.16.¹

If an agency is preparing an EIS and there is incomplete or unavailable information relevant to the impacts on the human environment, the agency must specify that such information is lacking, *id.* at §1502.22, and, if the cost of obtaining the information is not exorbitant, the “agency shall include the information...,” *id.* at §1502.22(a), or, if the cost is exorbitant, the agency must include a statement explaining the relevance of the incomplete or unavailable information to evaluating the impact on the human environment, summarize existing credible scientific evidence which is relevant to the anticipated impacts, and include an evaluation of such impacts based on theoretical approaches or research methods generally accepted in the scientific community. *Id.* at §1502.22(b)(2)(3) and (4). Similarly, when preparing an EIS, agencies must “insure the professional integrity, including scientific integrity, of the discussions and analysis. *Id.* at §1502.24. The same standards must logically apply to EAs if they are intended to be used to determine if an EIS is necessary.

The FWS has failed to comply with NEPA in evaluating the environmental impacts of its proposed lion hunt on the KNWR in the Draft EA. This failure is across the board in that the FWS failed to identify a legitimate purpose and need for the proposed hunt, failed to include a reasonable range of alternatives, failed to properly describe the affected environment, failed to critically evaluate the environmental consequences, including the cumulative impacts, of its action. Indeed, the Draft EA would appear to be a document that relies on questionable evidence, presumption, assumption, and no credible analysis to achieve a desired outcome versus providing a credible and complete analysis of the environmental impacts of the proposed hunt. More specifically, the deficiencies in the Draft EA are:

1. The FWS has failed to accurately describe the original purpose for establishing the KNWR (formerly the Kofa Game Range). Though conceding that the language in the

¹ Under NEPA impacts and effects are synonymous. Effects include “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health...” 40 CFR §1508.8(b). The analysis of the environmental impacts of an action include the direct, indirect, and cumulative effects. Direct impacts “are caused by the action and occur at the same time and place.” *Id.* at §1508.8(a). Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* at §1508.8(b). Cumulative impacts results “from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” and can include “individually minor but collectively significant action taking place over a period of time.” *Id.* at §1508.7.

Executive Order that established the Kofa Game Range is “somewhat vague,” the FWS claims that it “is widely understood” that the Kofa Game Range was established “to preserve ... a dwindling population of desert bighorn sheep (*Ovis canadensis mexicana*) and the habitat upon which the sheep depend.” Draft EA at 1.² It is unclear how the FWS can reach such a conclusion considering that the original Executive Order specified, as the FWS indicates on page 2 of the Draft EA, that the Kofa Game Range was established “for the conservation and development of natural wildlife resources, and for the protection and improvement of public grazing lands and natural forage resources.” Executive Order 8039, Federal Register, Friday, January 27, 1939, page 438 (Attachment 2). There is no reference in this Federal Register notice or in subsequent notices that renamed or expanded the Kofa Game Range to desert bighorn sheep. To suggest otherwise is to rewrite history. Thus, while desert bighorn sheep in and around the KNWR may have been in decline in 1939, there is no evidence offered by the FWS that President Franklin Roosevelt intended to establish the Kofa Game Range for the benefit of a single species and, indeed, President Franklin’s own words suggest that the intent was to conserve and protect all wildlife resources, which would include mountain lions.

2. The alleged purpose and need for the proposed action is not warranted. The FWS identifies the purpose of the proposed action as “to permit mountain lion hunting on the Kofa River National Wildlife Refuge.” Draft EA at 2. In other words, all of the time, money, and effort spent in compiling the Draft EA, Draft Plan, and Draft CD was to provide a recreational hunting opportunity to an extraordinarily limited number of persons who either participate in existing hunts on the KNWR and/or an even smaller number of hunters who will purposefully travel to the KNWR in the future to hunt lions if a lion hunt is permitted. The FWS, citing to a variety of different documents, then tries to justify this alleged purpose of its proposed action. Yet, none of the documents cited on page 2 of the EA provide any support for this purported purpose statement. Indeed, objective 2 of the 1996 Kofa National Wildlife Refuge & Wilderness and New Water Mountains Wilderness Interagency Management Plan, specifies that in regard to wildlife and habitat management, the KNWR will “maintain and enhance the natural diversity of flora and fauna.” Draft EA at 2. The FWS, however, provides no evidence that the proposed hunt is needed to “maintain and enhance the natural diversity of the flora and fauna” in the Draft EA and, if anything, the proposed hunt, given the small number of lions on the KNWR, is likely to adversely impact and potentially result in the extermination of this lion population.

The FWS ultimately attempts to justify its stated purpose of the proposed action by claiming that lion hunting is a wildlife dependent recreational use, that it is compatible with the mission of the NWRS and the purposes of the refuge and that, therefore, the FWS is obligated to permit this use. As will be explained in greater detail below, lion hunting is not a compatible use on the KNWR and, even if it were, the FWS is not obligated to initiate a hunt.

² As an example of the apparent haste in which the Draft EA was prepared the pages in the Draft EA were not number sequentially by the FWS. For the purpose of this comment letter the pages have been manually renumbered with page 1 being the page including the background section continuing on to page 20 as the final page of the Draft EA.

The stated “need” for the hunt is identified as the product of “an expression of interest from various local individuals and the Arizona Game and Fish Commission.” The fact that local hunters are interested in killing lions on the KNWR and that one of the local hunters, Mr. Joe Melton, is Chairman of the Arizona Game and Fish Commission, is not a legitimate or appropriate reason to implement a hunt that will cost the American taxpayers \$24,000 per year. Indeed, if the implications of this purported need statement were not so serious, this justification for the need to hunt lions on the KNWR would be laughable.

It is difficult to fathom why the FWS would feel so indebted to the Yuma Valley Rod and Gun Club (YVRGC)³ or Chairman Melton that it would even contemplate allowing a hunt on a species that consists of only 5 individuals known to have visited the refuge and that could be, as repeatedly conceded by the FWS throughout the Draft EA, adversely affected by the hunt. While politics is likely at play in this case, it is also possible that the FWS feels the need to thank the YVRGC for whatever volunteer work it has done on the KNWR by providing a new hunting opportunity. While these reasons are spurious at best, they do not justify the implementation of a hunt when so little is known about the lion population on the KNWR, when the FWS has not complied with federal law, and when the hunt itself could jeopardize both the sustainability and very existence of the refuge lion population.

The FWS offers no other alleged “needs” for the hunt but it does suggest throughout the Draft EA that the hunt could offer certain purported “benefits.” For example, in summarizing the No Action Alternative, the FWS notes that without a hunt “the possible benefit to bighorn sheep and mule deer populations from predator reductions would not be realized.” Draft EA at 5. On the same page, the FWS claims, in summarizing the Limited Hunting Season alternative that a hunt “could also maintain some wildlife populations at managed levels.” *Id.* The FWS, however, offers absolutely no evidence in the Draft EA to substantiate these alleged “benefits” of a hunt and/or that mountain lions are having any adverse impact on the refuge’s bighorn sheep and mule deer populations. Indeed, even the FWS concedes that “the impact from the removal of no more than one lion annually is unlikely to be significant.” Draft EA at 15. If the FWS wants to justify its proposed hunt on some alleged need to control the lion population in order to protect bighorn sheep or mule deer, it should be honest and declare that the hunt is crucial to meet that need and provide ample and credible evidence to document the legitimacy of such a claim. It should not, as it may be attempting to do here, claim that the hunt is needed to placate the desires of local hunters to kill lions while avoiding the undisclosed alleged “need” for the hunt because the FWS does not have a shred of evidence to suggest that lions are adversely impacting either mule deer or bighorn sheep on the refuge.

