



Coalition for Sonoran Desert Protection

300 E. University Blvd., Suite 120
Tucson, Arizona 85705
p (520) 388-9925 • f (520) 791-7709
www.sonorandesert.org

March 9, 2009

Ms. Neva Connolly
Pima County, Office of Conservation Science and Environmental Policy
3500 W. River Road
Tucson, AZ 85741

RE: Pima County Multi-species Habitat Conservation Plan, Draft V

Dear Ms. Connolly:

Throughout the past decade, the Coalition for Sonoran Desert Protection has consistently and vigilantly worked with Pima County and community stakeholders on developing the Pima County's Multi-species Habitat Conservation Plan (MSCP) and its supporting reports and documents. We commend the County for undertaking such a bold and comprehensive conservation effort and look forward to providing even more input as the MSCP continues through its final stages.

The Coalition appreciates the County's commitment to the strategies included in the current MSCP draft. However, in general we feel that the Final MSCP that will be submitted to the U.S Fish and Wildlife Service should include more details and many of our comments are a reflection of this sentiment. Our attached comments address the following topics:

- MSCP development
- Species loss and threat analysis
- Wildlife linkages
- Conservation easements
- Monitoring
- Leased State Lands and Grazing
- Climate Change
- Funding
- Specific species concerns
- Off-site mitigation

We are currently finalizing more comprehensive comments on the cactus ferruginous pygmy owl and its treatment in the MSCP and will be submitting these as an addendum in the near future.

We hope you find our comments useful as you prepare a Final MSCP to submit to the U.S. Fish and Wildlife Service. We would welcome an opportunity to sit down and discuss these comments in person with County staff. If you have any questions and/or would like to set up a meeting to discuss our comments further, please do not hesitate to contact me.

Sincerely,

Carolyn Campbell
Executive Director

cc: RECON Consulting
Ms. Sherry Barrett, U.S. Fish and Wildlife Service
Ms. Maeveen Behan, Pima County Office of Conservation Science and Environmental Policy

- Arizona Center for Law in the Public Interest
- Arizona League of Conservation Voters Education Fund
- Arizona Native Plant Society
- Center for Biological Diversity
- Center for Environmental Connections
- Center for Environmental Ethics
- Defenders of Wildlife
- Desert Watch
- Drylands Institute
- Environmental and Cultural Conservation Organization
- Environmental Law Society
- Friends of Cabeza Prieta
- Friends of Tortolita
- Gates Pass Area Neighborhood Association
- Neighborhood Coalition of Greater Tucson
- Northwest Neighborhoods Alliance
- Oro Valley Neighborhood Coalition
- Protect Land and Neighborhoods
- Safford Peak Watershed Education Team
- Save the Scenic Santa Ritas
- Sierra Club-Grand Canyon Chapter
- Sierra Club-Rincon Group
- Silverbell Mountain Alliance
- Sky Island Alliance
- Sky Island Watch
- Society of Ecological Restoration
- Sonoran Arthropod Studies Institute
- Sonoran Permaculture Guild
- Southwestern Biological Institute
- Tortolita Homeowners Association
- Tucson Audubon Society
- Tucson Herpetological Society
- Tucson Mountains Association
- The Wildlands Project
- Women for Sustainable Technologies

Comments and Recommendations on Draft V of Pima County's Multi-Species Habitat Conservation Plan

Throughout the past decade, the Coalition for Sonoran Desert Protection has consistently and vigilantly worked with Pima County and community stakeholders on developing the Pima County's Multi-species Habitat Conservation Plan (MSCP) and its supporting reports and documents. We commend the County for seeking to preserve wildlife habitat for 36 endangered, threatened, and vulnerable species, along with avoiding, minimizing, and mitigating for any incidental take of these species that may occur in the future. We also applaud the County for adopting the Conservation Lands System (CLS) in 2001; applying CLS policies to numerous new developments in recent years; acquiring approximately 159,000 acres of fee land and grazing leases through the Open Space Acquisition Program; and revising various County policies and ordinances to better protect wildlife habitat.

After reviewing Draft V of the MSCP, the Coalition has some remaining concerns, questions, and recommendations as the County prepares a Final MSCP for submittal to the U.S. Fish and Wildlife Service. These comments address both larger issues and text-specific issues, as outlined below.

