FOREST GUARDIANS

THE SOUTHWEST ENVIRONMENTAL CENTER

The Rewilding Institute

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Via postal mail and e-mail: comments-southwestern-coronado@fs.fed.us

RE: Comments Regarding Environmental Assessment (EA) for Carrizo, Cross S, Fresnal, Jarillas, Oro Blanco, and Sardina Allotments, *i.e.,* the Atascosa West Allotments

Dear Mr. Gerhart,

Thank you for providing our office with a copy of the EA for the Atascosa West Allotments in the Nogales Ranger District of the Coronado National Forest. These comments are submitted on behalf of Forest Guardians, the Southwest Environmental Center, the Rewilding Institute, and our collective members. All of us care about, and are affected by, the management of our National Forests.

Forest Guardians is a non-profit public interest organization dedicated to preserving the wild lands and wildlife of the American Southwest. Forest Guardians has a long history of interest and involvement in Forest Service activities with respect to grazing, riparian areas, water quality, and wildlife. The members and staff of Forest Guardians use and enjoy the public lands, waters, and natural resources within the Coronado National Forest for recreational, scientific, spiritual, educational, aesthetic, and other purposes. Forest Guardians and its members also participate in information gathering and dissemination, education and public outreach, commenting upon agency actions, and other activities relating to the Forest Service's management and administration of the public lands in Arizona.

The Southwest Environmental Center (SWEC) is a New Mexico non-profit corporation with its principal office in Las Cruces, New Mexico. SWEC has approximately 1,000 members, the majority of whom reside in New Mexico. SWEC's mission is to protect

and restore native wildlife and their habitats in the Southwestern borderlands through education, advocacy and restoration projects. Members of SWEC frequently use and enjoy the deserts, forests and grasslands of the Southwest, especially the Gila National Forest, including the Atascosa West Allotment, for wildlife viewing, recreational, aesthetic, and scientific activities. We will continue to do so. As part of its Desert Lands and Wildlife Program, SWEC has actively worked to protect and restore Mexican gray wolves and other native species within their historic range.

The Rewilding Institute is a non-profit, conservation think tank dedicated to science-informed protection and restoration of biological diversity at landscape and continental scales in North America. A primary focus of The Rewilding Institute is the restoration and conservation of ecologically effective populations of top predators.

As we are sure you are aware, the effects of cattle grazing have long subjected our southwestern public lands to ecological disrepair. Recent scientific studies have indisputably shown that grazing in the arid areas of our country, such as those in Arizona, eradicates native flora and fauna and degrades water quality.[1] These devastating effects stem from the fact that cattle denude the landscape while trampling soils and destroying stream banks. The ubiquity of subsidized livestock ranching on our National Forests is quickly eradicating the unique treasure of biodiversity that once pervaded throughout the places in which we now live, work, and recreate.

Modern scientific thought on southwestern cattle ranching is rapidly altering public opinion toward this land use. Many concerned citizens, including those in our own membership, seek change for range management on our public lands. Simply put, we feel that livestock grazing on the Coronado National Forest is unsustainable and incompatible with the public interest. It is from this perspective that we now comment on the proposed action for the Atascosa West Allotments.

PROJECT DEFINITIONS AND LEGAL PARAMETERS

"The purpose of the proposed action is to authorize livestock grazing consistent with [the policy of making forage from lands suitable for grazing available to qualified livestock operators] and in a manner that maintains or improves project area resource conditions and achieves the objectives and desired conditions described in the Coronado National Forest Plan."[2] In furtherance of this goal, the EA purports to analyze the environmental impacts of reauthorizing livestock grazing on the Atascosa West Allotments. Because continued grazing on this allotment specifically- and on our public lands in general- wreaks havoc on the environment, depletes public resources, and impairs recreational opportunities, any decision to reauthorize grazing at this time cannot be taken lightly.

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[1] *See e.g.* Wuerthner, G and M Matteson (eds). 2002. *Welfare ranching: the subsidized destruction of the American west.* Island Press, Washington; *see also* TL Fleischner. 1994. *Ecological Costs of Livestock Grazing in Western North America.* Conservation Biology 8:3:629-644.
[2] EA for the Atascosa Allotments, at 1.

Indeed, the need for sound agency decision-making is reflected in the myriad federal rules and regulations that now govern your decision.

Not only must the EA for the Atascosa West Allotments meet the procedural requirements of the National Environmental Policy Act (NEPA), 42 U.S.C §§ 4321 *et seq.,* all range management decisions concerning these allotments must comply substantively with NEPA, the National Forest Management Act (NMFA), 16 U.S.C §§ 1600 *et seq.,* the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1751 *et seq.,* the Public Rangelands Improvement Act (PRIA), 43 U.S.C. §§ 1901 *et seq.,* the Endangered Species Act (ESA), 16 U.S.C. §§ 1531 *et seq.,* the Administrative Procedures Act (APA), 5 U.S.C. §§ 706 *et seq.,* the Clean Water Act (CWA), 33 U.S.C. §§ 1251 *et seq.,* the Multiple-Use, Sustained-Yield Act (MUSY), 16 U.S.C. §§ 528 *et seq.,* the National Forest Grazing Act (NFGA), 16 U.S.C. §§ 580c *et seq.,* the United States Forest Service (USFS) Federal Regulations for Grazing and Livestock Use on the National Forest System, 36 C.F.R. Part 222, and the Coronado National Forest Plan (CNFP).

In short, the USFS is compelled to manage our forests in the public interest by preserving their natural integrity and balancing competing uses. The EA prepared for the Atascosa West Allotments should have reflected the USFS's aforementioned charge by realistically analyzing the environmental and financial costs of continued grazing, along with the benefits of long-term rest. The EA, however, failed to take either of these factors fully into account. Instead, the preferred action on the Atascosa West Allotments inappropriately and unjustifiably reflects the USFS's overarching policy of favoring the preservation of an ambiguous "ranching culture" over all other potential uses. In doing so, the USFS turns a blind eye to the real costs of public lands ranching, and fails to disclose the tangible benefits that could be realized by allowing our National Forests to be put to the panoply of other uses, which are now unrealistic on the 69% of USFS land that is currently devoted to livestock grazing.[3]

These comments explore the inadequacies of the EA for the Atascosa West Allotments. We do this through a discussion of those issues that should have been addressed therein, and conclude that the USFS must now complete an environmental impact statement (EIS). This heightened level of environmental review is required to cure the deficiencies of the EA, and adequately address other significant issues that the USFS should consider before deciding whether to reauthorize livestock grazing on these allotments.

INADEQUACY OF THE EA FOR THE ATASCOSA WEST ALLOTMENTS

We feel that the EA for the reauthorization of grazing on the Atascosa West Allotments fails to meet the requirements of the Council on Environmental Quality (CEQ)[4] as promulgated in accordance with NEPA. The sections that follow discuss the general role of an EA in the agency decision-making process, and point out why *this* EA provides an

[3] Wuerthner (2002).
[4] The CEQ regulations are codified at 40 C.F.R. §§ 1500 *et seq.*

insufficient basis upon which the USFS can move forward without further environmental review.

Purpose and Function of an EA Generally

When, as here, an action is not categorically excluded from environmental review,[5] the USFS may begin the NEPA process with the preparation of an EA.[6] The purpose of an EA is to determine whether the federal action is significant enough to require an EIS, *i.e.,* whether the federal action will have a significant effect on human health or the environment.[7] To facilitate such determination, the EA must contain, *inter alia,* brief discussions of the need for the proposed action, alternatives to the proposal, and the environmental impacts of the proposal and the alternatives.[8] Additionally, an EA must consider the cumulative impacts of the proposed action.[9]

An EA is meant to be a concise public document, which serves to provide sufficient evidence and analysis for determining whether to prepare an EIS or, on the other hand, make a finding of no significant impact (FONSI).[10] Although not as thorough or as detailed as an EIS, an EA requires enough of an investment of agency resources to carry out a preliminary environmental inquiry. Should such inquiry reveal that the federal action may significantly affect the quality of the environment, the USFS must prepare an EIS.

Closing the environmental review process on any major federal action[11] before providing the public sufficient evidence and analysis of the environmental impacts is contrary to law. We feel that the USFS has acted in such a contrary manner with regard to the EA for the Atascosa West Allotments. The following section details our rationale.

Specific Inadequacies of this EA

The EA for the Atascosa West Allotments constitutes inadequate environmental review for four main reasons. First, the EA uses inappropriate incorporation by reference throughout. Second, the EA fails to disclose and discuss the true environmental impacts of cattle grazing to riparian areas, water quality, wildlife, and threatened and endangered (T&E) species. Third, the EA offers no substantive range of alternatives to the proposed action. Fourth, the EA includes an inadequate discussion of the cumulative impacts of continued livestock grazing throughout the Coronado National Forest.

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[5] Categorical exclusions are rarely employed and only appropriate for non-impact decisions.
[6] *See* 40 C.F.R. §§ 1501.3 and 1501.4(a)-(c).
[7] 42 U.S.C. § 4332(2)(C).
[8] *See* 40 C.F.R. § 1508.9.
[9] *See e.g. Kern v. BLM,* 284 F.3d 1062 (9th Cir.2002); *Hall v. Norton,* 266 F.3d 969 (9th Cir.2001); *Blue Mountains Biodiversity Project,* 161 F.3d 1028 (9th Cir.1998); *Idaho Sporting Cong. V. Thomas,* 137 F.3d 1146 (9th Cir.1998).
[10] *See* 40 C.F.R. § 1508.9.
[11] The issuance or re-issuance of a USFS grazing permit is a major federal action under NEPA.

Taken either collectively or separately, these four failures bar the USFS from now issuing a FONSI for the reauthorization of grazing on the Atascosa West Allotments. We submit that each of the following four issues is significant enough to warrant the development of an EIS, and urge the USFS to do so in a timely manner.

1. INAPPROPRIATE INCORPORATION BY REFERENCE

In the very first paragraph of the EA for the Atascosa West Allotments, the USFS states that "throughout this EA, references to supporting documentation are shown in parenthesis. For example, a reference '(PR #21)' would indicate that a specific passage in the EA is linked to information contained in document No. 21 in the project record." The EA, however, fails to later disclose to which document each document number refers, and offers no instructions as to how one might retrieve this information.