Not surprisingly, the YVRGC – the local group that has clearly influenced the FWS to propose this hunt -- directly blames the mountain lion for the decline in the refuge’s

³ In its Draft Mountain Lion Hunt Plan the FWS indicates that the “Yuma Valley Rod and Gun Club (has) specifically requested a mountain lion hunt for several years.” Draft Plan at A8.

bighorn sheep population. In a December 3, 2006 article (Attachment 3) in The Sun (“Mountain Lions Migrate to Yuma Area”, Chris Mitchell, identified as a member of the YVRGC is claimed to have pinned the bighorn sheep decline on the mountain lions. In the same article, Refuge Manager Paul Cornes, claims that officials are currently studying the mountain lions’ effect on the sheep, but are uncertain which is contributing more to the decline – the mountain lions or the drought. Cornes is quoted as saying that “I don’t think there is enough information to say they (mountain lions) are the most significant factor” in explaining the bighorn sheep decline.

It is worth noting here, that at the most recent Arizona Game and Fish Commission meeting on December 9, 2006, Chairman Melton made clear that his interest is not in killing a single lion on the refuge but in killing all of the lions on the refuge (pers. comm. with Ms. Stephanie Nichols-Young who attended the Commission meeting and witnessed this statement by Chairman Melton). Not only does such a statement call to question Mr. Melton’s qualifications to be on the Game and Fish Commission, not to mention to be Chairman of that Commission, but it also demonstrates an anti-predator and anti-conservation attitude on the part of Mr. Melton who is also the legislative chair of the YVRGC. Such a statement also raises serious concerns about the potential impact of a hunt on the refuge lion population considering that the Chairman of the Commission and a high-ranking member of the YVRGC – the local group that has apparently influenced the FWS to propose this hunt -- is publicly advocating for the extermination of all lions on the KNWR.

The existing purpose and needs statements are inappropriate and don’t merit the establishment of a lion hunt on the KNWR. If the refuge has evidence suggesting that the lions on the refuge are somehow adversely impacting the bighorn sheep population and believe it is important to allow lion hunting to address that impact, the FWS should start from scratch and produce a Draft EA or EIS that discloses such evidence and comprehensively evaluates the environmental impact of a hunt on the lion population and other refuge resources.

3. The FWS has failed to consider a range of reasonable alternatives. The Draft EA offers three alternatives – no action, a limited hunt, and an open hunting season. In effect, the FWS has offered and considered only two alternatives since the limited hunt and open hunting season alternatives are, except for the estimated cost, the same in terms of impact considering that few, if any, lion hunters are likely to hunt lions on the refuge during the majority of the year due to the heat. Two alternatives do not constitute a reasonable range of alternatives as required by NEPA.

Even if it was presumed, solely for argument’s sake, that the offered purpose and need statements for the proposed hunt were legitimate, this range of alternative is deficient. As noted above, NEPA requires an agency, when considering alternatives to its proposed action, to include reasonable alternatives not within the jurisdiction of the lead agency,” 40 CFR at §1502.14(c). In this case, the FWS should have considered an alternative to encourage lion hunting in the GMUs surrounding the KNWR. While AWI and ADLA

would not have supported this alternative, it is a “reasonable alternative” to meet the alleged purpose and need offered for the proposed hunt.

The Draft EA claims that no hunter has reported taking a lion within the GMUs surrounding the KNWR (units 16B, 40B, 41, 43A, 43B, and 44B) (Draft EA at 13) which the AGFD estimates contains a population of 10 lions.⁴ While allowing any lion hunting in an area with such a small number of lions is biologically reckless at best, since so little is known about the home range size, movements, habitat use patterns, and distribution of the lions on the KNWR it is impossible to determine if they are resident lions (as the FWS appears to believe), transients that may utilize the refuge at certain times, and/or if one or more of them exist entirely within the refuge. Thus, any alternative that would encourage lion hunters to pursue lions in those GMUs outside of the KNWR could result in the killing of one or more lions per year satisfying the needs of the local hunters while protecting and preserving the refuge lion population. While such an alternative may not meet the needs of the FWS to promote wildlife-dependent recreational uses on the KNWR, such uses are not mandatory as explained below.

While the deficiencies inherent to the offered purpose and need statements limit the scope of potential reasonable alternatives, there is little question that the three alternatives evaluated in the Draft EA do not satisfy the FWS’s NEPA obligation to consider a range of reasonable alternatives. If the FWS had attempted to justify its proposed lion hunt based on another alleged need, other potential alternatives designed to meet that need could be available and would be appropriate for consideration.

4. The FWS fails to disclose sufficient information about the affected environment. The Draft EA contains information about climatic patterns on the KNWR, its history, a list of the predominant plants and animals, including federally protected species, known to inhabit the KNWR, summary information about archeological and historical sites, disclosure of general information about water resource developments and their use by wildlife, information about recreational uses on the KNWR, and a description of the history of the establishment of Congressionally designated Wilderness Areas on the KNWR. See Draft EA pages 7-10.

What is included, however, is not as important as what the FWS fails to disclose. For example, though the proposed action is to initiate a lion hunt, the description of the affected environment contains no biological or ecological information about lions in general or about the lions on the KNWR. There is no data provided documenting the distribution of refuge lions or their habitat use and movement patterns. There is no information on their productivity, age-specific survival rates, causes of mortality, or the existence of other lion populations outside the refuge that would provide a source for lions to colonize or recolonize open niches on the refuge. There is no data provided on their dietary preferences, documented incidents of lion depredation on bighorn sheep, or how many of the estimated 5 refuge lions are permanent refuge residents or transients who may occasionally pass through the refuge.

⁴ “Mountain Lions Migrate to Yuma Area,” The Sun, December 3, 2006. See: <http://www.redorbit.com/modules/news/tools.php?tool=print&id=752963> (Attachment 3).

Admittedly, the FWS provides some limited information about lions on the KNWR in the background section of the Draft EA. Such information included no report of a lion on the KNWR between 1944 and June 2000, additional sightings of three lions during a 2003 aerial survey, and the collection of 46 photographs of lions obtained between January 2004 and August 2006 from an unknown number of remote cameras placed at waterholes. Draft EA at 1. The photographs along with an examination of lion tracks located during unsuccessful efforts to capture and collar refuge lions, resulted in a determination that “at least five mountain lions” exist in the Kofa Mountains along with only one lion known to be a breeding female. Draft EA at 1 and 16. The Draft EA contains no estimate of the number of lions inhabiting the entire refuge and concedes that organized lion monitoring has not occurred in the Castle Dome Mountains. Draft EA at 1. In regards to mountain lion impacts on refuge ungulates, the Draft EA discloses a single deer found at the Little White Tanks in 2001 that was allegedly killed by a lion. Draft EA at 1.

No additional information about the refuge lions is disclosed by the FWS because it has no population-specific biological or ecological information and yet, based on the extraordinarily limited data that it does have, it has remarkably determined that the refuge lion population can support limited hunting. Draft EA at 3. How the FWS can make and justify such a determination is not disclosed in the Draft EA.

Also missing from the description of the affected environment is information about the refuge bighorn sheep and mule deer populations despite repeated statements in the Draft EA that the proposed hunt may benefit those species. If the FWS intends to suggest that a lion hunt may somehow benefit either bighorn sheep and/or mule deer, it must disclose evidence to substantiate such a claim. The Draft EA, with the exception of a statement claiming that the bighorn sheep population has been in decline since 2003 and that the decline is believed to be largely a consequence of long-term drought, Draft EA at 11, does not include any information on bighorn sheep or mule deer age-specific productivity, age-specific survival rates, mortality factors, disease status, habitat use and movements patterns, distribution, dietary preferences, vegetation productivity, abundance, and composition, and specific annual or monthly climatological data for the refuge. Without the disclosure of such information the FWS, the public, and the FWS decision-makers cannot possibly determine if the few lions on the refuge are responsible for the decline in bighorn sheep, whether they have any impact at all on bighorn sheep or mule deer, how climatological patterns have impacted vegetation abundance, productivity, and composition, and/or what other factors, including anthropogenic factors (e.g., hunting, recreational activities, FWS management actions) may be adversely impacting bighorn sheep and mule deer populations.