MSCP development

The MSCP would benefit from a more detailed discussion of the many years of hard work that have gone into the draft we are currently evaluating. This type of discussion will serve to outline for the reader how the many elements of the MSCP were created and decided upon and the scientific rigor that serves as the foundation for this document. Some important questions to consider include:

- What species were included in the development of the biological reserve design (all vulnerable species or just "covered" species)?
- What key habitats are included, and for what species?
- Is the extent and quality of protected habitat under CLS sufficient to conserve all vulnerable species? If not, how will the gaps be closed?
- How were the "mitigation ratios" for categories of conservation lands determined?

While tenets of conservation biology are invoked for the design of the CLS (Section 2.3.3), there is no analysis as to the degree of conformance. The MSCP should show how the CLS will work to avoid, minimize, and mitigate impacts to covered species, and efforts that might contribute to recovery of them, considering estimated population sizes needed for viability, habitat extent and quality to support viable populations, required habitat connectivity, etc. If there is no hard technical analysis but rather reliance on expert professional opinion, the MSCP should state that and explain or reference the methodology.

Species loss and threats analysis

The MSCP needs to include additional analysis addressing the issue of whether the sum of proposed mitigation (habitat protection, improvement, etc.) will offset projected habitat losses. As indicated in the December 2008 report "Projected Impacts of Urban Growth," Pima County is expected to reach maximum build out in about 30 years, reaching a population of approximately

1.9 million people. While Section 1.2 contains statements about “frameworks” for “smart growth,” “economic health,” and “ecological conservation,” these goals are not intrinsically compatible, and biodiversity losses can continue even with these intentions.

On page 3, the MSCP refers to “a host of planning documents that together provide a thorough analysis of Pima County’s natural resources, conditions, and needed conservation measures” without including references to these planning documents. Amending this section to include references to these planning documents will assist the reader in understanding the “thorough analysis” that led to the proposed conservation measures. The MSCP also states that some covered species will suffer substantial losses (as noted in tables 2.3 and 2.7) even though there is no indication that they can sustain such levels of take/habitat loss. Where is the evidence for each species (such as those included in Appendix E) that improving habitat conditions at protected sites can offset loss of habitat at others? There is no discussion of how “substantial losses” could negatively impact metapopulation dynamics. Are there specific habitats that are irreplaceable and support, or could support, crucial populations of covered species?

Permitted development activities are expected to impact 66,500 acres (p. 24) and result in habitat fragmentation (p. 33) yet there is no analysis of these impacts on species or the significance of lost acreage to them, and no discussion as to how expected impacts would affect achieving the overall goal of biological conservation. Habitat loss and fragmentation are leading causes of species extinction, thus such an analysis is warranted, particularly for covered species. This is not just a technical matter, as the MSCP inserts some doubt as to whether conservation is fully doable, given that the County intends “to minimize the potential adverse impacts of identifiable indirect effects...to the *extent practicable*” (emphasis added). Likewise, Appendix E describes conservation measures for covered species as measures “being considered.” If they are important for conservation, they should be “required” measures.

Wildlife linkages

An important question that needs a more complete answer is: how will the MSCP conserve wildlife linkages and what species will benefit, in particular evaluating the six identified Critical Landscape Connections (CLCs)? While CLCs are part of the Conservation Lands System, they are “broadly defined areas” that are overlaid on top of the other CLS categories. Nevertheless, these broad areas are also essential to the functioning of Pima County’s growing preserve system. Without them, the preserve system will become merely islands of habitat, leading to genetic isolation for wildlife populations and potentially significant losses of biological diversity in the Sonoran Desert.

There are many complicated issues surrounding the preservation of these linkages, such as how to deal with State Trust Lands and the high cost of important parcels on frontage roads and near large transportation corridors (such as Interstates 10 and 19, and SR 77 / Oracle Road). The MSCP needs to provide a more detailed analysis of what strategies will be employed to assure that each of these linkages, critical to the effective functioning of the overall preserve, will function and be conserved in perpetuity.

Conservation easements

The Coalition still has concerns about the specific commitments made in the MSCP in relation to conservation easements on conservation lands. We reiterate the questions posed in our November 21, 2007 letter to County Administrator Chuck Huckelberry (attached).

- What is the timeline for securing conservation easements on CLS and county-owned lands?
- What department in the County is responsible for securing and monitoring the conservation easements?
- When will these lands be mapped and incorporated into the County's GIS database, and included as a component of the MSCP monitoring program?
- A Conservation Easement Template is included as Attachment G to the MSCP. Will this template be used for all conservation easements under the MSCP? Or will it be modified depending on the type of land being preserved?