In total, the EA includes 46 cross-references to the project record.[12] Each reference is used to support one or more of the USFS's contentions about the proposed action and/or its alternatives to that action. These contentions range from environmental impacts, to current conditions, to key issues previously raised by other commenting groups. Without more, this type of incorporation by reference is inappropriate and possibly illegal. We offer the following excerpt from a recent federal case out of California[13] as an elaboration:

> I begin by noting that **there is no apparent reason to believe that an incorporation process is appropriate relative to an EA.** Thus, although the CEQ regulations permit, under stringent standards discussed below, incorporation by reference in an EIS, 40 C.F.R. § 1502.21, no such provision is made for an EA. On the contrary, the regulations appear to contemplate that an EA will be a concise public document which briefly presents sufficient evidence and analysis for determining whether to prepare an EIS or a FONSI. 40 C.F.R. § 1508.9. **Given the purpose of an EA, [the no incorporation] restriction on the document does not appear unreasonable.**
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> [T]he threshold for requiring an EIS is quite low. Thus, only in those obvious circumstances where no effect on the environment is possible, will an EA be sufficient for the environmental review required under NEPA. Under such circumstances**, the conclusion reached must be close to self-evident and would not require an extended document incorporating other studies.** Moreover, **because the purpose of an EA is to decide whether an EIS must be prepared,** 40 C.F.R. § 1501.4(a), (b), (c); *Jones v. Gordon,* 792 F.2d 821, 827 (9th Cir.1986), **the document itself (and any attachments or appendices included with it) must facilitate or enable public comment concerning the agency's determination that the project does not significantly affect the environment.** *Cf. Sierra Club v. U.S. Forest Service,* 843 F.2d 1190, 1193 (9th Cir.1988).

[12] These references are found on pp. 2, 6, 10-12, 16-20, 23, 24, 26, 27, 29, and 32 of the EA.
[13] *Sierra Club v. Babbitt,* 69 F.Supp.2d 1202, 1216-17 (E.D. Cal. 1999) (emphasis added).

> [U]nder certain circumstances the law permits incorporation of materials by reference into an EIS. The propriety of such incorporation is dependent upon meeting three standards: **1) the material is reasonably available; 2) the statement is understandable without undue cross reference; and 3) the incorporation by reference meets a general standard of reasonableness.** *See California v. Bergland,* 483 F.Supp. 465, 485 (incorporation of material into a DEIS), *aff'd. in relevant part, California v. Block,* 690 F.2d 753, 765.

The EA for the Atascosa West Allotments constitutes inadequate environmental review because "the document itself" does not "facilitate or enable public comment concerning the agency's determination that the project does not significantly affect the environment." Each time the USFS cross-references a document that is not available to the public, it is leaving us in the dark as to the foundation for its assertions. We are not satisfied to accept your conclusions at face value. Based on the above judicial decision, we are legally entitled to see the data upon which you are relying to make management decisions for these allotments.

Your incorporation by reference fails even when tested for meeting the lower EIS threshold for reasonableness. This is primarily because the material referenced is not "reasonably identified or available." Concerned citizens from all over the country routinely comment on actions taken by the USFS that affect our public lands. Holding hard copies of the project record for general dissemination on an as-requested basis is unreasonable and inconvenient for the public at large.

You have told us that specific pieces of the project record are available upon request. While we appreciate that there is some avenue for obtaining this information, the comment period for this action is so short that there simply is no time to endeavor in the lengthy process of piecemeal information gathering. Concerned citizens should not have to a make a specific request to your office each time they need to review a document referenced in the EA in order to understand your assertions. Instead, the conclusion reached in this EA should be "self-evident." This can be accomplished either by including a hard copy of the project record with the EA or by making the project record available on your website, and referencing that site in the EA.

2. FAILURE TO PROVIDE SUFFICIENT EVIDENCE AND ANALYSIS OF ENVIRONMENTAL IMPACTS

Any EA must provide enough evidence and analysis of environmental impacts for the USFS to make an informed decision as to whether it should prepare an EIS.[14] NEPA procedures must insure that *high quality* environmental information is available to public officials and citizens before decisions are made and before actions are taken.[15] Accurate scientific analysis, expert agency comments, and public scrutiny are essential to

[14] *See* 40 C.F.R. § 1508.9(b).
[15] *See* 40 C.F.R. § 1500.1(b).

implementing NEPA.[16] Most important, NEPA documents must concentrate on the issues that are truly significant to the action.[17]

Despite the federal requirement for high quality scientific disclosure throughout the NEPA process, the actual environmental consequences of continued livestock grazing are not fully disclosed and explained in the EA for the Atascosa West Allotments. This is unacceptable. Without sufficient knowledge of the environmental impacts that can be expected to flow from the proposed action, an informed decision as to whether those impacts are significant cannot be made.

The following sections explore the well documented and scientifically accepted environmental impacts of livestock grazing in the arid southwest. Although not politically appealing, these impacts are non-speculative and ecologically relevant. Their disclosure in the EA for the Atascosa West Allotments is required by law.[18]

Cattle Grazing Destroys Riparian Areas & Impairs Water Quality

Riparian and stream ecosystems represent only 0.5 to 1% of the surface area of arid lands in the eleven western United States,[19] yet support an estimated 60 to 70% of Western bird species[20] and as many as 80% of wildlife species in Arizona and New Mexico.[21] Despite the immense ecological importance of these areas, grazing by livestock has damaged 80% of the streams and riparian ecosystems in arid regions of the western United States.[22] As recently as 1990, the U.S. Environmental Protection Agency reported that "extensive field observations suggest that riparian areas throughout much of the West are in their worst conditions in history."[23] In addition, a joint Bureau of Land Management (BLM) and USFS report concluded that "riparian areas have continued to decline" since grazing reforms in the 1930's."[24]

The result of cattle grazing in and around riparian areas is nothing short of ecological collapse. A recent survey of scientific literature reported on the effects of livestock grazing on Western streams and riparian zones.[25] Cattle have a negative effect on water

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[16] *Id.*
[17] *See id.*
[18] 40 C.F.R. § 1508.9(b).
[19] U.S. General Accounting Office. 1988. *Public rangelands: some riparian areas restored by widespread improvement will be slow.* GAO/RCED-88-105; *see also* Belsky, A.J., A. Matzke, and S. Uselman. *Survey of livestock influences on stream and riparian ecosystems in the Western United States.* Journal of Soil and Water Conservation 54 (1999): 419-431.
[20] Omart, R.D. 1996. *Historical and present impacts of livestock grazing on fish and wildlife resources in western riparian habitats.* Pp. 245-279. In: P.R. Krausman (ed.), *Rangeland wildlife.* Society for Range Management: Denver, CO; *see also* Belsky et al. (1999).
[21] Chaney, E., W. Elmore, and W.S. Platts. 1990. *Livestock grazing on Western riparian areas.* Northwest Resource Information Center, Inc.: Eagle, ID; *see also* Belsky et al. (1999).
[22] U.S. Department of Interior. 1994. *Rangeland reform '94, draft environmental impact statement.* Bureau of Land Management: Washington D.C.; *see also* Belsky et al. (1999).
[23] Chaney et al. (1990).
[24] U.S. Department of Interior (1994).
[25] Belsky et al. (1999).

quality and seasonal quantity, stream channel morphology, hydrology, riparian zone soils, instream and stream bank vegetation, and aquatic and riparian wildlife.[26] Strikingly, this comprehensive survey of peer-reviewed, experimental and comparative studies found no positive environmental impacts due to cattle grazing.[27]

Cattle not only destroy wildlife habitat through the degradation of water quality; they also impair human water supplies. Agriculture is the major source of water quality impairment in this country. Siltation, introduction of excessive "nutrient" materials, bacteria, proliferation of oxygen-depleting substances, and pesticides rank as the top causes of water quality decline in rivers.[28] Agriculture- including livestock production- is linked to all of them.[29] Livestock waste alone is a major factor in the nutrient pollution of streams, increase of pathogenic bacteria in water supplies, and the decline of dissolved oxygen levels in rivers, lakes, and other water bodies.[30] Cattle are by far the largest generators of waste, producing about 3.5 tons per year for every man, woman, and child in the United States.[31]

Although there are few *per se* riparian areas on the Atascosa West Allotments,[32] nine streams flow through project analysis area, which is located within six Fifth Code watersheds.[33] In fact, the Atascosa West Allotments comprise approximately 11% of the total acres of these six watersheds, which cover approximately 572,010 acres.[34] As such, the area potentially impacted by degraded water quality and quantity resulting from cattle grazing on these allotments is quite significant.

The USFS has a legal duty to protect the rivers, streams, springs, seeps, and wetlands of the Coronado National Forest from the pollution generated by its permittee's cattle operations. CWA § 313 requires federal agencies to "comply with…all state…and local requirements, administrative authority, and process sanctions respecting the control and abatement of water pollution in the same manner and to the same extent as any non-governmental activity."[35] The USFS will violate CWA § 313 if it allows its permittees to degrade water quality on the Coronado National Forest to such an extent that the Arizona water quality standards are exceeded. The Arizona Department of Environmental Quality has made no water quality assessments within the action area.[36] This testing must be completed before a term grazing permit is reissued. Reauthorizing grazing where state water quality standards have been exceeded is a violation of APA § 706(2)(A).

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[26] *See id.*
[27] *See id.*
[28] U.S. Environmental Protection Agency, *The Quality of Our Nation's Water: 1996- Executive Summary of the National Water Quality Inventory: Report to Congress,* EPA841-S-97-001 (Washington, D.C.: USEPA, Office of Water, 1998).
[29] *Id.*
[30] Carter, John. *Stink water: declining water quality due to livestock production* in *Welfare ranching: the subsidized destruction of the American West.* Foundation for Deep Ecology (2002).
[31] *Id.*
[32] *See* EA, at 4.
[33] *See id.*, at 27-29.
[34] *See id.,* at 29.
[35] 33 U.S.C. § 1323(a)(1).
[36] EA, at 29.

Cattle Grazing Harms Wildlife and Native Vegetation, and Imperils Species

Livestock grazing has occurred in the project area for over 100 years, resulting in ongoing negative impacts to soils and vegetation. Grazing-related losses of herbaceous cover and litter have resulted in increased erosion, soil compaction, and increases in woody vegetation throughout the southwest.[37] The reduction in fine fuels, combined with active fire suppression has contributed to a decreased fire frequency and subsequent invasion of many grasslands by woody plants.[38] The effects of these actions are evident in portions of the project area in the form of compacted soils and increased woody vegetation.[39]

The detrimental effects of cattle grazing on wildlife and federally listed T&E species are numerous and far reaching. Nearly one-quarter of all of the imperiled species listed under the ESA are imperiled by livestock grazing; in the southwest, grazing is a leading cause of species endangerment.[40] Large numbers of permitted livestock on lands completely unsuitable for such grazing pressure causes ecosystem disruption and imbalance. Grazing depletes food sources necessary for sustaining wildlife by denuding the landscape of vegetation. Native plants are integral components of the ecosystem, and they not only provide direct nutritional value for herbivorous species, but this serves to nourish the prey base for carnivorous ones. As native vegetation is grazed to oblivion, exotic weeds invade, threatening grass and shrub ecosystems and disturbing the soil surface.