While the FWS has no additional evidence relevant to the refuge lion population, we know that it has data on the refuge bighorn sheep and mule deer populations.⁵ That data should have been disclosed in the Draft EA. If such data is incomplete then the FWS,

⁵ See, e.g., the FWS Draft Compatibility Determination for the Southern California Edison electric transmission line.

just as it was required to do in regard to the void of data on mountain lions, was mandated to determine the cost of obtaining such data and, if exorbitant, must include a statement explaining the relevance of the incomplete or unavailable information to evaluating the impact on the human environment, summarize existing credible scientific evidence which is relevant to the anticipated impacts, and include an evaluation of such impacts based on theoretical approaches or research methods generally accepted in the scientific community. 40 CFR at §1502.22(b)(2)(3) and (4). Though such an explanation would never take the place of credible data, the lack of such information along with the inadequate disclosure of known information renders the affected environment section of the Draft EA as completely inadequate.

5. The FWS fails to adequately evaluate the environmental consequences of its proposed action and the alternatives. This section of the Draft EA is supposed to provide a critical analysis of the direct, indirect, and cumulative impacts of the proposed action and its alternatives. The purpose of including a no-action alternative is to compare and contrast the impacts of the proposed action and any action alternatives to the impacts inherent to the no action or status quo alternative. As a reminder, NEPA requires that all relevant information be released to the public and be made available to the FWS decision-makers before an action is taken and that any analysis must be scientifically accurate. In this case, the FWS's analysis of the environmental consequences of the proposed lion hunt is woefully inadequate, is not scientifically accurate, and the FWS has failed to disclose critical information relevant to the full range of impacts inherent to the proposed hunt. An example of the deficiencies in the FWS analysis are:

A. A failure to disclose the methodologies used to document the presence of lions on the KNWR and to determine a population estimate. While it is clear that the FWS primarily relied on images captured by remote cameras to determine both the presence and estimate the number of lions in the Kofa Mountains, the FWS fails to disclose the photographic evidence in the Draft EA or to disclose and discuss the process used to determine, from the photographs and lion tracks, that at least 5 lions are present on the refuge. Instead of disclosing such information, the FWS apparently prefers that the public trust its analysis. While such trust could be warranted with a comprehensive discussion of the methodologies used to obtain such photographs (*i.e.*, where the cameras that captured images of the lions were placed, what time of year the images were captured, how many cameras were in the field and operational) and to make such estimates (*i.e.*, how were individual lions distinguished from each other, who made these determinations, how many individuals were involved in reviewing the photographs, what is the expertise of the individuals in regard to mountain lion biology and ecology), without such information there is no proof that five lions are known to exist on the KNWR.

Similarly, the Draft Plan reports that “all indications from current surveys from Refuge staff and the AGFD biologists are that mountain lion populations are sufficient for limited public hunting,” Draft Plan at A4/A5, yet there is no disclosure in the Draft EA as to what current surveys have been conducted and/or what data have been gathered from such surveys. Information about such surveys such as what methodologies have been

used, where and when were such surveys have been conducted, how frequently such surveys have been performed, who has conducted the surveys, and for how many years have the surveys been run must be disclosed and discussed if the public is to understand and be able to submit informed and substantive public comment on the environmental impacts of the proposed action. Without the disclosure of such data it is also unclear as to how the FWS decision-makers can render an informed decision on the proposed hunt.

Finally, the Draft EA claims that “hunting must be balanced with maintaining a harvestable population of lions on the Refuge” and that “population monitoring must continue to ensure that a harvestable population remains.” Draft EA at 16. The FWS provides no data in the Draft EA, except for its own conclusions without supporting evidence, to suggest that a “harvestable” population of lions exists on the KNWR. Besides the obvious fact that it is difficult to conceive that the FWS would consider a purportedly known population of 5 lions to represent a “harvestable” population, considering that virtually nothing is known of the biology and ecology of these lions the FWS cannot legitimately claim that there is currently a “harvestable” population of lions on the KNWR. Indeed, the only way that the FWS could possibly argue that there exists a “harvestable” population of lions on the KNWR is if it was only referring to the opportunity to kill a lion and not the sustainability of the hunt. If the FWS intends to claim that there is a harvestable surplus of lions on the KNWR, it must provide data substantiating its claim.

B. A failure to disclose evidence to demonstrate any impact of KNWR lions on the refuge bighorn sheep or mule deer populations. The FWS concedes that “lion predation is not suspected to be significantly detrimental to these populations (bighorn sheep and mule deer) on the Refuge,” Draft EA at 11, and that the “Kofa bighorn sheep herd . . . suffered a large decline from 2003 to 2006, largely due to long-term drought in the region.” Draft EA at 11. It also reports only a single mule deer presumed to be killed by a mountain lion found in 2001. Despite all of these statements attributing the decline in the bighorn sheep population to drought, not mountain lions, the FWS continues to claim that “it is possible that a reduction in the mountain lion population would assist in the recovery of the sheep population” Draft EA at 11 and 13. The FWS admits, however, that “hunting may not provide the targeted control method recommended” to address lion predation impacts on small, isolated bighorn sheep populations, Draft EA at 13, and that “the impact from the removal of no more than one lion annually is unlikely to be significant.” Draft EA at 15.

Though the FWS’s own statements completely contradict its claim that the proposed hunt would or could have any positive impacts on the bighorn sheep population, besides conjecture, the FWS provides no substantive data or other evidence to document any beneficial impact of the proposed hunt. For instance, the FWS has disclosed no evidence that it has ever confirmed a single bighorn sheep kill on the refuge attributable to a lion. In regard to mule deer, there is a single documented mortality allegedly attributable to a mountain lion over the course of the last 5 years. While the FWS failed to disclose any data on the size of the bighorn sheep or mule deer populations on the KNWR, given the appetite of 5 mountain lions and their alleged preference for deer, surely there would be

additional evidence of mule deer mortality attributable to mountain lions if lions were depredating deer on a regular basis.

While it is easy to claim that killing a lion could possibly save a bighorn sheep, it is much more difficult to prove such a cause and effect relationship. The FWS has not disclosed any data to prove that relationship and, therefore, should not include such unsubstantiated statements in the Draft EA or consider such alleged benefits in determining the impacts of the proposed hunt.

C. The FWS fails to disclose what mountain lion monitoring strategies are currently in place and/or will be implemented to assess the impact of the proposed hunt on the lion population. The Draft EA contains a number of references to existing and future monitoring to assess the status of the refuge lion population to either determine if the population can support additional removals, Draft EA at 13, or if the impacts of the hunt render the population incapable of sustaining a hunt requiring discontinuation of the activity. Draft EA at 14. The FWS asserts that “population monitoring must continue in order to confirm that the population can sustain harvest, and the monitoring must be sufficient to determine trends in the population,” Draft EA at 13 and 16, but recognizes that “cougar sightings, depredation events, and harvest levels are not reliable ways to index cougar populations.” Draft EA at 13. Since the only form of monitoring identified in the Draft EA which has been ongoing are the remote cameras established at natural or artificial watering areas and since lion photographs are, in effect, sightings which the FWS concedes are not sufficient for monitoring trends in the population, it is unclear what, if any, additional mountain lion monitoring strategies are in place currently on the refuge and/or will be established if a hunt is authorized.