Furthermore, a strategy needs to be developed to secure conservation easements on all County acquisition lands. Without a conservation easement held by a third party (such as the Regional Flood Control District for the County or a 501(c)(3) organization), there is nothing preventing the County from selling these lands in the future. We appreciate the commitment to such a strategy stated on page 39 and look forward to more details being developed and publicly evaluated prior to the issuance of the Section 10 permit.

Lastly, on page 38, the MSCP states that, "enforcement of Natural Open Space set-asides through the County's land use regulatory authority" will be one means of protecting "mitigation lands secured through the application of CLS development policy and other County environmental regulations." What specific "regulatory authority" is being referred to here? How will this commitment be accomplished? This statement seems especially vague and additional specificity is needed.

Monitoring

The Coalition reiterates our comments submitted on December 5, 2008 addressing the "Powell 2008b" report referenced on this page (attached). These comments requested clarification regarding the species chosen for single-species monitoring and those chosen for habitat, threats, and/or ecosystem-level monitoring, including specific comments on details in Table 2 of the report; questions regarding monitoring parameters for species-level monitoring efforts; and the importance of including a history and scientific rationale for the species selection process.

We also believe that the monitoring program needs to document necessary changes in County planning well in advance of irreparable habitat loss or degradation. Use of land cover data (such as in the January 2009 report "Changes in Pima County Land Cover") is useful for evaluating what has happened and land trends, but it can do nothing to help Pima County protect habitat areas already lost. The January 2009 analysis was based on 1992-2001 data that may not be timely for most purposes. Adding more current data to this analysis may further improve its utility. A robust program for threats monitoring that anticipates potential impacts to habitat could be a key to more effective adaptive management. Certainly, identifying loss or adverse

modification of habitat before it happens is superior to documenting it after the fact and may better facilitate mitigation/acquisition strategies for like habitat in the affected area(s).

Leased State Lands and Grazing

The Coalition appreciates the great strides the County has taken to acquire biologically important land throughout Pima County, including both fee simple lands and state leases on working ranches, now totaling approximately 159,000 acres. These ranches include important riparian areas and wildlife habitat that are deserving of maximum protection. However, we also feel that the treatment of these ranches requires significant changes in the MSCP.

First, the Coalition disagrees with granting 100% mitigation credit for State Trust Land grazing leases owned by the County. With a length of only ten years, these leases are temporary and thus provide no assurances that these lands will be preserved in perpetuity. While the temporary nature of these leases is acknowledged in the MSCP, the statements that “mitigation credit for [State Trust Land leases that are not renewed] will be debited from the total acres of Pima County mitigation lands” and “Pima County may need to acquire additional mitigation lands as a result of the loss of state leases” are insufficient. If the U.S. Fish and Wildlife Service grants *any* credit for grazing leases, then the MSCP needs to include an analysis of where these additional mitigation lands will come from, their potential cost, and what habitat value(s) they will represent. Please describe how any mitigation lands will contribute to the configuration, function, and connectivity of the preserve system and for which species.

One exercise that could assist with such an analysis would be to use State Trust Lands in both growth projections and mitigation analysis. The growth projections outlined in the report “Projected Impacts of Urban Growth for Pima County’s Multiple Species Conservation Plan” include State Trust Lands while the mitigation analysis in the MSCP does not. This discrepancy needs to be resolved such that both the growth projections and the mitigation analysis are evaluating the same set of lands. Once this analysis is completed, it will be more apparent where these additional mitigation lands could come from if some of the current state leases are lost in the future. In the same vein, on page 116, the MSCP states, “[If] the State Trust releases land to development, such development will not be included in the annual take report.” The exact opposite should be the case. If the State Trust releases land to development, then this now private land will likely be developed, be subject to rezoning applications, and come under the auspices of the CLS. Thus, while this land may increase the take in the take analysis, it will also contribute to the pool of mitigation lands.