Livestock grazing depletes native vegetation communities and wildlife habitat through destruction of a basic ecological component: biological soil crusts. Biological (cryptobiotic, cryptogamic) soil crusts are important elements of arid and semi-arid ecosystems. These crusts contribute to increased organic matter, increased minerals, increased soil stability, reduced water run-off, enhanced germination and seedling establishment of native plants, decreased germination of some alien plant species, and increased survivorship of native vascular species.[41] Biological soil crusts provide little fuel to carry fire and may act as refugia, slowing fire, decreasing its intensity, and contributing to the mosaic pattern of vegetation.[42]

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[37] EA, at 33.
[38] *Id.*
[39] *Id.*
[40] Flather, C. T., L. A. Joyce, and C. A. Bloomgarden. 1994. Species endangerment patterns in the United States. Pp. 42. USDA Forest Service, Ft Collins.
[41] Belnap, J. 1994b. Potential role of cryptobiotic soil crusts in semiarid rangelands. Pp. 179–185 *in* S. B. Monsen and S. G. Kitchen (compilers), Proceedings — Ecology and Management of Annual Rangelands. General Technical Report INT-GTR-313. USDA Forest Service Intermountain Research Station, Ogden, UT.; Belnap, J. and J. S. Gardner. 1993. Soil microstructure in soils of the Colorado Plateau: the role of the cyanobacterium *Microcoleus vaginatus*. Great Basin Naturalist 53: 40–47; Belnap, J. R. Rosentreter, S. Leonard, J. H. Kaltenecker, J. Williams, and D. Eldridge. 2001. Biological soil crusts: ecology and management. Technical Reference 1730-2. U.S.D.A. BLM National Science and Technology Center Information and Communications Group, P.O. Box 25047, Denver, CO 80225-0047
[42] Belnap et al. 2001

Despite the fundamental importance of biological crusts, the EA fails utterly to discuss their occurrence on the Atascosa West Allotments or the impact that livestock grazing has on the formation and persistence of these soils. Livestock negatively impact biological crusts through trampling and compaction, especially during dry seasons.[43] Both cover and biomass of the biological soil crust has been found to be reduced on areas grazed by domestic livestock and exposed soil to increase. Significant correlations can exist between biological soil crust cover and the composition of vascular plant communities, so that damage can result in an altered vascular flora.[44] Grazing can reduce nitrogen fixation by as much as 95%.[45]

Degradation of soils and decreases in vegetation caused by livestock grazing has consequential effects in riparian areas as well, by increasing run-off and sediment loads, thereby decreasing water quality and habitat for aquatic species.

Terrestrial species are also harmed by cattle grazing. Fencing and other so-called range "improvements" fragment habitat, creating edge effects and isolating populations. Barbed wire fencing causes significant mortality in raptor and other bird species populations.[46] Further, perceived benefits of water development to wildlife should be evaluated in the context of natural adaptations of species.[47]

NEPA and the ESA direct your discussion and decision regarding the reauthorization of livestock grazing in light of its impacts to other species. Birds, bears, wolves, frogs, snails, prairie dogs, sage grouse, and bison are but a few examples of wildlife being put at risk for the sake of subsidized public lands ranching. The Atascosa West Allotments "provide habitat for a variety of native wildlife, including many species found nowhere else in the forest."[48] Numerous T&E species can also be found in the action area, including the jaguar, lesser long-nosed bat, northern Aplomado falcon, Chiricahua leopard frog, and possibly Sonoran pronghorn and desert tortoise.

The Coronado Land and Resource Management Plan directs the USFS to: provide for ecosystem diversity by at least maintaining viable populations of all native and non-native wildlife, fish, and plant species through improved habitat management; and to improve the habitat of and protection for local populations of T&E species to meet the goals of the ESA.[49] In accordance with this directive, the desired condition on the Atascosa Allotments is one in which "occupied habitats for threatened, endangered,

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[43] Anderson, D.C., K.T. Harper, S.R. Rushforth. 1983. Recovery of cryptogamic soil crusts from grazing on Utah winter ranges. Journal of Range Management 35(3): 355-359; Belnap and Gardner 1993; Beymer and Klopatek 1992; Belnap et al. 2001.
[44] Beymer and Klopatek 1992.
[45] Belnap et al. 2001.
[46] Anderson, H. L. 1977. Barbed wire impales another great horned owl. Raptor Research 11:71-72; Avery, M. L., P. F. Springer, and N. S. Dailey. 1978. Avian mortality at man-made structures: An annotated bibliography. U.S. Fish and Wildlife Service; Fitzner, R. E. 1975. Owl mortality on fences and utility lines. Journal of Raptor Research 9:55-57.
[47] Burkett, Douglas W. and Bruce C. Thompson. 1994. Wildlife association with human-altered watersources in semi-arid vegetation communities. Conservation Biology 8(3): 682-690.
[48] EA, at 15.
[49] *See id.,* at 4-5.

sensitive, and management indicator species are maintained or improved and recovery objectives are being met."[50]

Despite the aforementioned charge, the USFS admits that "continued grazing in the project area could result in effects to wildlife, including listed, sensitive, and management indicator species and their habitats. The effects could include modification of the structure and composition of plant communities that provide habitat through selective removal of forage, disturbance during critical periods, and changes in the availability of water."[51] The USFS must actively protect wildlife and T&E species on all areas of the Forest. Thus, any complete EA should thoroughly assess the variable consequences of each alternative to wildlife and T&E species.

b. NEPA

NEPA requires that you disclose sufficient evidence and analysis of the real impacts of reauthorizing grazing on the Atascosa West Allotments to wildlife and T&E species.[52] In order to be "sufficient," under NEPA, an EA or EIS must "put interested persons on notice of the significant impacts of [the] project on the environment."[53] This means that the EA must disclose all T&E species that inhabit the action area and/or depend on the action area for recovery. This also means that cursory discussions and conclusory statements regarding findings of "no effect" are inadequate. Upon reading the EA, the public must get a real sense of how and why continued grazing on these allotments will or will not impact wildlife and listed species.

a. ESA

When authorizing and/or issuing grazing permits on federal public land inhabited by T&E species, the USFS must comply with ESA §§ 7 and 9. ESA § 7(a)(1) requires the USFS to "carry out programs for the conservation of endangered species and threatened species…." Courts have interpreted this mandate as "a specific, rather than a generalized duty to conserve species."[54] This means that the USFS "must utilize all [of its] authorities to 'conserve' the endangered [species there]."[55] The USFS must take active measures to encourage the propagation of healthy populations of T&E species on the Coronado National Forest. Because there is a direct causal link between livestock grazing and declining populations of each of the T&E species that inhabit the Atascosa West Allotments, the USFS must take real steps to relieve livestock pressures on the Coronado. This means significantly reducing if not eliminating the presence of cattle.

ESA § 7(a)(2) requires the USFS to consult with the U.S. Fish and Wildlife Service (FWS) on all of its actions to insure that that action is not "likely to jeopardize the

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[50] *Id.,* at 5.
[51] *Id.,* at 7.
[52] *See* 40 C.F.R. § 1508.9(b).
[53] *Iowa Citizens for Environmental Quality, Inc. v. Volpe,* 487 F.2d 849, 853 (8th Cir. 1973).
[54] *Sierra Club v. Glickman,* 156 F.3d 606, 618 (5th Cir.1998); *Defenders of Wildlife v. Secretary, U.S. Dept. of the Interior,* 2005 WL 221253 (D.Or. Jan. 31, 2005).
[55] *Rio Grande Silvery Minnow v. Keys,* 2002 WL 32813602 (D.N.M. April 19, 2002).

continued existence of" a listed species or to "result in the destruction or adverse modification of" its critical habitat.[56] Section 7 is both clear and broad in imposing a duty on the USFS to prepare biological assessments (BAs). For "any agency action" proposed for an area where listed species "may be present," the USFS "shall conduct" a BA. "Any action" means "any action"- regardless of its size or repetition. Yet, the USFS conducted no new consultation for these permit renewals.[57] Instead, you erroneously relied on previous consultation, and simply adopted all of the associated "no effects" findings therein.[58] It is of no relevance that the resource conditions are stable on the allotments or that there will be no change from current management- the USFS must consult with the FWS *every time* it undertakes an action in the known habitat of T&E species. This federal mandate is nondiscretionary.

ESA § 9 prohibits any person from "taking" a threatened or endangered species. "Take" is defined broadly under the ESA to include harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.[59] "Take" includes direct as well as indirect harm, and need not be purposeful.[60] Indeed, a take may even be the result of an accident.[61] Causing or attempting to cause almost any level of injury to an endangered species is prohibited by law. "Take is defined in the broadest possible manner to include every conceivable way in which a person can 'take' or attempt to 'take' any fish or wildlife."[62]

ESA § 9 prohibits individuals, *as well as federal and state agencies,* from taking T&E species.[63] The ESA not only prohibits the acts of those parties that directly cause the taking, but also bans those acts of a third party that bring about the acts exacting a taking. "[A] governmental third party pursuant to whose authority an actor directly exacts a taking…may be deemed to have violated the provisions of the ESA."[64] Therefore, ESA § 9 prohibits the USFS from issuing a grazing permit that authorizes a third party's cattle operation if that operation harms or threatens to harm protected species or their critical habitat.[65]

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[56] 16 U.S.C. § 1536(a)(2).
[57] *See* EA, at 18.
[58] *See* EA, at 18.
[59] 16 U.S.C. § 1532(19).
[60] *See Babbitt v. Sweet Home Chapter of Communities for a Great Oregon,* 515 U.S. 687, 704 (1995).
[61] *See National Wildlife Federation v. Burlington Northern Railroad,* 23 F.3d 1508, 1512 (9th Cir.1994).
[62] *Defenders of Wildlife v. Administrator, EPA,* 882 F.3d 1294, 1300 (8th Cir.1989).
[63] 16 U.S.C. §§ 1538(g) and 1532(13).
[64] *Strahan v. Coxe,* 127 F.3d 155, 163 (1st Cir.1997). *See also Defenders of Wildlife v. Administrator, EPA,* 688 F.Supp. 1334 (D.Minn. 1988), *aff'd by Defenders of Wildlife v. Administrator, EPA,* 882 F.3d 1294 (8th Cir.1989); *Loggerhead Turtle v. County Council of Volusia Co.,* 148 F.3d 1231 (11th Cir.1998), *cert. denied,* 526 U.S. 1081 (1999); *Sierra Club v. Lyng,* 694 F.Supp. 1260 (E.D.Tex. 1988), *aff'd by Sierra Club v. Yeutter,* 926 F.2d 429 (5th Cir.1991); and *U.S. v. Town of Plymouth, Mass.,* 6 F.Supp.2d 81 (D.Mass. 1998).
[65] *See also Defenders of Wildlife v. EPA,* 882 F.2d 1294 (8th Cir. 1989) and *Sierra Club v. Yeutter,* 926 F.2d 429 (5th Cir.1991).