Considering the fact that the FWS concedes that the hunt could cause what it believes to be a resident population of lions to become transient again and/or that it has no idea how long it would take for a breeding female lion (or a male lion) to recolonize the refuge, a monitoring program is clearly critical to assess the impact of the proposed hunt on the lion population. Indeed, the FWS admits the importance of a monitoring program. For example, it reports that “a viable monitoring program, with support from both the Refuge and the AGFD, is essential for this hunt to operate. . . .” Draft EA at 16. It also claims that it will discontinue the hunt if monitoring suggests that it is unsustainable and/or if monitoring itself is not possible. Draft EA at 14.

The FWS, however, completely fails to disclose what strategies it intends to use to monitor the KNWR lions and the suitability of the selected strategy or combination of strategies in providing relevant data allowing the FWS to detect slight changes in population trend that would warrant discontinuing the hunt. Considering that the KNWR lion population is so small to begin with, the monitoring strategy or strategies used must be sensitive enough to pick up minor changes which, in a larger lion population, may not be significant but could be the difference between survival and extirpation in the KNWR lion population. The FWS must disclose and evaluate these strategies so that the public can assess the strengths and weaknesses of such tools and either support or criticize them in their comments. The lack of any information about the monitoring strategy is a

significant deficiency in the Draft EA considering the stated importance of monitoring to assess the impact of the proposed hunt on the population to determine if the hunt continues, is expanded, or is discontinued.

D. The FWS has no means of ensuring that only a single lion is killed annually on the refuge and/or that encouragement provided to hunters to target only male lions will succeed. According to the Draft Plan, the proposed lion hunt on the KNWR (GMUs 45A, 45B, and 45C) hunt would run concurrently with the state season for quail which normally begins on the first or second weekend of October and continues through the first or second weekend in February. Draft Plan at A5. The only exception to this would be during the 10-day general mule deer season at which time the KNWR would be closed to the hunting of foxes, coyotes, and mountain lions though a deer hunter could kill these species until his/her deer tag is filled. Draft Plan at A5. Other AGFD requirements for lion hunting would also be applicable to lion hunting on the KNWR including the 48-hour contact requirement and the mandate that mountain lion hunters call the AGFD before initiating a hunt to determine if the harvest objective for their desired GMU has been met. As proposed, once a lion is removed from either the Kofa GMUs or surrounding GMUs, all of the GMUs in this area would be closed to lion hunting for the year. Draft EA at 16/Draft Plan at A5.

While the FWS may claim that these provisions are sufficiently restrictive to prevent the killing of multiple lions on the KNWR, neither it nor the AGFD can guarantee that only a single lion would be killed on the KNWR and/or outside the KNWR before all of the GMUs are closed to hunting. Considering the extremely small size of the KNWR lion population, this lack of control is a significant issue of concern.

There are several reasons why such control cannot be guaranteed. First, as stated in end note 2 of AGFD Mountain Lion Commission Order 10 for the 2005/2006 hunting season, when the harvest objective for GMUs 16B, 40B, 41, 43A, 43B, and 44B (the GMUs surrounding the KNWR) is met those units will be closed to lion hunting “at sundown the Wednesday immediately following.” Therefore, if the proposed hunt is implemented and the same rules apply, the reported killing of a lion on the KNWR on a Thursday will not result in the closure of the GMUs to lion hunting for 6 more days.

Second, even the 48-hour contact requirement imposed under Arizona law does not ensure that more than one lion could not be killed on the KNWR. Indeed, even if a hunter complies with this contact requirement, the GMUs would still not be closed to hunting until the following Wednesday. Even if the GMUs could be closed earlier, considering the interest of the YVRGC in promoting this hunt, its apparent belief the mountain lions are responsible for the decline in the bighorn sheep population, and Chairman Melton’s publicly stated desire to kill all of the lions on the KNWR, it is not inconceivable that hunting groups could purposefully flood the KNWR with hunters, including lion hunters, on the first two days of the hunt to maximize the killing of lions before the area is closed to all lion hunting.

Finally, though mountain lion hunters may be responsible for calling the AGFD to determine if their desired GMU is still open to lion hunting, there is no such requirement for persons hunting on the KNWR primarily for deer and who happen to see and shoot a lion prior to filling their deer tag. Such a kill would be completely legal since deer hunters on the KNWR would be allowed to kill foxes, coyotes, and mountain lions until they kill a deer. It is difficult to comprehend how a person whose primary interest is in killing a deer but who sees a lion while hunting will contact the AGFD to determine if lion hunting is still permitted on the KNWR before taking a shot. Beyond whatever excitement a hunter may feel when afforded an opportunity to kill a lion, he/she may not have the physical capacity, let alone the desire, to contact the AGFD to determine if he/she can legally shoot the lion. While this problem can be easily resolved by prohibiting the killing of any lion during the 10-day general gun season for deer on the KNWR, such a prohibition will not resolve the other problems associated with the purported claim that the refuge would be closed to hunting after a single lion is killed.

Similarly, though both the FWS and AGFD can encourage hunters to kill only male lions both to reduce the likelihood of killing the only known female breeding lion on the refuge and to avoid orphaning lion kittens, neither agency can guarantee that only male lions will be killed. This is a significant concern both because of the potential for the orphaning and eventual mortality of lion kittens but also, as the FWS concedes, because “it may take some time for another female to establish a territory on the Refuge,” Draft EA at 16, if the only known breeding female on the refuge is killed. While the proposal to allow even a single lion out of a known population of 5 to be hunted is wholly unjustified and biologically reckless, taking any chance that the single known breeding female could be killed and/or that lion kittens could be orphaned and die on the refuge crosses the boundaries of any level of scientific sensibility or soundness as it could compromise any chance, in the short or long-term, in enhancing the numbers and viability of the KNWR lion population.

The FWS has failed to adequately evaluate the short and long-term implications of its proposed hunt on the sustainability and viability of the KNWR lion population. Instead, the FWS desires to kill now and determine the impacts later versus determining what impacts killing will have on the refuge lion population before even a single lion is allowed to be hunted. The FWS offers no rational explanation as to why it is willing to risk the viability of the KNWR refuge lion population – a species for which there were no sightings on the refuge for 56 years – to placate a local hunting club. The Draft EA should have included an analysis of the potential impacts of various hunting mortality levels, the killing of female versus male lions, and the potential orphaning and eventual death of lion kittens on the viability and sustainability, short and long term of the refuge lion population. We suspect that such an analysis was not included because the FWS does not have sufficient data to accurately assess such impacts in a population model or otherwise. Without such data and such an analysis, the FWS must, at a minimum, postpone any decision on the proposed hunt.

E) The FWS has failed to disclose or discuss the environmental impacts associated with the use of dogs/hounds to hunt lions. Neither the Draft EA, Draft Plan, nor Draft

CD indicates that the FWS will or will not allow lions to be hunted with hounds on the KNWR. Without an explicit statement prohibiting such use, it must be assumed that hounds will be permitted on the KNWR since the AGFD allows hounds to be used to take mountain lion. A.C.R.R. §12-4-304(A)(8)(i).

Assuming this is the case, the FWS has failed to provide any discussion of the environmental impacts of using dogs to hunt lions. Such impacts include adverse effects on the dogs (i.e., injury, mortality), on the mountain lions (i.e., injury, mortality, exhaustion, physiological impacts, separation from and potential orphaning of kittens, and impacts to reproductive potential), on other refuge users (i.e., disturbance, harassment, injury), on other refuge wildlife (i.e., disturbance, harassment, injury, mortality, impacts to reproductive potential), and to any landowners with private inholdings on the KNWR (i.e., trespass, disturbance, harassment).

FWS policy explicitly requires that “refuge managers ... carefully consider the impacts of the use of dogs on the refuge, specific approved refuge objectives, and the activities permitted by the State when evaluating the compatibility of hunting dog use.” 605 FW 2.7G. The policy goes on to state that “a refuge manager must discuss the following in the compatibility determination before permitting hunting dogs on the refuge: the likelihood of the dog injuring or harassing nontarget wildlife species to such an extent as to significantly impact population segments of the nontarget species,, and the quality of the experience of visitors participating in other compatible wildlife-dependent recreational activities.” Id.