The Coalition also believes that since the County owns or controls approximately 159,000 acres of land where grazing occurs, grazing must be included as a covered activity in the MSCP. The statement on page 61 that, “Pima County intends to maintain grazing on these ranches under ten-year agreements from the State of Arizona and Pima County does not propose grazing as a covered activity at this time,” is wholly inadequate in explaining the decision to not include grazing as a covered activity. Even though the County leases to independent operators for management, the County is still ultimately in control of what activities occur on the land and leases acquired with taxpayer bond dollars. Since grazing is one of these activities, and undoubtedly has impacts on the wildlife habitat present there, grazing should be included as a covered activity. Thus, it is important that the County complete an analysis of what habitat exists

on grazing lands and what stocking rates and grazing activities are or are not compatible with the conservation of covered species and their habitats.

Another mechanism for more effectively managing grazing lands is to include habitat and species-friendly goals in the Coordinated Resource Management Plans (CRMPs). For instance, one of the goals for the CRMPs (as stated on page 63) should be to, “Identify degraded areas and habitats and plan restoration activities such as fencing, resting, revegetating, etc.” Other goals could include reducing permitted numbers and to use the County’s ability to either rest or restore the actual grazing permit lands to allow for regeneration of degraded rangelands.

There also needs to be a CRMP for all ranch properties within two years of purchase, not “as time and resources permit,” as stated on page 63. If a CRMP is not created for a ranch property, then mitigation credit for this property should not be allowed.

Climate change

The MSCP should address climate change in a more direct and comprehensive manner. First, there needs to be a General Management Directive (Section 4.1) addressing climate change. This will ensure that impacts from climate change will be addressed in all MSCP-related management plans and in all relevant Pima County departments that are implementing the MSCP.

Second, although Table 6.1 describes a possible changed circumstance as “regional, decadal-scale drought,” this could be stated much more clearly as “climate change,” (assuming this was the general intention). It is already widely accepted that the Sonoran ecoregion is currently in the throes of a profound drought. On June 23, 1999, the Arizona Division of Emergency Management declared a statewide drought emergency (PCA99006) which remains in effect as a “current open disaster” at the time of this writing (Arizona Department of Emergency Management 2009).

Pima County can clearly expect increased aridity in the future (Seager 2007) and this should be reflected in the changed circumstances analysis. How will habitats change as a consequence and what will this mean for each vulnerable species (species respond differently), in combination with projected land development and other ongoing threats? For example, the U.S. Climate Change Science Program issued a report in 2008 that is one of the most extensive examinations of the impacts of climate change on important U.S. ecosystems undertaken to date. It concludes that in arid region ecosystems that have not co-evolved with a fire cycle, the probability of loss of iconic, charismatic mega flora such as saguaro cacti will greatly increase. In addition, what adjustments may be needed to the CLS as the specific impacts of climate change become clearer? There is a great deal of uncertainty surrounding how climate change will change habitat conditions but predictions from the U.S. Climate Change Science Program report (2008) include the increased risks to horticulture/agriculture and livestock; increased insect outbreaks and forest fires; and increased invasion of exotic grass species negatively impacting riparian systems in arid lands. Growing seasons have increased by 10-14 days in temperate latitudes over the last 19 years. The MSCP should recognize this uncertainty up front. Responses to this changed circumstance could be to proactively build in flexibility into the CLS, increase ecosystem resiliency via habitat restoration projects and protect habitat connectivity. Finally, how will Pima

County address its own greenhouse gas pollution, perhaps through an abatement and/or carbon sequestration program?

Funding

Overall, the funding section is problematic. Virtually none of the funding is actually “assured,” but rather up to the discretion of the Board of Supervisors and their yearly budget, along with “pursuing” and “encouraging” other funding sources. As evidenced by the County’s massive budget cuts this year resulting from the state of the economy, reliance on the general fund is not reassuring, and even in the best of economic times, is subject to political will. At least one non-General Fund derived funding source should be in place before permit issuance to cover Phase I costs. To assist with this, the MSCP should present high, medium, and low estimated annual costs, rather than the low estimates presented in Table 8.1 (page 105).

Cactus ferruginous pygmy owl

The Coalition is in the final stages of completing more extensive comments on the cactus ferruginous pygmy owl and its treatment in the MSCP. We will be submitting these comments as an addendum in the near future.

Pima Pineapple Cactus

The Coalition is concerned that the Pima pineapple cactus will not be adequately conserved by the strategies outlined in Appendix E of the MSCP (*Special Conditions, Management and Monitoring Directives* section). The only viable strategy may be up-front conservation by means of either public and / or private mitigation bank acquisition throughout the entire PCA. These lands should provide for movement of pollinators, and be identified and targeted subsequent to surveys. Credits would then be sold prior to development impacts.