3. FAILURE TO PROVIDE SUBSTANTIVE RANGE OF ALTERNATIVES

NEPA requires federal agencies to consider alternatives to their proposed actions, and examine the environmental impacts of those alternatives. This requirement implements NEPA's environmental policies. It requires federal agencies to consider whether they can carry out their proposed action in a less environmentally damaging manner, and whether alternatives exist that make the action unnecessary. In fact, the CEQ has described the alternatives requirement as the "heart" of environmental review.[66] The courts have been correspondingly emphatic, calling the alternatives requirement the "linchpin" of the EIS.[67]

Importantly, the alternatives requirement also applies to the preparation of an EA.[68] NEPA § 102(2)(E) requires all agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in *any* proposal which involves unresolved conflicts concerning alternative uses of available resources" (emphasis added).[69] The CEQ regulations require that an EA include "brief discussions of the need for the proposal, of alternatives as required by [NEPA § 102(2)(E)], [and] of the environmental impacts of the proposed action and alternatives."[70] Courts, too, have stressed the importance of the alternatives requirement in the development of EAs. In doing so, they have required federal agencies "to study alternatives to any actions that have an impact on the environment, even if [it is ultimately determined that] the impact is not significant enough to require a full-scale impact statement."[71]

Some courts have concluded that the duty to discuss alternatives in an EA under NEPA § 102(2)(E) is *at least as broad and may be broader* than the duty to discuss alternatives in an EIS. For instance, the Fifth Circuit has held that NEPA § 102(2)(E) is "supplemental and more extensive" than the alternatives requirement of an EIS.[72] That court further stated that the purpose of NEPA § 102(2)(E) is "to insist that no major federal project would be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project…"[73]

Here, the CEQ requires the USFS to present the realistic environmental impacts of its proposed action on the Atascosa West Allotments, as well as to present all reasonable alternatives to that action in comparative form.[74] A proper alternatives analysis should

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[66] *See* 40 C.F.R. § 1502.14
[67] *See Monroe County Conservation Council, Inc. v. Volpe,* 472 F.2d 693 (2nd Cir.1972).
[68] *See e.g. Greater Yellowstone Coalition v. Flowers,* 359 F.3d 1257 (10th Cir.2004); *Highway J Citizens Group v. Mineta,* 349 F.3d 938 (7th Cir.2003); *Mt. Lookout-Mt. Nebo Prop. Prot. Ass'n v. Federal Energy Regulatory Comm'n,* 143 F.3d 165 (4th Cir.1998); *Sierra Club v. Epsy,* 38 F.3d 792 (5th Cir.1994); *Senville v. Peters,* 327 F.Supp.2d 335 (D.Vt. 2004).
[69] 42 U.S.C. § 4332(2)(E).
[70] 40 C.F.R. § 1508.9(b).
[71] *See City of New York v. United States Dep't of Transp.,* 715 F.2d 732 (2nd Cir.1983), *appeal dismissed,* 465 U.S. 1055 (1984).
[72] *Environmental Def. Fund. Inc. v. United States Army Corps of Eng's,* 429 F.2d 1123 (5th Cir.1974); *accord Bob Marshall Alliance v. Hodel,* 852 F.2d 1223 (9th Cir.1988).
[73] *Id.*
[74] *See* 40 C.F.R. § 1502.14.

"rigorously explore" and "objectively evaluate" these alternatives, which means it should "devote substantial treatment to each alternative considered in detail- including the proposed action- so that reviewers may evaluate their comparative merits."[75]

The range of alternatives to be set forth in an EA is governed by the "rule of reason," and defined by the "purpose and need" of the action itself.[76] Again, the purpose of the proposed action is to authorize livestock grazing in a manner that maintains or improves project area resource conditions and achieves the objectives and desired conditions described in the Coronado National Forest Plan. Certainly, the USFS need not consider an infinite range of alternatives- but it must seriously consider all reasonable and feasible alternatives for fulfilling the project purpose.

The USFS failed to meet the alternatives requirement in the EA for the Atascosa West Allotments for two reasons. First, there are significant issues that exist on the allotment, which are not considered in the EA. Second, you failed to accurately disclose the benefits of adopting the No Grazing Alternative.

Significant Issue- Riparian and Watershed Health

According to the EA, riparian and watershed health are in fair condition on the Atascosa West Allotments. However, the USFS admits that "continued grazing in the project area could affect soil condition, hydrological function, and riparian areas."[77] Because the CNFP directs the USFS to protect and improve riparian and watershed health, it would be antithetical to now choose to reauthorize grazing on these allotments.

The CNFP contains a multitude of goals, standards, guidelines, emphases, and objectives relating to improving riparian health on the Coronado as a means of enriching wildlife habitat and enhancing water quality. For instance, controlling riparian standards and guidelines include directives to: "manage riparian areas in accordance with legal requirements regarding flood plains, wetlands, wild and scenic rivers, and cultural and other resources; manage riparian areas to protect the productivity and diversity of riparian-dependent resources by requiring actions within or affecting riparian areas to protect and, where applicable, improve dependent resources; emphasize protection of soil, water, vegetation, and wildlife and fish resources prior to implementing projects; give preferential consideration to resources dependent on riparian areas over other resources; and recognize the importance and distinct values of riparian areas in Forest

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[75] 40 C.F.R. § 1502.14(b); *see also* Council on Environmental Quality, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18026, 18027, 18028 (1981): Question 5 (degree of analysis devoted to each alternative to be substantially similar to degree of analysis devoted to proposed action); Question 7 (contrasting discussion of alternatives with discussion of environmental consequences and suggesting that discussion of alternatives be presented concisely in comparative form, including charts and tables); *see also* 40 C.F.R. § 1502.2(d) (impact statement must state how alternatives achieve goals of statute); 40 C.F.R. § 1505.1(e) (alternatives considered by decision maker must encompass those included in impact statement); 40 C.F.R. § 1503.25(b) (alternatives to include no-action alternative, other reasonable courses of action and mitigation measures).
[76] *See* 40 C.F.R. § 1502.13.
[77] EA, at 7.

Plans."[78] "Other resource uses and activities may occur to the extent that they support or do not adversely affect riparian-dependent resources."[79]

Elsewhere, the CNFP states that the USFS should "emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines," and that "management strategies should move degraded riparian vegetation toward good condition as soon as possible."[80] "Damage to riparian vegetation, stream banks, and channels should be prevented" in the Coronado,[81] as it is a Forest wide water goal to "provide a favorable water flow in quantity and quality for off-Forest users by improving or maintaining all watersheds to a satisfactory or higher level."[82] In short, the CNFP directs the USFS, in unequivocal terms, to protect riparian areas on all areas of the Forest- including those areas used for cattle grazing.

Riparian areas and watershed health would be improved and recovered under the No Grazing Alternative. Indeed, under this alternative, there would be "no direct or indirect effects from livestock grazing on canyon bottom vegetation and stream channels."[83] "The potential increase of vegetation groundcover (VGC) on the banks, elimination of livestock-caused bank alteration and compaction, and reduction in browse in the riparian areas would contribute to an improved riparian function and stream channel stability."[84] "Adequate VGC would contribute to maintaining satisfactory hydrological function, and runoff would continue to be satisfactory. On impaired soils, the potential increase of VGC and elimination of potential livestock compaction would contribute to an incremental improvement in hydrological function resulting in less runoff and better infiltration. Water quality would improve due to less sediment moving in the system and less turbidity."[85]

Salting and controlled access to waters is simply not enough to protect delicate riparian areas.[86] Due to their ecological importance, all riparian areas must be protected. Although we whole-heartedly support the total elimination of cattle from this area, the USFS has a duty to present and adopt certain mitigating measures before reauthorizing livestock grazing if it chooses to move forward with the proposed action. These include, but are not limited to: permanent rest for all riparian areas; the construction of exclosures around *all* riparian areas within one year of permit renewal; and scheduled, ongoing riparian monitoring.

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[78] CNFP, at 39 (these directives are presented here in no particular order).
[79] *Id.*
[80] *Id.,* at 18.
[81] *Id.*
[82] *Id.,* at 10.
[83] *Id.,* at 28.
[84] *Id.*
[85] *Id.,* at 29-30.
[86] *See* EA, at 13.

Significant Issue- Jaguar Recovery

Jaguars (*Panthera onca*), which are most commonly associated with dense semitropical or tropical rainforests of Brazil, Costa Rica, and Mexico, have a historic range that extends well into the United States, and as far north in Arizona as the Grand Canyon.[87] To be sure, the greatest number of jaguar reports north of the United States/Mexico international border during the 20th century has come from Arizona.[88] Unfortunately, jaguars, like all other large predators, have suffered a tumultuous history at the hands of humans. Throughout the American Southwest, jaguars were indiscriminately killed to accommodate the needs of ranchers and homesteaders. In Arizona, the species had reached the point of extirpation by the 1960s.[89]

In 1997, the FWS belatedly listed the jaguar as an endangered species under the threat of litigation.[90] Meanwhile, representatives of state and federal agencies and local governments signed a Memorandum of Agreement (MOA) to implement a Conservation Agreement for the jaguar.[91] Signatories of the MOA worked together to establish a Jaguar Conservation Team (JAGCT), Jaguar Working Group (JAGWG), Jaguar Scientific Advisory Group (JAGSAG), and various subcommittees to accomplish tasks outlined in the agreement and to determine how to best manage for jaguars in Arizona and New Mexico.[92] The JAGCT/JAGWG consists of representatives of state and federal land and wildlife management agencies, as well as non-profit organizations and private citizens with an interest in jaguars or jaguar management in the southwestern United States.[93]

Jaguar conservation efforts are greatly needed in Arizona,[94] where the thinly scattered resident population was historically larger than is seen today.[95] It is generally accepted that the recent sightings of male jaguars in the southwestern United States are dispersing animals from populations in Sonora, Mexico,[96] where jaguar habitat is becoming smaller and more fragmented due to expanding human populations.[97] This means that Sonoran jaguars may need to occasionally and temporarily disperse north until territory opens up