Unless the FWS intends to prohibit the use of dogs for lion hunting on the KNWR, it must fully disclose and evaluate all potential direct, indirect, and cumulative impacts associated with the use of dogs to hunt lions.

F) The FWS has failed to provide any discussion of the potential existence of the Yuma puma (*Puma concolor browni*) on the KNWR.

As recently as February 1998, the Yuma puma was listed as a species of special concern under the federal Endangered Species Act. See, Arizona Heritage Data Management System (HDMS), Updated July 2006 (Attachment 4). The same 2006 database documents that the Yuma puma is designated a WSC or wildlife of special concern by the state of Arizona with a state ranking of S1? and a global rank of G5T1T2.⁶ In 1988, however, the subspecies was designated as state endangered in Arizona (AGFD 2003). In California, the Yuma puma or Yuma mountain lion is designated as a species of special concern. See, California Department of Fish and Game, Habitat Conservation Planning Branch, Mammal species of Special Concern (Attachment 5).

⁶ The S1 rank refers to species that are very rare with 1-5 occurrences in the State or very few individuals within the State. Though the global designation (G5T1T2) is confusing, it would appear to mean that the species (*Puma concolor*) is “demonstrably secure” with more than 100 occurrences, the subspecies is rare to very rare with 1-20 occurrences throughout its entire range.

The Yuma puma also frequently appears as a species of special concern in a number of environmental documents prepared to evaluate the impact of federal or private agency actions in California and Arizona. For example, it is identified as a Wildlife Species of Concern in the Imperial Project Draft Environmental Impact Statement/Draft Environmental Impact Report prepared by the Bureau of Land Management. See, <http://www.blm.gov/ca/eis/imperial/c3b.html> (Attachment 6). Similarly, in the Lower Colorado River Multi Species Conservation Program EIS/EIR published in December 2004 the Yuma puma is identified as a species of special concern both in Section 3.4 on biological resources (See page 3.4-20; Attachment 7) and in Appendix D of that same document (See page D-2; Attachment 8). The subspecies was also referenced in the November 3, 1999 testimony presented by David Donnelly, the Deputy General Manager of the Southern Nevada Water Authority to the Senate Environment and Public Works Committee (Attachment 9). Finally, even the May 2006 Draft EIR/EIS on the Devers-Palo Verde No. 2 Transmission Line Project – a project that would impact the KNWR and which is currently under review by KNWR staff – the Yuma puma is listed in Appendix 7 of that document as a species of special concern (Attachment 10).

Though, admittedly, there is increasing evidence that the Yuma puma may not be a valid subspecies, the frequent reference in official agency documents to the subspecies as a species of special concern continues to suggest that there remains some question in the scientific community as to whether the Yuma puma is a distinct and valid subspecies or, at a minimum, whether it is genetically distinguishable from *Puma concolor*. In their paper on the taxonomy and conservation status of the Yuma mountain lion, McIvor et al (1995) question the legitimacy of the subspecies based on ecological evidence, but they report that “its status may not be satisfactorily resolved without a larger morphometric data set, and through the application of modern genetic and statistical techniques.” They concede, however, that “it is unlikely that any single ecological, morphological, or genetics-based approach will or should answer the question of subspecific status” and suggest that “an integrated approach should be used involving natural history, morphology, range and distribution, and molecular genetic data.” Culver et al (2000) performed such a genetic analysis on 315 puma specimens of specified geographic origin and determined that only 6 phylogeographic groupings or subspecies were resolved and that the entire North American population of lions was genetically homogeneous in overall variation relative to central and South American populations. Though not clear in Culver et al (2000), it appears that their genetic analysis involved only 5 museum specimens from *Puma concolor browni* raising concern that the sample size may not have been sufficient to detect genetic differences between the Yuma puma and other North American mountain lions. While we are not suggesting that the conclusions from Culver et al. (2000) were incorrect, the lack of a statistically viable number of samples may indicate that additional study of lions occupying the historical range of this subspecies is in order.

In 2003, the AGFD published a draft paper through its Heritage Data Management System, on the Yuma puma. Though the AGFD acknowledged that controversy existed over the validity of the subspecific designation for the Yuma puma, the AGFD still considered the subspecies as a wildlife species of concern and recommended that the

subspecies be protected from being killed and its habitat protected in order for it to persist in Arizona. AGFD 2003 (Attachment 11). In January 2006, a second draft report from the Heritage Data Management System, claims, based on the study by Culver et al (2000) that Yuma puma subspecies is no longer valid (Attachment 12).⁷ Despite this determination, the Yuma puma, as indicated previously, remains on the HDMS list as a wildlife species of concern in Arizona.

Considering that the Yuma puma remains on the HDMS list as a wildlife species of concern in Arizona, that it is listed as a species of concern in California, that it continues to be identified as a species of special concern in various agency NEPA documents, and since its historical habitat includes the KNWR, the FWS erred in failing to provide any mention or reference to the Yuma puma, disclose evidence of its historical or present day existence on the KNWR, and/or explain why the subspecific designation of the Yuma puma is no longer valid in the Draft EA. Moreover, since there may still be a disagreement among taxonomists over the legitimate classification of the Yuma puma, it would appear to be far more prudent for the FWS to engage in a long-term study of the KNWR lion population, including efforts to obtain hair or other samples for genetic analysis, to determine if the subspecific designation requires additional discussion and/or to assess the genetic differences, if any, between the Yuma puma and other North American lion populations than to permit the killing of lions on the KNWR.⁸ Indeed, considering the small size of the refuge's lion population (purportedly 5 known individuals) and the regional population (10 individuals estimated by the AGFD), if the Yuma puma does exist or if the KNWR lions are genetically unique given their isolation from other lion populations, the removal of even a single animal by a hunter would be an irretrievable and irreplaceable genetic loss. At a minimum, the FWS must disclose and discuss why it believes the Yuma puma does not exist in a legally sufficient NEPA document though, preferably, the FWS will forgo any proposed lion hunt at this time in order to collect and analyze DNA samples from KNWR lions so that it can be sure of the full range of impacts of a hunt before proceeding to implement such an action.

6. The FWS fails to adequately evaluate the cumulative impacts of its proposed action. The cumulative impact analysis in the Draft EA is limited to an assessment of the impacts of the proposed refuge lion hunt on the regional and refuge lion population. This analysis, though woefully inadequate, should have been included in the environmental consequences section of the document as it has no relevance to the cumulative impacts of the proposed lion hunt. As a reminder, a cumulative impact or effect is defined under NEPA as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person

⁷ It is unclear why these two AGFD reports are identified as drafts and it is unknown when or if the reports will ever be finalized. In addition, if the AGFD intends to remove the Yuma puma from its list of wildlife species of concern, such an action may require public notice and comment under the Arizona state administrative procedures act.

⁸ For example, Ernest et al. (2003) documented distinct genetic subdivisions between mountain lions in the north Coast Ranges and southwestern California compared to those lions inhabiting other regions of the state. The same situation may exist in Arizona and would be important to determine since it could influence population or site specific appropriate management strategies.

undertakes such other actions.” 40 CFR §1508.7. Thus, a legally sufficient cumulative impact analysis must consider other past, present, or future actions taken by the FWS, other federal agencies, state agencies, or individuals that may incrementally add to the impact of the proposed hunt on the lion population. As the range of the lions who occupy the refuge may extend beyond the refuge boundaries, this analysis must consider any and all actions that may impact the regional lion population.