Off-site Mitigation

It is unclear in the MSCP whether mitigation of habitat impacts is occurring in like habitat and in the same areas as the impacts. In particular, while the MSCP indicates that impacts will be mitigated with an appropriate amount of acreage within the broader preserve system, there seems to be no analysis indicating that County projects’ impacts are or will be mitigated with like habitat and in the same geographic location. This omission needs to be rectified by including a section addressing this issue.

In addition, on page 50, the MSCP states,

Pima County will require a more rigorous site analysis of lands in the CLS that are proposed for development. This site analysis will provide sufficient information for configuration of the development in a manner that conserves vulnerable species and special elements and contributes to a viable preserve design. The analysis will document any off-site mitigation that is part of the proposed development. Assessment of off-site mitigation parcels will also describe [the] contribution to the goals of the CLS. If approved mitigation/conservation banks are proposed for such off-site mitigation, an assessment of off-site mitigation will not be required.

There needs to be a more detailed explanation of who will conduct the assessments of off-site mitigation parcels, when these assessments will occur, and what exactly will be included in the assessments. The last sentence in particular, which says that assessments will not be required for off-site mitigation parcels even though the previous sentence indicates some type of assessment will occur, raises important questions about the details of these assessments. Who will be conducting the assessments of off-site mitigation parcels? The County or the developer? When will the assessments be completed? What types of information will be required for the assessments? Will they be independently reviewed and if so, by whom?

USFWS "findings and recommendations" document

While the MSCP describes the decennial reporting that the County will be completing, it does not include a description of the detailed "findings and recommendations" document that the U.S. Fish and Wildlife Service should be preparing to analyze the implementation of the MSCP. This document should be prepared according to ESA Section 10 regulations (50 CFR 17.32 (b)(2), "Issuance criteria") requiring preparation of similar documents prior to initial issuance of ESA Section 10 permits. The MSCP Implementing Agreement (IA) Committee made a formal recommendation endorsing the completion of this document on March 31, 2005 and the Coalition concurs. The recommendation states, "The Pima County MSCP and Implementing Agreement should contain specific, detailed, and measurable conservation benchmarks for determining program success."

TEXT-SPECIFIC COMMENTS

p. 5

- Change the last sentence in Section 2.1 to read "All of these areas..."

p. 7

- County-maintained roadways on federal and tribal lands should be included in the permit area since the County is responsible for the rights-of-way.

p. 9

- Add reference to list of STAT members in Section 10
- Add list of other committees that have contributed, such as the Steering Committee, and peer reviewers (~200), in Section 10
- Add a brief summary of the general make-up of the Steering Committee and their role in the SDCP and MSCP process, along with the recommendations from their 2003 report, on p. 9

p. 13

- 6th paragraph – Add a sentence describing *when* the CLS is applied.
- Critical Landscape Connections – Mitigation ratio should be that of the underlying CLS designation and never less than 2:1.

p. 14

- Section 2.5 Species Not Proposed for Coverage – This section describes how there were 56 priority vulnerable species and 36 species were chosen for permit coverage. However,

the section only addresses five species as “species not proposed for coverage.” Address and describe the rationale for not including the other fifteen priority vulnerable species in the MSCP.

p. 16

- Table 2.4 – What is the status of *Sonorella rosemontensis*? Should it be added?

p. 17

- Replace “but using” with “which uses” in the first sentence of the paragraph after the second set of bullets.

p. 22

- Section 2.6.5 – The County should be required to cover the grazing activities that occur there. By covering grazing, the County will be protecting the public investment in the deeded grazing lands, as well as document and quantify the improved conditions that will be accomplished.

p. 23

- Along with collecting baseline data for each covered species, baseline vegetative data should be collected to evaluate effectiveness.
- All restoration/enhancement activities should be independently reviewed.
- Section 2.6.8 – Mention the state-wide Safe Harbor Agreement.

p. 24

- The County’s new land absorption model should be independently reviewed.

p. 25

- Table 2.5 and 2.6 – Why are the “acres potentially available for development” under IRA smaller (2,125 acres) than the projected total impacts for IRA (3,620 acres)?