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[87] *See* Pavlik, S. 2003. Rohonas and spotted lions: the historical and cultural occurrence of the jaguar, Panthera onca, among the native tribes of the American southwest. Wicazo Sa Review Spring:157-175.
[88] Rabinowitz, AR. 1999. *The present status of Jaguars* (Panthera onca) *in the southwestern United States.* The Southwestern Naturalist 44:96-100.
[89] *See* Swank, WG and JG Teer. 1989. *Status of the jaguar.* Oryx 23:14-21.
[90] Pavlik (2003).
[91] Johnson, TB and WE Van Pelt. 1997. *Conservation Assessment and Strategy for the Jaguar in Arizona and New Mexico: Nongame and Endangered Wildlife Program Technical Report 105.* Arizona Game and Fish Department, Phoenix, AZ.
[92] Hatten, JR, A Averill-Murray, and WE Van Pelt. 2003. *Characterizing and Mapping Potential Jaguar Habitat in Arizona: Nongame and Endangered Wildlife Program Technical Report 203.* Arizona Department of Game and Fish, Phoenix, AZ.
[93] *Id.*
[94] *See* Appendix Item 1, which shows the locations of reliable jaguar sitings in Arizona.
[95] *See* Brown, DE and CA Lopez Gonzales. 2001. *Borderland Jaguars.* University of Utah Press, Salt Lake City, UT.
[96] Hatten (2003).
[97] (Friederici, P. 1998. *Return of the jaguar.* National Wildlife 36:48-51; Rabinowitz 1999).

in the breeding population.[98] Thus, *any* American habitat is potentially significant for Sonoran jaguar populations, and we must create and protect international travel corridors to maintain access for these animals.[99] The JAGSAG has explicitly stressed the importance of identifying and maintaining a travel corridor between the jaguar population in Sonora, Mexico and Arizona, stating that without the corridor, there is little hope of jaguars visiting or occupying this state.[100]

Travel corridors exist on the Atascosa West Allotments.[101] Indeed, jaguars have been photographed in the Peloncillo, Baboquivari, and the Pajarito Mountains since 1996, documenting transient and/or resident populations in or near the action area.[102] These sightings are of no surprise, as the action area has been identified as "ideal" for jaguar recovery.[103]

Each of the Atascosa West Allotments sit within a potentially suitable jaguar biome, as identified by the JAGHAB.[104] Moreover, the best-suited area for jaguar conservation is located in southeastern Arizona in Santa Cruz, Pima, Cochise, and Graham Counties.[105] These counties are collectively known as Zone 1, which is shown in Appendix Item 3 herein. As you can see, Zone 1 resembles an inverted V with the southern end separated by a swath of agricultural and developed land, or land that is more than 5 km from a spring or more than 10 km from perennial/intermittent waters. Habitat corridors form to the south and north of the Cochise/Graham County boundary.[106] Based upon the jaguar distribution patterns in southeast Arizona, Hatten (2003) suspects that there are habitat corridors in Mexico that connect southeast Arizona to the northern-most established jaguar population in the Sierra Madres.

Neither the elevation nor rugged terrain[107] of the Atascosa West Allotments make them unsuitable for successful jaguar habitation. Conversely, jaguars have been found at varying elevations and in a wide variety of vegetation communities, including semi-desert grasslands.[108] The majority of jaguar sightings in Arizona have been in scrub grassland similar to that of the Atascosa West Allotments, in intermediately to extremely rugged terrain, and within 10 km of a water source.[109] Unfortunately, human activities within the last century have impacted all three of these seemingly important habitat components for jaguar.[110] Scrub grasslands of southeastern Arizona have become increasingly dominated by desert scrub vegetation due to extensive fire suppression and

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[98] Hatten (2003).
[99] Miller, B, AR Rabinowitz, and CA Lopez Gonzalez. 2000. *Memorandum to jaguar scientific advisory group.* 11/14/00.
[100] Hatten (2003).
[101] *See* EA, at 18.
[102] *See id.,* at 16.
[103] *See* Hatten (2003).
[104] *See* Appendix Item 2.
[105] Hatten (2003).
[106] *Id.*
[107] Appendix Item 4 illustrates the rugged quality of the action area, which lies wholly within Zone 1.
[108] Robinowitz (1999); Brown and Lopez Gonzales (2001).
[109] Hatten (2003).
[110] *Id.*

cattle grazing.[111] Human activities have also caused many watercourses to become dry or intermittent.[112]

The amount of area identified as potentially suitable jaguar habitat in Arizona ranges from approximately 21 to 30% of the state.[113] While elevation may not limit the distribution of jaguars in Arizona, distance to water surely does and may provide an explanation to the wandering patter of jaguars searching for suitable habitat. Sixty-four percent of jaguars occur within 5 km of perennial/intermittent creeks or rivers, 76% within 10 km, and 84% within 20 km.[114] Furthermore, 80% of jaguars occur within 2.5 km of a spring, and 96% within 5 km.[115] When springs and rivers/creeks are combined, 100% of the reliable sighting records are within 10 km of a water source.

Due to the presence of riparian areas on the Atascosa West Allotments,[116] these allotments could serve as productive habitat for jaguars if livestock grazing did not occur there. Habitat studies in the core part of jaguar range indicate a close association with water, dense cover,[117] sufficient prey[118] and an avoidance of highly disturbed areas.[119] Eliminating cattle from these allotments would allow them to recover ecologically, encourage the free dispersal of jaguar via travel corridors, and open this "ideal habitat" up for recovery.

Jaguars do not respect political or legal boundaries, and the USFS is charged with aiding their recovery as they disperse into this country from Mexico.[120] Jaguars range across many nations and habitat types, making international cooperation a necessity for jaguar conservation.[121] While the most important large expanse of occupied jaguar habitat is centered in the Amazon Basin, Sanderson and others have stressed the importance of protecting jaguar populations in all the significantly different ecological settings in which they occur.[122] This includes populations at the fringe of the species' range in the Sierra Madres of Mexico. Indeed, these fringe areas (including the southwestern United States) could become important to the conservation of the species if present rates of tropical forest conversion continue, threatening jaguar survival in the heart of the range.[123] Jaguar distribution patterns over the last 50 years suggest that Zone 1 in southeast Arizona is the

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[111] *Id.*
[112] Robinowitz (1999).
[113] Hatten (2003).
[114] Appendix Item 5 shows the proximity of jaguar sightings to perennial or intermittent waters.
[115] Appendix Item 6 shows the proximity of jaguar sightings to springs.
[116] *See* Appendix Items 5 and 6.
[117] *See Schaller*, GB and PG Crawshaw. 1980. *Movement patterns of jaguar.* Biotropica 12:161-168.; *see also* Quigley, HB and PG Crawshaw. 1992. *A conservation plan for the jaguar* Panthera onca *in the Pantanal region of Brazil.* Biological Conservation 61:149-157.
[118] *See* Seymour, KL. 1989. *Mammalian Species,* Panthera Onca. The American Society of Mammalogists 340:1-9; *see also* Swank, WG and JG Teer. 1989. *Status of the jaguar.* Oryx 23:14-21.
[119] *See* Quigley and Crawshaw (1992).
[120] *See* 16 U.S.C. § 1536.
[121] Sanderson, EW, KH Redford, CB Chetkiewicz, RA Medellin, AR Rabinowitz, JG Robinson, and AB Taber. 2002. *Planning to save a species: the jaguar as a model.* Conservation Biology 16:58-72.
[122] *Id.*
[123] Miller et. al (2000).

most likely area for future jaguar occurrence in the United States, and is therefore a hotspot for conservation.[124]

Despite the overwhelming evidence that this area is critical to jaguar recovery, the EA for the Atascosa West Allotments makes no attempt to raise the jaguar issue or discuss the negative implications that continued cattle grazing could hold for the recovery of this species. Because whether livestock grazing should be reauthorized on the Atascosa West Allotments turns, in part, on the magnitude and proposed resolution of potential jaguar-livestock conflicts there, a "jaguar alternative" falls well within the "rule of reason." Accordingly, environmental review of the proposed action cannot close until this integral alternative is developed and submitted for public comment.

4. FAILURE TO CONDUCT ADEQUATE CUMULATIVE IMPACTS ANALYSIS

Although not explicitly required by NEPA, a discussion of the cumulative environmental effects of a proposed action is an essential part of the environmental review process,[125] for otherwise the combined environmental effect of related actions will not be evaluated. Although the CEQ regulations explicitly apply to EISs, the courts readily apply these regulations to EAs.[126] "Cumulative impact" is defined 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. . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."[127]

The CEQ interprets NEPA and its corresponding regulations as requiring analysis and a concise description of the identifiable present effects of past actions. The USFS must do this to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the current agency proposal may have a continuing, additive and significant relationship to those effects.[128] The courts of appeal have adopted different tests to determine what cumulative impacts must be included in a discussion of environmental impacts. The Ninth Circuit, for example, applied the CEQ regulation that all "reasonably foreseeable" actions that have potential cumulative impacts must be addressed in an EIS or EA.[129]

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[124] Hatten (2003).
[125] *See Tomac v. Norton,* 433 F.3d 852 (D.C. Cir.2006).
[126] *See e.g., Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208 (9th Cir. 1998); *American Canoe Ass'n v. White,* 277 F. Supp. 2d 1244 (N.D. Ala. 2003); 40 C.F.R. § 1508.9; and 40 C.F.R. § 1508.8.
[127] 40 C.F.R. § 1508.7; *see also Inland Empire Pub. Lands Council v. United States Forest Serv.,* 88 F.3d 754 (9th Cir. 1996); and Coalition on Sensible Transp., Inc. v. Dole, 826 F.2d 60 (D.C. Cir. 1987).
[128] *See* 40 C.F.R. § 1502.22.
[129] *See e.g. Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208 (9th Cir. 1998) (environmental assessment for timber sale must address cumulative effects of other "reasonably foreseeable" timber sales in the forest); *Kern v. United States Bureau of Land Mgmt.,* 284 F.3d 1062 (9th Cir. 2002) (timber sales); *Muckleshoot Indian Tribe v. United States Forest Serv.,* 177 F.3d 800 (9th Cir. 1999) (land exchange*); City of Tenakee Springs v. Clough,* 915 F.2d 1308 (9th Cir. 1990) (logging in forest); *Northern Alaska Envtl. Center v. Norton,* 361 F. Supp. 2d 1069 (D. Alaska 2005) (oil and gas leasing, must analyze effects of proposed plan amendment).

Given the damage that grazing causes to wildlife and T&E species through riparian devastation and overall habitat destruction, the reauthorization of grazing on the Atascosa West Allotments cannot be analyzed in a vacuum. Actions currently taken on this allotment will be felt far beyond its boundaries and well into the future. Indeed, it is the culmination of effects brought on by the government-sanctioned grazing of over 300 million acres of land in the arid west[130] that has led to biological travesty we now see unfolding. The Atascosa West Allotments are part of a larger ecosystem, and should be analyzed as such.

Although some cumulative impacts analysis was offered, the EA should have included a *thorough* analysis of cumulative effects reflective of the "hard look" that NEPA requires.[131] This means the analysis must disclose the potential for cumulative significant impacts on *all values and resources on the allotments,* such as wildlife, water quality, vegetation, recreation, etc. Without a serious cumulative effects analysis, the USFS cannot be said to have taken a "hard look" at the potential effects of the reauthorization of one or more term livestock permits, when taken together with those of other past, present, or reasonably foreseeable actions that affect the allotments. This failure thwarts the underlying purpose of NEPA, which is to "insure that environmental information is available to public officials and citizens before decisions are made."[132]

The EA should have explored how the reauthorization of grazing on the Atascosa West Allotments will further exacerbate the degradation of all connected watersheds, and how additional fragmentation may affect overall accessibility of wildlife habitat and Important Bird Areas (IBAs). The fact that the Atascosa West Allotments could play a critical role in jaguar recovery over the next ten years makes cumulative impacts analysis here even more imperative. The cumulative impacts of grazing on the Coronado National Forest as a whole must be analyzed in light of jaguar recovery efforts.