Such actions could include any planned residential, commercial, industrial, or military developments in the area, the addition of or elimination of natural or artificial water catchments in or outside the KNWR, increased recreational use (including hunting) in the area, increased military activities affecting the refuge and the region, and any proposed increase in livestock stocking rates on any private ranches or public grazing allotments. While few such activities may be planned for the KNWR and lands immediately adjacent to the refuge, it is the disclosure of those activities and an analysis of their impacts which must be evaluated as part of the cumulative impact analysis. Until and unless the FWS provides a legally sufficient cumulative impact analysis the Draft EA, assuming it were otherwise fully in compliance with NEPA, would remain deficient.

7. An EA does not provide an appropriate level of environmental impact analysis for the proposed project and an EIS is necessary. As indicated previously, the Draft EA is woefully inadequate and fails to even begin to comply with the requirements of NEPA. At a minimum, therefore, the FWS must rescind the Draft EA and examine the impacts of the proposed lion hunt in a far more comprehensive EA or, preferably, in an EIS.

NEPA requires agencies to consider the significance of its action when determining if an EIS is required to evaluate the environmental impacts of a proposed action. The significance criteria includes both the context in which the action occurs and the intensity or severity of the action. The intensity of the action is evaluated based on 10 factors. When considering these 10 intensity factors in light of the proposed hunt, it is clear that the proposed action in this case meets or exceeds seven of the intensity factors.

For example, the proposed hunt is likely to have impacts that are both beneficial and adverse. 40 CFR §1508.27(b)(1). Even the FWS concedes that the proposed hunt may benefit the refuge’s bighorn sheep and mule deer population while potentially adversely impacting the KNWR lion population by either causing the population to become transient again or resulting in the unsustainable killing of lions necessitating the discontinuation of the hunt. The location of the proposed action on the KNWR, given its designated wilderness and large number of historic and cultural resources, also qualifies it for evaluation in an EIS. *Id.* at §1508.27(b)(3). The effects of the proposed action are also likely to be highly controversial, even among scientists, and involve highly uncertain or unique risks. *Id.* at §1508.27(b)(4) and (5). For example, the proposed hunt could cause the KNWR lion population to become transient again or could, over the short or long-term, reduce or eliminate any breeding lions on the refuge. The proposed action will also establish a precedent not only in regard to the possibility that other refuges in Arizona or throughout the west will propose to allow lion hunting but that such refuges could attempt to do so using the same justifications and deficient NEPA analysis used in

this case. *Id.* at §1508.27(b)(6). Finally, the FWS has not adequately assessed the potential impacts of the proposed action on structures, sites, or objects listed in or eligible for listing in the National Register of Historic Places and will otherwise violate at least two federal laws. *Id.* at §1508.27(b)(9) and (10). For these reasons, the FWS must either initiate the review of the proposed action in a legally sufficient EIS and/or provide a rational explanation as to why an EIS is not required in this case.

National Wildlife Refuge System Administration Act as amended by the National Wildlife Refuge System Improvement Act and relevant FWS regulations and policies governing the management of national wildlife refuges including, but not limited to, regulations and policies relevant to hunting.

The National Wildlife Refuge System Administration Act, as amended provides the legal framework for the management of all national wildlife refuges. It established the mission of the NWRs CCP as “the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitat within the United States for the benefit of present and future generations of Americans. 16 USC §668dd(a)(2). Each individual refuge is to be “managed to fulfill the mission of the System, as well as the specific purposes for which that refuge was established.” *Id.* at §668dd(a)(3)(A).

In administering the system, it is the responsibility of the Secretary of the Interior to “provide for the conservation of fish, wildlife, and plants, and their habitats within the System,” *id.* at §668dd(a)(4)(A), “ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans,” *id.* at §668dd(a)(4)(b), and both recognize compatible wildlife-dependent recreational uses as the priority general public uses of the System and ensure that opportunities are provided for such uses within the System. *Id.* at §668dd(a)(4)(H and I). As the FWS concedes in the Draft EA, “when the Secretary determines that a proposed wildlife-dependent recreational use is compatible within a refuge, that activity should be facilitated, subject to such restrictions or regulations as may be necessary, reasonable and appropriate.” *Id.* at §668dd(a)(3)(D); Draft EA at 14; (emphasis added). Given that the operative word in this statutory provision is “should” it is clear that the FWS has some discretion in determining if a wildlife-dependent recreational use is implemented. Moreover, there is nothing in the NWRsSAA, as amended, that mandates that wildlife-dependent recreational uses be permitted on every refuge within the NWRs.

The NWRsSAA, as amended, also provided the FWS with additional guidance regarding the preparation of compatibility determinations for various uses permitted on refuges specifying that “wildlife-dependent recreational uses may be authorized on a refuge when they are compatible and not inconsistent with public safety.” *Id.* at §668dd(d)(3)(iii). Finally, the amended Act, required the preparation of Comprehensive Conservation Plans (CCPs) for each refuge. CCPs are required to include disclosure of “the purposes of each refuge comprising the planning unit,” *id.* at §668dd(e)(2)(A), “the distribution, migration patterns, and abundance of fish, wildlife, and plant populations and related habitats

within the planning unit,” *id.* at §668dd(e)(2)(B), and “significant problems that may adversely affect the populations and habitats of fish, wildlife, and plants within the planning unit and the actions necessary to correct or mitigate such problems.” *Id.* at §668dd(e)(2)(E).⁹

The FWS has promulgated a number of policies to provide additional guidance in interpreting and implementing the NWRSA, as amended. Such policies include 603 FW 2 on Compatibility Determinations, 601 FW 3 on Biological Integrity, Diversity, and Environmental Health, 602 FW 3 on the Conservation Comprehensive Planning Process, and 605 FW 2 on Hunting. For the purpose of these comments, two of these policies will be briefly discussed.

A “compatible use” is defined in 603 FW 2 as “a proposed or existing wildlife dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge.” 603 FW 2.6B.

The phrase “sound professional judgment” refers to a “finding, determination, or decision that is consistent with principles of sound fish and wildlife management and administration, available science and resources...” and includes a refuge manager’s “field experience and knowledge of the particular refuge’s resources.” *Id.* at 2.6U. This term also requires that a refuge manager “consider the extent to which available resources (funding, personnel, and facilities) are adequate to develop, manage, and maintain the proposed use so as to ensure compatibility.” *Id.* at 2.11A(2). Whether a proposed use will “materially interfere with or detract from” the mission of the NWRS or the purpose of a refuge is also a finding that is based on the sound professional judgment of the refuge manager. According to the Compatibility policy, it would appear that the proponents of a particular use have the burden to show that the use passes a threshold test (an example of which is whether the use would degrade the ecological integrity of the refuge) of compatibility and not on the Refuge Manager. *Id.* at 2.11B(1). Fundamentally, however, this determination is based on whether the proposed use and any impacts from the use, including direct, indirect, and cumulative impacts, will affect the ability of the FWS to fulfill the NWRS mission and the refuge purposes. *Id.* at 2.11B(2) and (3).

One criteria identified in FWS policy that is inherent to fulfilling the mission of the NWRS is to maintain and restore, where appropriate, the biological integrity, diversity, and environmental health of the NWRS. See 601 FW 3. As reported in FWS policy, the House Report 105-106 which accompanied the National Wildlife Refuge System

⁹ There is no reference to a CCP for the KNWR. According to the FWS website (<http://www.fws.gov/refuges/refugePlanning/>) the Kofa National Wildlife Refuge & Wilderness and New Water Mountains Wilderness Interagency Management Plan and Environmental Assessment is identified as the KNWR CCP. This document, however, was completed in October 1996 well before the National Wildlife Refuge System Improvement Act – the Act which required CCPs – was even promulgated and it fails to disclose the information or provide the requisite analysis required for CCPs under the NWRSA, as amended, and relevant FWS policy (602 FW 3).