p. 31

- Table 2.7 – For seven species (burrowing owl, southern yellow bat, Mexican garter snake, ground snake, Gila chub, Sonora sucker, and Pima pineapple cactus), the percent conservation proposed in the MSCP (column 3) is less than the STAT conservation goal (column 2). Explain this discrepancy.

p. 33

- The re-listing petition for the CFPO currently under review by the USFWS should be discussed in this section.
- The development and construction standards (“to minimize the potential adverse impacts of identifiable indirect effects”) should be in place before permit issuance.
- Section 2.10.1 – Since there is a strong possibility that the pygmy owl will be listed again, this section should be expanded and the effects on the pygmy owl’s habitat fully analyzed.

p. 35

- The mechanisms of the Mitigation and Implementation Program should also include bioassessments, management agreements, and conservation easements.

p. 38

- “conservation easements or other means” – What are these other means? Describe in more detail.

p. 39

- Provide a full list of “additional measures” to be used for perpetual conservation of mitigation lands.
- State Trust Grazing Leases – The Coalition does not support one hundred percent mitigation credit for lands leased from the Arizona State Land Department for the length of the leases.

p. 40

- Provide a strategy that clearly outlines how many acres of additional lands will need to be acquired if the County loses their leases on State Trust Lands (or they are not managed properly, etc.).

p. 43

- 4th paragraph, 5th line – change “resource values” to “resources elements and values”

p.44

- It is not clear why Appendix G is referred to in at the bottom of this page. Perhaps Appendix C instead?

p. 48

- Section 3.5.4 – There will have to be Safe Harbor Agreements for these areas if the species are considered “expendable.”

p. 49

- Through an IGA, other jurisdictions should agree not to utilize, promote, or distribute non-native mosquitofish as well.
- Section 3.6 (4) – add “and account for connectivity” after “PCA” in the third line.

p. 55

- Add a “Climate Change” section to the General Management Directives.
- Include bullfrogs with buffelgrass as the most pressing invasive species issue.
- First bullet – Add bullfrogs along with exotic fish and crayfish.
- Update the Invasive Species section to include information on the recently formed Southern Arizona Buffelgrass Coordination Center.

p. 56

- Section 4.1.2 – last sentence, change “riparian species” to “riparian and grassland species.”
- The fact that the 10,000 acre-feet of effluent may very well not exist in the future should be addressed.

p. 57

- Under “Kino Wetlands,” the project description is of 58 acres but the acres column identifies 65 acres. Clarify.
- Include a column in Table 4.1 that identifies the planning timeline for these projects. Even if this timeline is still in draft form, some indication of when these projects are scheduled to start would be helpful.

p. 59

- Add “No ATVs/ORVs on any of these lands.”

p. 61

- Change “nine ranches” to “ten ranches.”

p. 63

- (1) Instead of “consistent with utilization guidelines,” change to “that are consistent with the biological goals of the SDCP.”
- Section 4.2.1 – Instead of “accelerated erosion,” change to “any erosion.”

p. 64

- (3) at the top – Is this the BLM “proper functioning condition”? If so, this needs to be vetted by the STAT since there are better ways to measure riparian area health.

p. 65

- (B) Explain why plant communities will be monitored in the fall.

p. 66

- The MSCP states, “Pima County and RFCD will develop site-specific management plans or update existing management plans for most properties >100 acres.” Since there are likely important tracts of land <100 acres in size that would benefit from a management plan, an alternative would be to develop management plans for area “complexes.” These complexes could be identified by the STAT based on their habitat type, conservation value, and threats level. The Coalition is concerned that important parcels of land may not be managed at all simply because they do not satisfy a particular acreage threshold. This would result in a complete absence of knowledge about their status.
- Include an outline and/or draft of the Park Rules

p. 69

- “The effectiveness monitoring effort for the Pima County MSCP will also monitor the effects of permitted activities on a broader range of conservation targets in keeping with

the goals and objectives of the SDCP.” Provide more detail on this “broader range of conservation targets.”

p. 70

- Instead of focusing on “if a covered species experiences significant declines or the cause for the decline is unknown,” this should be re-framed to state more detailed studies will be conducted when new information becomes available.
- The habitat-based monitoring should be tiered off the species monitoring to make sure that they are cross-walkable and relates clearly to what we know about the species.