THE NEED FOR AN EIS

Due to the inadequacies described above, the USFS must complete an EIS for the reauthorization of grazing on the Atascosa West Allotments. The public is legally entitled to be made aware of this project's full environmental impacts to the Coronado National Forest. Closing environmental review on this decision would run contrary to NEPA and the APA. This is because the issuance of a FONSI may lead to agency violations of the ESA, the CWA, and the CNFP.

When undertaking a more thorough environmental analysis at the EIS level, we urge you to fully explore the issues described in the preceding sections, and conduct a realistic cost/benefit analysis of continuing to use the Atascosa West Allotments for grazing as opposed to opening this public land up to further the larger public interest.

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[130] Wuerthner (2002).
[131] *See Kleppe v. Sierra Club,* 427 U.S. 390 (1976).
[132] 40 C.F.R. § 1500.1(b); *see also Sierra Club v. Watkins,* 808 F.Supp. 852, 858 (D.D.C. 1991).

Costs v. Benefits of Continued Livestock Grazing on our Public Lands

A true cost/benefit analysis of continued livestock grazing on the arid public lands of the American Southwest reveals the heavy burden paid by the public at large for the slight benefit reaped by a select few. Surely, the only "benefit" of continued grazing on the Atascosa West Allotments is that of a financial subsidy to the associated permittees. The public has no obligation to financially support ranchers who are engaged in an economically dwindling and environmentally destructive industry. When, as here, the benefits of ranching are not commensurate with the costs, the USFS has no obligation to do so either.

The benefit of continued grazing on these allotments outweighs neither the ecological costs nor the financial burden to the American taxpayer. The Government Accountability Office (GAO) has reported that the federal government spends at least $144 million each year managing private livestock grazing on federal public lands, but collects only $21 million in grazing fees. This equates to a net loss of at least $123 million per year.[133] Considering the additional direct and indirect costs not included in the GAO report, economists have estimated that the federal public lands grazing on BLM and USFS lands may cost as much as $500 million to $1 billion annually.[134]

The benefits that would flow from the elimination of cattle, however, are numerous. Besides its inherent value, livestock-free and fence-free wildlife habitat enhances opportunities for ecological services and recreational uses. There is rising demand for outdoor recreation on our public lands. As a recently released report emphatically illustrates, the economic contribution of recreationists to the national economy is staggering in the United States today.[135]

From birdwatchers to mountain bikers, outdoor enthusiasts bring in almost $300 billion in annual retail sales, and contribute more than twice that to the United States economy. Outdoor recreationists spend $46 billion a year on the gear they need to recreate in the American woods, rivers, and slopes. They spend five times that much- $243 billion- on the food, lodging, entertainment, and transportation they require along the way. In all, active outdoor recreation pumps $730 billion annually into the United States economy.

The recreation industry supports about 6.5 million jobs, and associated annual tax revenues add up to $88 billion a year. Wildlife viewing is currently the most common outdoor activity, with birding alone attracting 66 million people last year. Biking is the second most favored outdoor activity. In fact, 60 million people took part in cycling last year, while those taking to the trails for running, hiking, rock climbing or backpacking totaled 56 million.

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[133] GAO. 2005. Livestock grazing: federal expenditures and receipts vary, depending on the agency and the purpose of the fee charged. GAO-05-869. Government Accountability Office. Washington, D.C.

[134] Moscowitz, K. and C. Romaniello. 2002. *Assessing the full cost of the federal grazing program.* Center for Biological Diversity. Tuscon, AZ. The estimated cost of the federal grazing program at $500 million is consistent with estimates developed by other experts.

[135] Joanne Kelly, *US Impact of Outdoor Recreation: $730 Billion,* Scripps Howard News Service, Sept. 18, 2006 (all information cited in the following two paragraphs was obtained from this article).

The EIS for the Atascosa West Allotments should attempt to accurately quantify the income of enhanced hunting and recreation, along with the non-monetary ecological and social benefits, which would arise from the cessation of grazing, and the devotion of the allotment to wildlife and other unique resources. The USFS must consider socio-economic benefits not only to permittees and local communities, but also to the entire public now and in future generations, as they are the ultimate owners and inheritors of this land.

Furthermore, any consideration of the "lifestyle and culture" of ranching must be weighed explicitly against the "lifestyle and culture" interests of the far more numerous hikers, hunters, fishers, and professional or amateur mycologists, ornithologists, entomologists, herpetologists, botanists, mammalogists and other zoologists, wilderness lovers and bird watchers that frequent and enjoy the biodiversity and landscape of this allotment. Through appropriate social survey, the USFS should estimate the actual demand for these services.

Although it may no longer be the policy of the USFS to weight values such as environmental quality, federal law requires just this type of inclusion in a cost-benefit analysis. In its provisions specifying the requirements for environmental decision-making by federal agencies, NEPA requires that agencies develop methods to ensure that "presently unquantified environmental amenities and values" be given appropriate consideration in decision-making along with economic and technical considerations.[136] The EIS for the reauthorization of grazing on the Atascosa West Allotments should include a proper cost-benefit analysis, which realistically takes environmental quality into account.

A Call to Adopt the No Grazing Alternative

Again, we strongly encourage the USFS to develop an EIS. We feel that a realistic analysis of both the consequences of continued grazing on the Atascosa West Allotments and the benefits of eliminating livestock there will lead you to adopt the No Grazing Alternative. The history of cattle grazing on these allotments has damaged their natural values. We believe a period of long-term rest will be the best and most sustainable use of the Atascosa West Allotments at this time.

The only proposed hardship of adopting the No Grazing Alternative set forth in the EA is the USFS's conclusion that this alternative is not consistent with management policies 2202.1 and 2203.1. Under these policies, the USFS is to make forage available to qualified livestock operators from lands suitable for grazing, and to continue contributions to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood. As the above sections illustrate, the lands on the Atascosa West Allotments are unlikely "suitable for grazing." Moreover, the elimination of grazing in this area will have no significant impact on the local economy.

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[136] 42 U.S.C. § 4332(B).

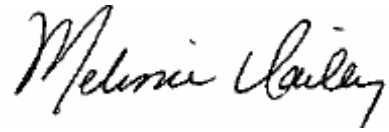
Ranching has no an economic stronghold in Santa Cruz and Pima Counties, where the Atascosa West Allotments are located. I submit the following from the EA:

> For Santa Cruz County, tourism, international trade, manufacturing, and services are the foundation of the economy. In 2000, farm employment accounted for just 1.3% of the total employment in this county. The economy of Pima County tends to be dominated by manufacturing and tourism associated with the City of Tucson. Ranching operations in the area tend to be characterized by small profit margins with the need for off-ranch supplemental income to continue operations.[137]
>
> Total revenues to the USFS from grazing fees brought in by the Atascosa West Allotments may not even cover recurring administrative costs there. Any negative economic effect brought on by the No Grazing Alternative is "relatively small compared to total budgets," and that "the action alternative would not result in a significant change from the current revenue."[138]

We are concerned that any continuation of livestock grazing is both economically unsustainable and inconsistent with federal environmental laws and the broader public interest mandate of the USFS. We are dismayed at the USFS's longstanding policy of prioritizing the economic benefit to livestock grazing permittees over all other concerns, including benefits to wildlife, riparian areas, watershed health, and the United States taxpayer. We would like to see the USFS begin to adjust this policy to reflect the growing interest of all Americans in conservation of our public lands. The USFS can begin doing so now by giving serious consideration to the ecological and economic benefits of the No Grazing Alternative to the reauthorization of grazing on the Atascosa West Allotments.

Thank you again for this opportunity to participate in this planning process, and please keep us apprised of future actions for these allotments.

Respectfully submitted,



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[137] EA, at 31.
[138] EA, at 32.

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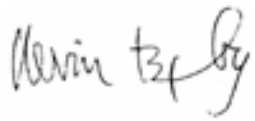

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APPENDIX[1]

Item 1: Locations of Reliable Jaguar Sightings in Arizona

Item 2: Potentially Suitable Biomes

Item 3: Suitable Habitat in Zone 1

Item 4: Terrain Ruggedness Index

Item 5: Proximity to Perennial or Intermittent Waters

Item 6: Proximity to Springs

[1] All Appendix Items are taken from Hatten (2003). Internal citations are shown.