Improvement Act of 1997 states “...the fundamental mission of our System is wildlife conservation: wildlife and wildlife conservation must come first.” 601 FW 3.7A. In other words, though the 1997 Act gave hunting and other wildlife-dependent recreational uses priority consideration within the NWRS, wildlife and its conservation trumps any recreational use. Since biological integrity, diversity, and environmental health are critical components of wildlife conservation, and wildlife conservation is the fundamental mission of the NWRS, then the protection of the biological integrity, diversity, and environmental health of a refuge is a key consideration as to whether a proposed use is compatible. Id. at 3.18.

Biological diversity refers to “the variety of life and its processes, including the variety of living organisms, the genetic differences among them, and communities and ecosystems in which they occur.” Id. at 3.6A. Biological integrity refers to “biotic composition, structure, and functioning at genetic, organism, and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities.” Id. at 3.6B. FWS policy specifies that, first and foremost, it will “maintain existing levels of biological integrity, diversity, and environmental health at the refuge scale” and, secondarily, will “restore lost or severely degraded elements of integrity, diversity, environmental health at the refuge scale... where it is feasible and supports achievement of refuge purpose(s) and System mission.” Id. at 3.7D.

In assessing biological diversity, the FWS examines the extent to which biological composition (i.e., species, populations), biological structure (i.e., social structure of populations, food webs of species, and niche partitioning within communities), and biological function (i.e., population migration, evolution of species, and community succession) has been altered from historic conditions. Id. at 3.10A(1). To evaluate biological diversity, the FWS considers various taxonomic levels (class, order, family, genus, species, subspecies) relying on population surveys and studies of flora and fauna. Id. at 3.10B(1). In protecting biological diversity, the FWS, among other things, strives to maintain populations of breeding individuals that are genetically viable and functional. Id. at 3.10B(3). In regard to population management, the FWS claims to “formulate refuge goals and objectives for population management by considering natural densities,, social structures, and population dynamics a the refuge level” relying on “population parameters such as sex ratios and age class distributions when managing populations to maintain and restore where appropriate biological integrity, diversity, and environmental health.” Id. at 3.14B and C.

Applying these basic criteria to the proposed lion hunt and recognizing the limited information about the KNWR lion population, it is inconceivable that the FWS could – as it has – determine that the proposed hunt is compatible with the mission of the NWRS and purpose of the refuge.

First, if the mission of the NWRS is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of

present and future generations of Americans,” it is difficult to understand how allowing a hunt on a species for which only 5 individuals have been identified on the KNWR can possibly represent the conservation or management of the species. If anything, such a hunt is antithetical to the conservation mission of the FWS as it could jeopardize the very existence of this population of lions.

Moreover, if wildlife are first in refuge planning as indicated by Congress, and if wildlife conservation includes protecting the biological diversity and integrity of each refuge, authorizing a lion hunt on the KNWR, given the small size of the population and the lack of any credible biological or ecological data about the population, would be inconsistent with these concepts and mandates. If, as indicated in FWS policy, the protection of biological diversity and integrity involve the preservation of ecosystem functions, processes, and the maintenance of a genetically viable and functional population of breeding individuals, any hunt, like the proposed hunt, that would eliminate a top-line predator from the ecosystem thereby altering predator-prey dynamics, potentially result in the killing of the refuge’s single known breeding lion, and/or cause the extirpation of the species from the refuge would, by definition and quite obviously, be incompatible with the mission of the NWRS.

The second test for compatibility is whether the proposed action is consistent with the purpose of the refuge. Despite the FWS claim that the KNWR was established to protect bighorn sheep, there is no evidence in the relevant Executive Order that this was the case and the FWS has provided no additional evidence or citations to other records that would substantiate its claim. The relevant language in the Executive Order indicates that the Kofa Game Range (which ultimately became the KNWR) as “... set apart for the conservation and development of natural wildlife resources, and for the protection of public grazing lands and natural forage resources.” Executive Order 8039. Consequently, there is no specific mandate to protect bighorn sheep and therefore the unsubstantiated claim that a lion hunt could somehow benefit the refuge bighorn sheep population cannot be used to determine the compatibility of the proposed hunt. Even if such a bighorn protection mandate existed, the FWS would have to provide evidence that the existing lion population was adversely impacting the refuge sheep population and that the removal of a single lion would ameliorate that situation before it could rely on such an argument to warrant a determination that the proposed hunt is compatible with the KNWR purposes.

A third criteria used in determining the compatibility of a proposed use is whether the proposed use, in the sound professional judgment of the Refuge Manager, is consistent with principles of sound fish and wildlife management and administration, available science and resources. Considering the small size of the KNWR lion population and, with the exception of some photographs, the fact that virtually nothing is known of the ecology or biology of this population of lions, allowing the killing of one lion out of a known population of only five animals is entirely inconsistent with the principles of sound fish and wildlife management. If the FWS disagrees, it must provide a rational explanation relying on credible data to justify its position. In this case, not only has the FWS failed to include such an explanation but there is no credible data disclosed in the

Draft EA that could be interpreted as providing any biological justification for the proposed hunt.

Finally, the Refuge Manager must determine that sufficient resources are available to develop, manage, and maintain the proposed use so as to ensure compatibility. In this case, despite an estimated price tag of \$24,000 for the first year of the hunt which would allegedly include the cost of lion monitoring, Draft Plan at A3, the FWS claims that “staff, equipment, and facilities are available to administer this use.” Draft CD at 2.

While the estimated cost of \$24,000/year to allow the hunting of a single lion should have immediately caused the FWS to abandon this proposal, the relevant FWS policy on compatibility determinations requires the FWS to make a finding that sufficient funds are available to administer this use, the Draft CD does not make this mandatory determination. Instead, the FWS, contradicting its previous claim that the cost of lion monitoring is included in the estimated \$24,000 price tag, reports that “current budget expectations are sufficient to manage a hunting program, but budgetary support will be required from the Arizona Game and Fish Department and hunting proponents for population monitoring and management.” Draft Plan at A3. In other words, the FWS is conceding that it does not have sufficient funds to fully implement the proposed action, which includes the proposed mountain lion population monitoring efforts, and that it would have to rely on handouts or donations from the AGFD and hunt supporters to meet its financial needs.

If the FWS cannot determine that it is able to afford the full costs of the proposed action using its existing federal funds, it can’t issue a compatibility determination. There is no regulation or policy that permits the FWS to make a determination of compatibility based on a presumption that whatever federal funds are not available to administer the use, State or private funds can be collected to make up the difference. Even if the FWS could accept donations from State and private parties to help meet its financial needs, the FWS has offered no evidence that it will receive sufficient funds from either the AGFD or hunt proponents making it impossible for the FWS to determine that the proposed hunt is compatible.

For the foregoing reasons, the FWS’s compatibility determination for the proposed hunt is in error, must be withdrawn, and should not be reissued until and unless the FWS can make the required findings.

Finally, though the FWS has relatively few regulations pertinent to hunting on national wildlife refuges, 50 CFR §31.1 requires the use of population censuses, habitat evaluations, and other means of ecological study to determine if a “surplus” of a particular wildlife species exists on a refuge. This is a critical determination as FWS regulations specify that only “surplus” wildlife can be “reduced or utilized” by “public hunting.” *Id.* at §31.2 and §31.2(e). Simply put, without a determination that a species is present on a refuge in numbers that are “surplus” to what the refuge can or should support, the species can’t be subject to a public hunt. There is no credible argument or data that the FWS has disclosed or can disclose to suggest that there are “surplus”

mountain lions on the KNWR and, therefore, the FWS cannot proceed with the proposed action. If the FWS disagrees with this interpretation of its regulations, it is obligated to provide a rational explanation for its interpretation of the regulation and its applicability to the management of hunting on national wildlife refuges.