p. 71-72

- Table 5.1 – The Coalition reiterates our position that the cactus ferruginous pygmy owl and desert tortoise should be included under the single-species monitoring plan. The August 2008 monitoring report (Recommended Approach) describes the pygmy owl as being in limbo between single-species and habitat monitoring but no additional information is provided in the MSCP. The pygmy owl, a covered species that may soon be re-listed as endangered, should not be left in “limbo.” Species-specific monitoring is the only way the status and trends of this species’ populations can be tracked and responded to. Without population-specific information to inform the decision-making process, we will remain in an information vacuum and the pygmy owl will remain in limbo.

p. 74

- The precipitation gauges at monitoring sites should be expanded to full weather stations and should be installed at all sites.

p. 75

- Rather than complete habitat monitoring only for those species not receiving species-specific monitoring, habitats for all covered species need to be monitored.

p. 76

- The MSCP states, “Pima County will perform 2-8 surveys to each property >100 acres in size...” This policy excludes smaller properties <100 acres in size that may still contain important wildlife habitat and/or special elements. The Coalition suggests that the STAT develop criteria to evaluate these smaller properties. These criteria can then be used to create a list of smaller properties that will be surveyed on a regular basis.
- The Chiricauha leopard frog could be found on the Marley or Sands ranches.
- Section 5.4.1.3 – At least three surveys should be performed, in the spring, dry summer, and wet summer/early fall.

p. 77

- Change “rangeland monitoring experts” to “rangeland and ecosystem monitoring experts.” It is important that not only forage production be monitored under NRCS protocols but also the ecological health of rangelands must be monitored under more robust protocols.

p. 78

- Section 5.6 – To facilitate more monitoring on private property, access to private properties for monitoring activities should be included as a rezoning condition.

p. 83

- “If one of the covered species, its habitat, or ecosystem properties exhibits significant and deleterious declines, a team of experts will be convened to evaluate appropriate management options such as alteration of habitat.” Add “or if new information becomes available” after “declines.”

p. 88

- Remove drought from the list of examples of Unforeseen Circumstances, especially since it is listed in Table 6.1 Changes Circumstances.

p. 107

- “A 20% contingency to allow for the addition of species or increased monitoring to address changed circumstances is not included in this estimate.” Why not? This contingency funding should be included in the estimate.

p. 109

- Section 7.2.3 – The specific relevance of the \$45 million in RTA wildlife linkages funding to the MSCP is not clear in this section. Include a statement clarifying that the County may receive a portion of this money by applying to the RTA Wildlife Linkages Subcommittee on a project-by-project basis, but it will certainly not be privy to the full \$45 million.

p. 110

- Section 7.3.2 – Include a statement clarifying that to fully implement the acquisition program, it will take a total of 3-5 bonds.

p. 119

- Section 8.3.1 – Add “avoided” before “minimized and mitigated.”

p. 121

- Collaborative Partnering – Also include other local jurisdictions, especially those that are developing their own Habitat Conservation Plans (i.e. Town of Marana, City of Tucson).
- Include target timelines for the goals of the MAMAT.
- Consider including NGOs on the MAMAT.

p. 124

- Change “Sky Islands Alliance” to “Sky Island Alliance.”

Appendix B

- Tables B1 and B2 – Include acreage data for these projects, if possible.

Appendix C

(Comments below apply to both High Value Biological and Community Resources)

- P. A20, #13 – The Coalition objects to allowing continued seeding of non-native grasses. All efforts should be made to discontinue seeding of non-native grasses.
- P. A20, #18 – Add “chip-sealing and oiling” after “paving.”
- P. A21, #1 – Change “should be” to “only” under a range management plan.
- P. A21, #9 – The use of herbicides and pesticides needs expanded guidelines and explanation.
- P. A21, #10 – All replacement activities must occur outside of riparian areas.
- P. A21, #11 – No new roads should be permitted on ranches.
- P. A21 – Permitted Activities on High Value Biological Resources/Conservation Lands
 - Under #1, Line 1, remove “preferably” and “or grazing plan.
 - Remove #11 “construction of new roads where necessary to enhance or protect biological values on the Property or to facilitate farming or livestock-related activities.” No new roads should be constructed.

○

Appendix D

- P. A28, #2 – Use the newest model developed by FWS and the City of Tucson instead of the RECON model.
- P. A45 – The most important thing we can do for the desert box turtle and the tortoise is to prohibit ATVs in washes.
- P. A46 – Use the newest habitat model for the desert tortoise developed by Pima County.
- P. A47 – Add a directive to eradicate bullfrogs and crayfish for all riparian species.
- P. A49 – Add a directive to conduct Chytrid fungus testing.