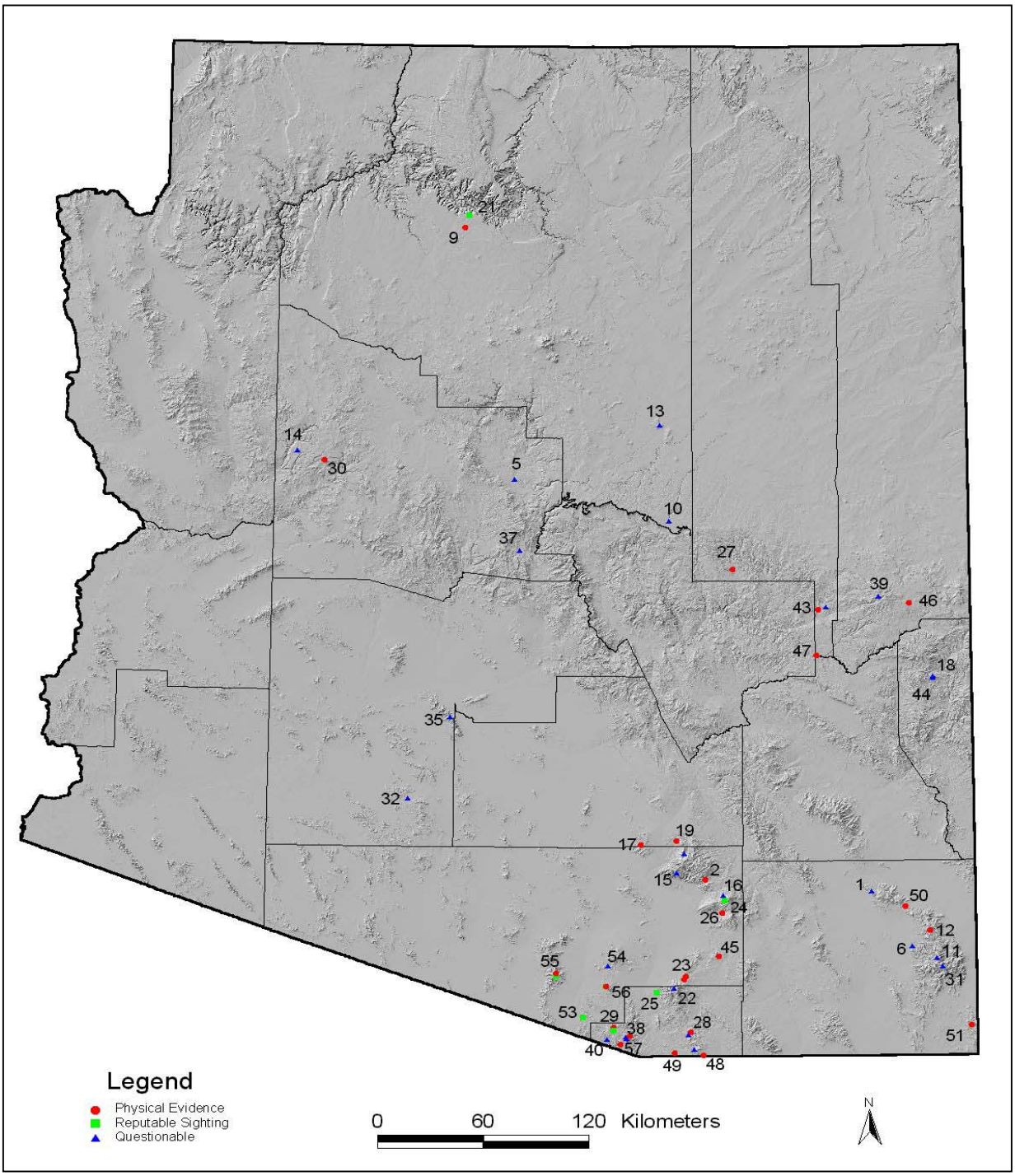

Figure 1. The 57 sighting records used in our analysis. Only sites with physical evidence (Class 1), or those observed by a reliable person (Class 2), or those that could be accurately mapped were considered for model construction. (see Appendix 1).

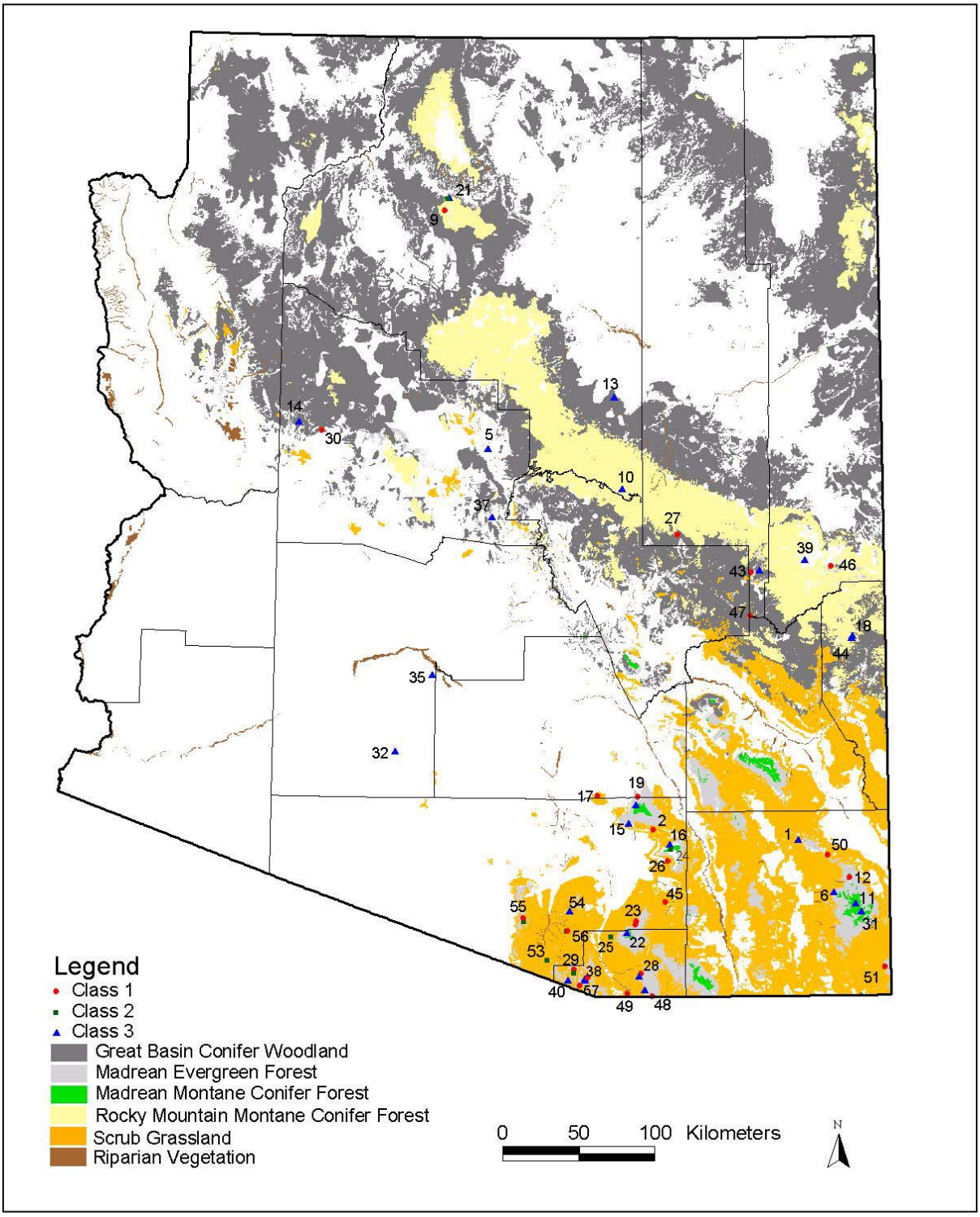

Figure 12. Potentially suitable biomes identified by JAGHAB, but only 4 contained Class 1 or 2 sightings (Great Basin Conifer Woodland, Madrean Evergreen Forest, Rocky Mountain Montane Conifer Forest, and Scrub Grassland). The riparian vegetation containes 4 biomes.

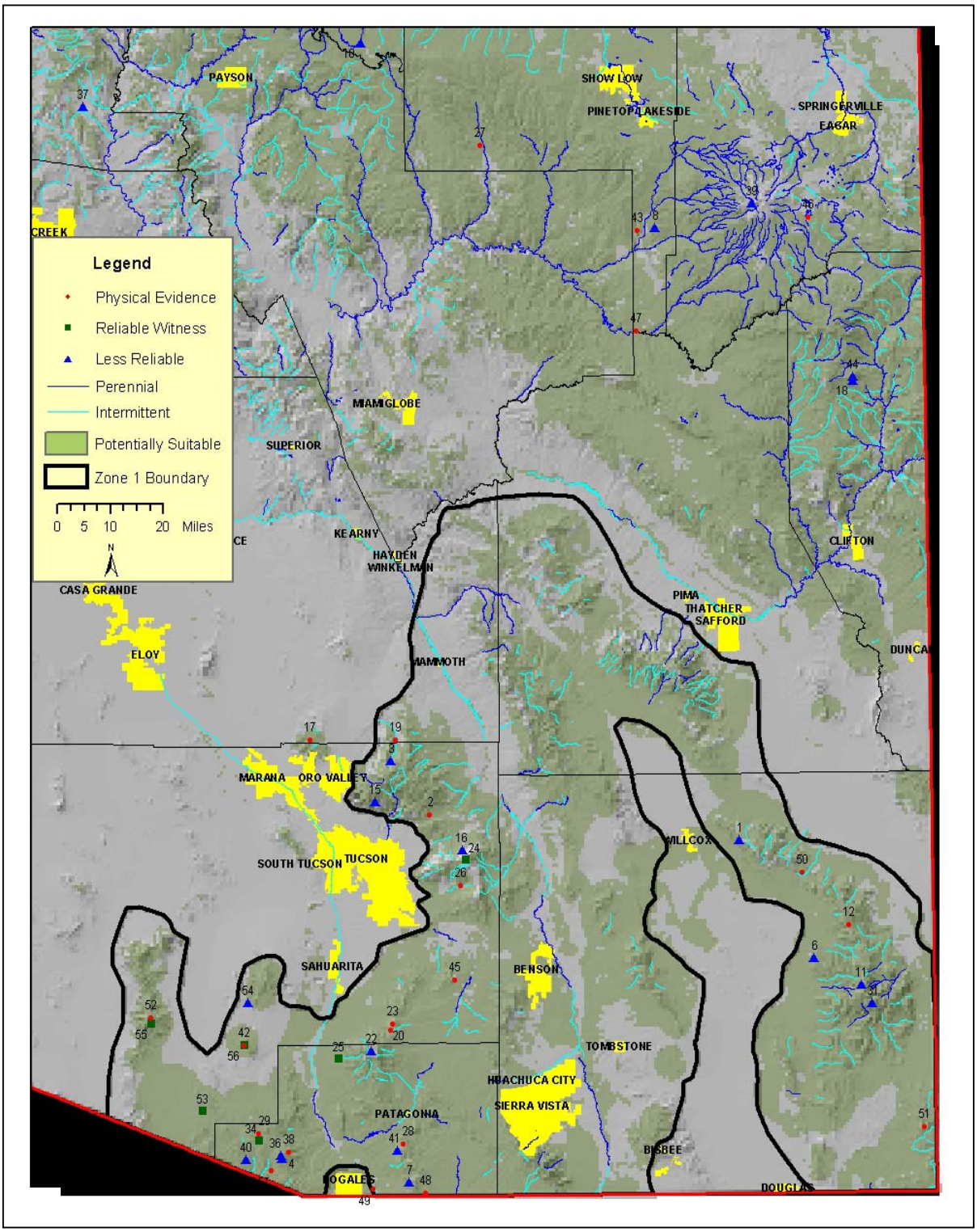

Figure 14. The most suitable conservation area for jaguars is in southeast Arizona (Zone 1).