National Historic Preservation Act.

The National Historic Preservation Act (NHPA) was enacted in 1966 to protect the Nation's historical resources from increasing development and expansion pressures by establishing a comprehensive national historic preservation policy. See 16 U.S.C §470 et seq. The NHPA specifically directs federal government agencies to take historic preservation into account in planning their initiative and actions. Specifically, Section 106 of the NHPA requires “the head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district site, building, structure, or object that is included in or eligible for inclusion in the National Register.” Moreover, Section 110 of the NHPA requires the head of all federal agencies to be responsible “for the preservation of historic properties which are owned or controlled by such agency,” that such properties are “identified, evaluated, and nominated to the National Register,” and that such properties that “are listed in or may be eligible for the National Register are managed and maintained in a way that considers the preservation of their historic, archaeological, architectural, and culture values... .”

Regulations implementing the NHPA are found at 36 CFR 63 and 36 CFR §800. These regulations specify that federal agencies are required “to take into account the effects of their undertakings on historic properties¹⁰ and to afford the Council (Advisory Council on Historic Preservation) a reasonable opportunity to comment on such undertakings.” 36 CFR §800.1(a). The purpose of the consultation process is to “identify historic properties potentially affected by the undertakings, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects... .” Id. Such consultations are required and involve the relevant state historic preservation officer (SHPO), tribal historic preservation officer (THPO), or the appropriate representative of the tribe whose lands may be affected by a federal agency undertaking for those tribe have not assumed the SHPO functions. Id. at §800.2(c)(1), (c)(2), (c)(2)(B), and (c)(2)(B)(ii). The public also has a role in the Section 106 process as its “views are essential to informed Federal decision-making... .” Id. at §800.2(d).

¹⁰ A “historic property” is defined under the NHPA as “any prehistoric or historic district, site, building, structure, or object including in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior.” 36 CFR §800.16(1)(1). This term “includes artifacts, records, and remains that are related to and located within such properties” which includes “properties of traditional religious and cultural importance an Indian tribe or Native Hawaiian organization and that meets the National Register criteria.” Id.

To comply with the Section 106 process, a federal agency official must determine if the proposed federal action is an undertaking and, if so, whether it is the type of activity that has the potential to cause effects on historic properties. *Id.* at §800.3(a). When evaluating the impact of an undertaking, the agency must consider sites listed on the National Register, sites eligible for listing on the National Register, and other sites, including sites not previously identified, that may be of religious or cultural significance to Native Americans, *id.* at §800.4(a)(4), and then determine if such sites warrant listing on the National Register in order to include them, if appropriate, in the Section 106 evaluation process. *Id.* at §800.4(c)(2).

An “undertaking” is defined to include “a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including ... those requiring a Federal permit, license or approval.” *Id.* at §800.16(y). If the undertaking has no potential to cause effects, there are no further obligations under Section 106. *Id.* at §800.3(a)(1). An “adverse effect” refers to “when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” *Id.* at §800.5(a)(1). Examples of “adverse effects” include the physical destruction of or damage to all or part of the property, removal of the property from its historic location, change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance, or the introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features. *See* 36 CFR §800.5(a)(2)(i-v). In consultation with the relevant SHPO or THPO, the agency makes a determination as to whether its undertaking may have an adverse effect. If no adverse effect is found, the consulting parties are provided an opportunity to review the findings and to either concur or object to the conclusion. *Id.* at §800.5(c) et seq. If an adverse effect is disclosed, further consultation is required to resolve the adverse effect. *Id.* at §800.5(d)(2).

In regard to NEPA, the NHPA encourages federal agencies to coordinate compliance with section 106 with the requirements of NEPA. *Id.* at §800.8(a)(1). Specifically, federal agencies “should ensure that preparation of an environmental assessment and finding of no significant impact or an EIS and record of decision includes appropriate scoping, identification of historic properties, assessment of effects upon them, and consultation leading to resolution of any adverse effects.” *Id.* at §800.8(a)(3).

The FWS has ignored its obligations under the NHPA in the Draft EA despite conceding that the KNWR “files contain variable records of approximately 92 known or recorded archeological and historic sites on the Kofa NWR.”¹¹ Draft EA at 8. The FWS fails to disclose the location of such sites or whether such sites are included on the National Register or are eligible for inclusion on the National Register. The FWS summarily dismisses any potential impacts of the proposed action on cultural resources by claiming

¹¹ The Yuma County 2010 Comprehensive Plan indicates that the KNWR maintains a list of archeologically and historically significant sites but that the list is confidential to maintain the integrity of the sites. *See* Yuma County 2010 Comprehensive Plan at 7-6 (Attachment 13).

that the limited hunt alternative “is unlikely to affect cultural resources,” Draft EA at 14, while claiming that the open season alternative is “unlikely (to) impact cultural resources more than current conditions.” Draft EA at 15. While cultural resources are included in those sites potentially protected by the NHPA, the NHPA’s reach extends beyond cultural resources to include other sites, artifacts, and structures.

Though the FWS claims that impacts of the proposed action to cultural resources is unlikely, there is no evidence that the FWS has comprehensively evaluated all relevant sites to determine whether they could be adversely effected by the proposed action and neither the Draft EA nor the Draft CD contains an assessment of the potential effects of the proposed action on these sites as required under the NHPA. Conversely, the KNWR Draft CD on the Public Utility Right-of-Way for Southern California Edison’s proposed installation and maintenance of a 500 Kilovolt electric transmission line, identifies four known sites recommended as National Register of Historic Places eligible that are located within the general corridor of the proposed transmission line segment that would traverse the KNWR. In that case, the KNWR concluded that the proposed construction activities could impact the identified sites.

In the Draft CD on lion hunting, however, there is not a single reference to the NHPA or the potential impact of hunting on any historic or archeological site on the KNWR. Indeed, it is likely that the KNWR has failed to subject any of its existing hunts to the required evaluation under the NHPA despite, as disclosed in the Draft EA, recreational hunting on the KNRW generates up to 2000 visits per year, Draft EA at 9. While hunting may not cause as significant an impact as would road construction or other development, the auditory and physical impacts of hunters may adversely effect known or yet to be discovered and documented archeological and historic sites on the KNWR.

Notwithstanding the other serious deficiencies inherent to the Draft EA, the FWS cannot issue a FONSI until and unless it complies with the NHPA. Since such compliance must include providing the public with an opportunity to participate in its decision-making process the FWS has no choice but to, at a minimum, assess the potential impact of the proposed lion hunt on historic sites on the KNWR and provide the public with an opportunity to comment on its findings.

CONCLUSION:

For the foregoing reasons, AWI and ADLA are unalterably opposed to the proposed mountain lion hunt. Not only has the FWS failed to subject the proposed hunt to sufficient environmental impact analysis as required by NEPA but it has also violated other federal laws, including its own statutes, regulations, and policies governing the management of national wildlife refuges. The proposed hunt is biologically reckless, is not based on any credible scientific evidence, and, if authorized, could cause the extirpation of lions from the KNWR. Consequently, for these and other reasons, the hunt is not and cannot be compatible with the mission of the NWRS or the purpose of the KNWR which, contrary to the FWS assertions, is not dedicated to protecting and preserving bighorn sheep.

Given the multitude of inadequacies identified in its analysis, the FWS must rescind the Draft EA, Draft Plan, and Draft CD and either initiate a new planning process to comprehensively evaluate the full range of environmental impacts of its proposed action (preferably in an EIS) or, given the lack of credible scientific data on the ecology and biology of the mountain lion on the KNWR, the FWS should abandon this project altogether in favor of implementing a long-term ecological study of lions on and adjacent to the KNWR.

Thank you in advance for considering these comments.

Sincerely,



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