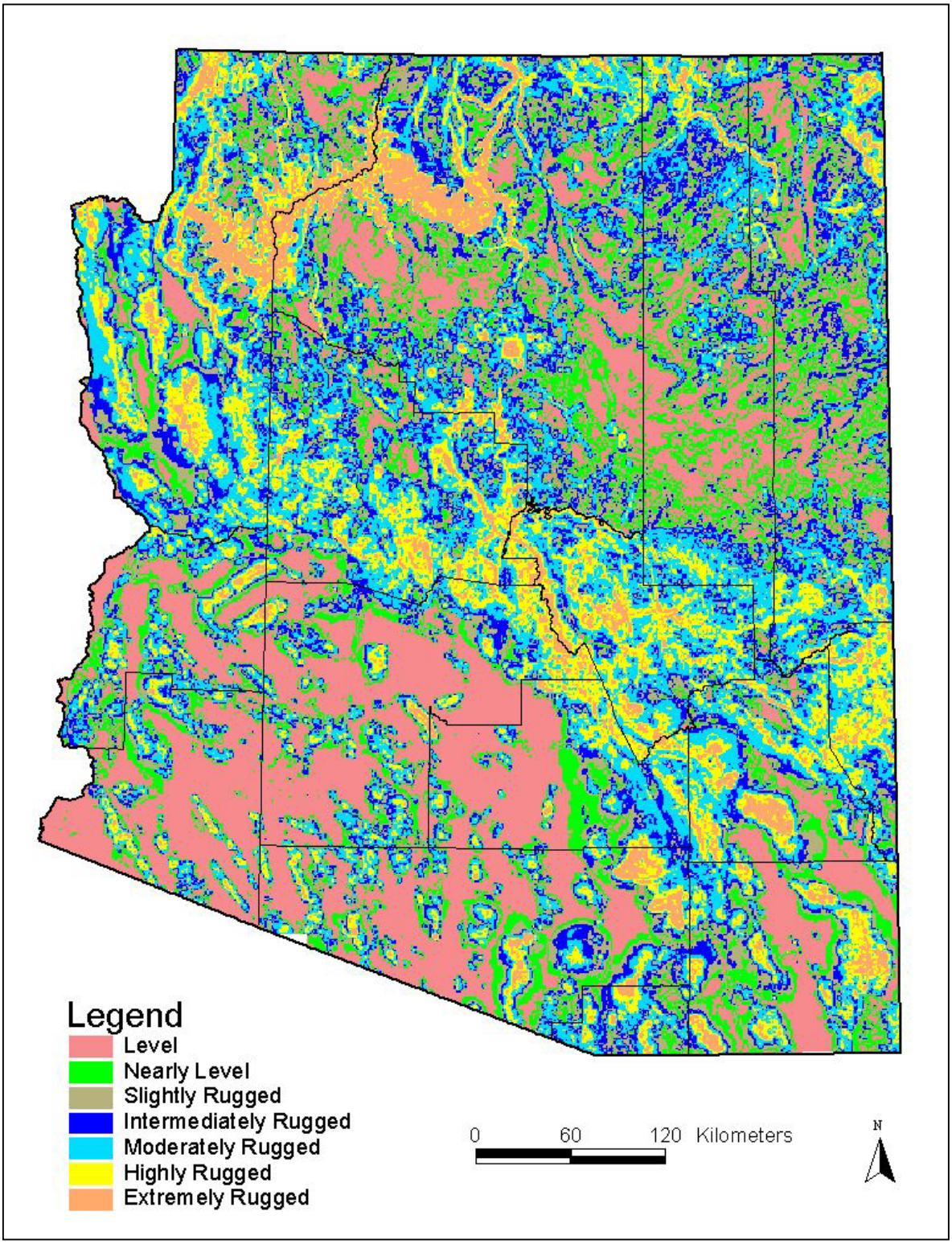

Figure 5. A Terrain Ruggedness Index (TRI) map of Arizona.

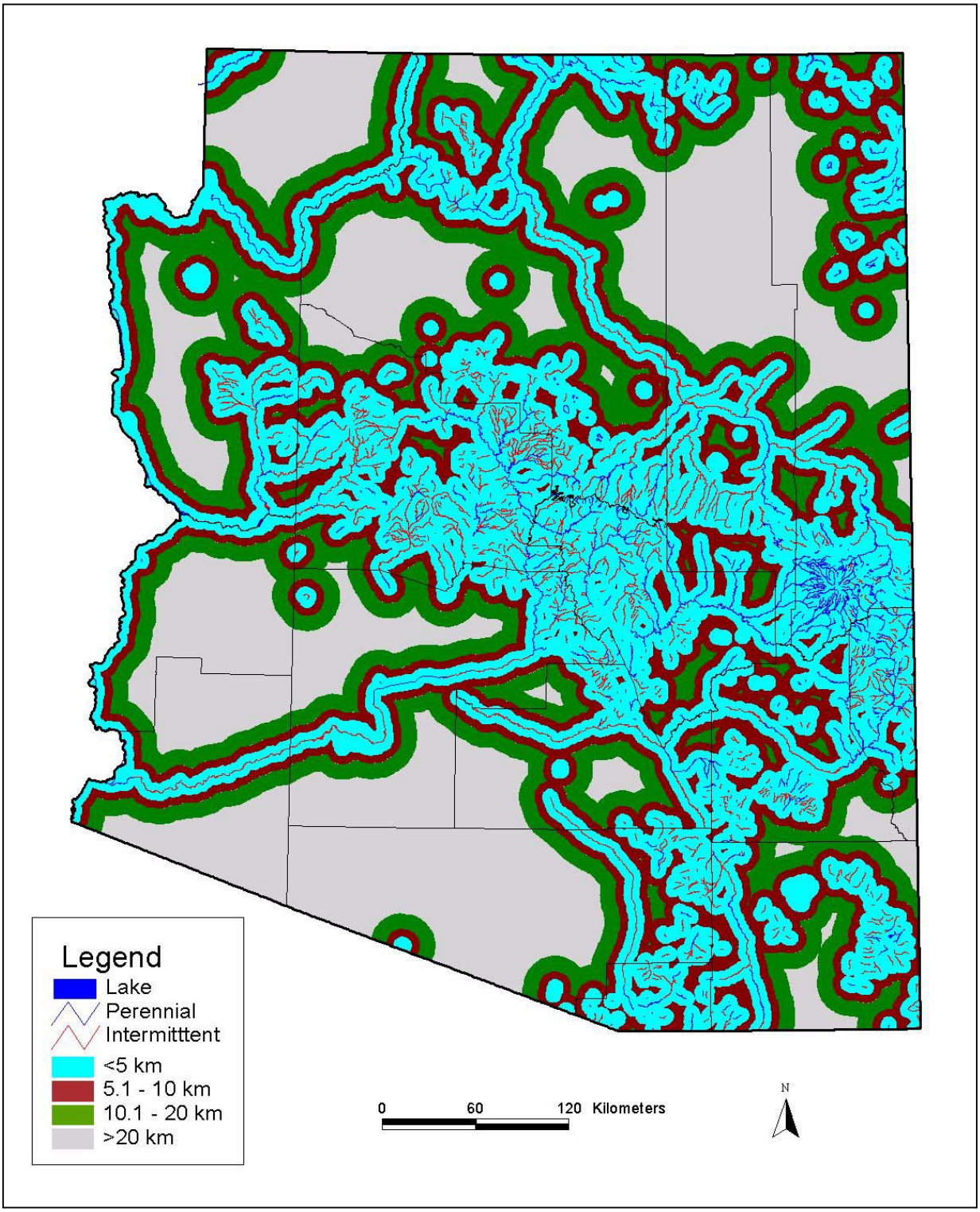

Figure 6. Proximity to perennial or intermittent waters (not including springs).

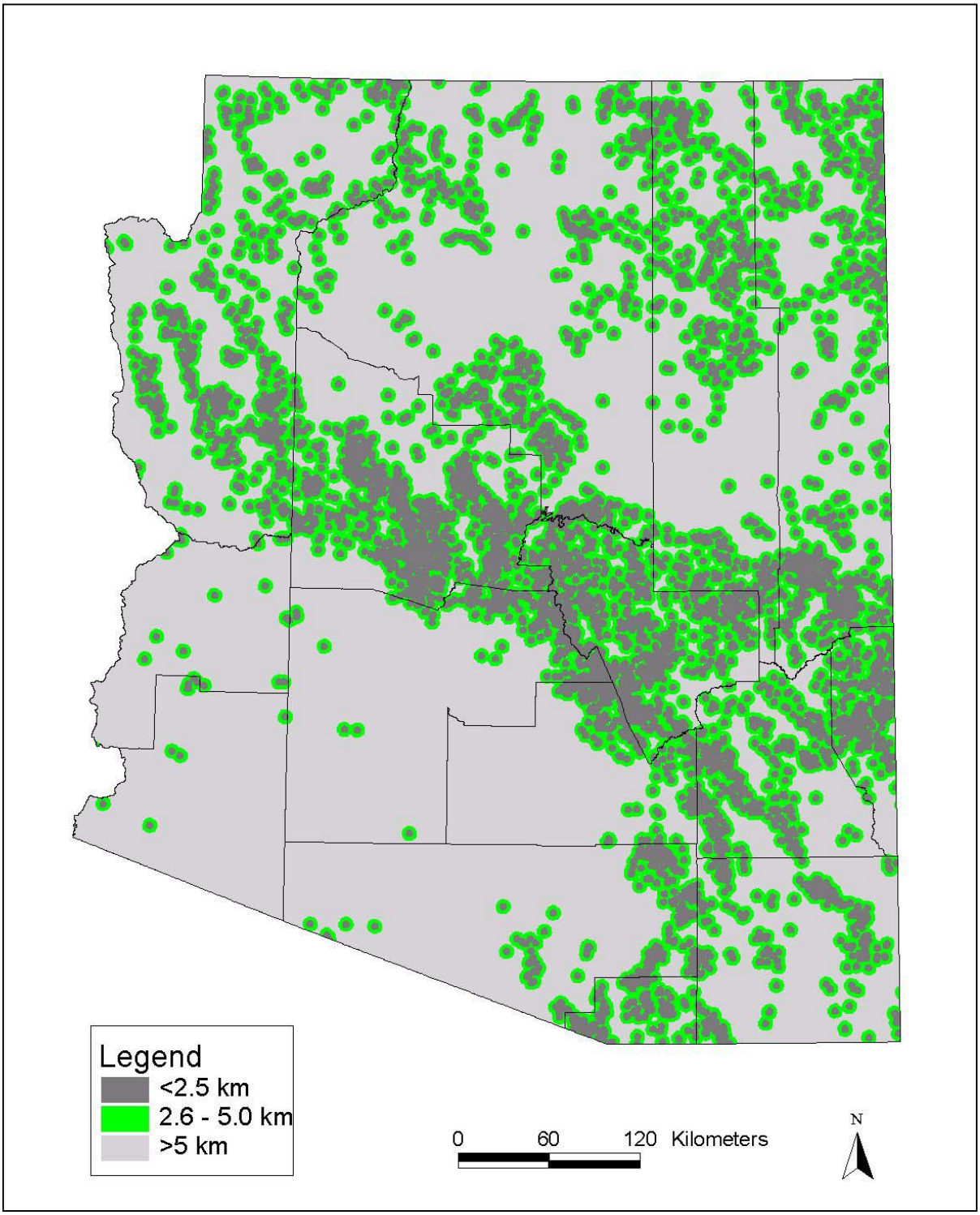

Figure 7. Proximity to springs in Arizona.