Appendix E

Add the following Special Conditions, Management and Monitoring Directives for the noted species:

- Rufous-winged sparrow
 - Monitor grazing on Pima County lease lands for range health. Avoid over-grazing on all Pima County Conservation Lands (PCCL). Manage for at least light to moderate grazing condition (particularly on flat or rolling lands, no greater intensity), with a desired habitat condition of a mix of native grasses and native shrubs in an open savannah-like mosaic of these components.
- Swainson’s hawk
 - Implement the Pima County Riparian Protection Ordinance. To benefit this species, even small, narrow riparian habitat should be protected.
 - Manage for at least light to moderate grazing condition, with a desired habitat condition of a mix of native grasses, in an open un-fragmented grassland landscape.
 - Enact a 100 m. buffer “restricted activity zone” during the nesting period (mid March through mid August). Allow only short duration “pass through” activities only.

- Enact a 400 m. buffer, no “developed use zone”, around any nest found, restricting the area from permanent or sustained use activities during the above time period.
- Western yellow-billed cuckoo
 - Aim for at least twenty-five 20-hectare (or greater) riparian patches, wider than 100 m., with a goal of 500 hectares or greater in high quality meso-riparian habitat along the San Pedro (in Pima County), and along the Cienega/Pantano/Rincon/Tanque Verde/Aqua Caliente/Sabino watershed (within Pima County), respectively.
 - Enact a 100 m. buffer “restricted activity zone” during the nesting period (early March through mid August). Allow only short duration “pass through” activities.
 - Protect washes/creeks from OHV/paintball/target shooting, or similar wildlife disturbing activity intrusions.
- Southwestern willow flycatcher
 - Aim for at least 25 hectares (or greater) in high quality hydro-riparian habitat along the San Pedro (in Pima County), and along the Cienega/Pantano/Rincon/Tanque Verde/Aqua Caliente/Sabino watershed (within Pima County), respectively.
 - Enact a buffer “restricted activity zone” during the nesting period (April 25-August 31) around any known nesting patch. Allow only short duration “pass through” activities.
 - Protect washes/creeks from OHV/paintball/target shooting, or similar wildlife disturbing activity intrusions.
- Abert’s towhee
 - Protect washes/creeks from OHV/paintball/target shooting, or similar wildlife disturbing activity intrusions.
- Bell’s vireo
 - Protect washes/creeks from OHV/paintball/target shooting, or similar wildlife disturbing activity intrusions.

Appendix G

- There is a portion of the Conservation Easement template missing.

REFERENCES

Arizona Department of Emergency Management. 2009. Current Open Disasters. Accessed March 9, 2009 at:
http://www.dem.azdema.gov/recovery/docs/publications/pa/Past_Present_Disasters.pdf

R. Seager et al. 2007. Model projections of an imminent transition to a more arid climate in Southwestern North America. *Science*. 316:1181-1184.

U.S. Climate Change Science Program. 2008. The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. Accessed March 9, 2009 at: <http://www.sap43.ucar.edu/>



Coalition for Sonoran Desert Protection

300 E. University Blvd., Suite 120
Tucson, Arizona 85705
p (520) 388-9925 • f (520) 620-6401
www.sonorandesert.org

November 23, 2007

Arizona Center for Law in
the Public Interest
Arizona League of
Conservation Voters
Education Fund
Arizona Native Plant Society
Buffers
Center for Biological
Diversity
Center for Environmental
Connections
Center for Environmental
Ethics
Defenders of Wildlife
Desert Watch
Drylands Institute
Environmental and Cultural
Conservation Organization
Environmental Law Society
Friends of Cabeza Prieta
Friends of Tortolita
Gates Pass Area
Neighborhood Association
Neighborhood Coalition of
Greater Tucson
Northwest Coalition for
Responsible Development
Northwest Neighborhoods
Alliance
Oro Valley Neighborhood
Coalition
Pima Farms/Scenic Drive
Neighborhood Association
Protect Land and
Neighborhoods
Safford Peak Watershed
Education Team
Save the Scenic Santa Ritas
Sierra Club-Grand Canyon
Chapter
Sierra Club-Rincon Group
Silverbell Mountain Alliance
Sky Island Alliance
Sky Island Watch
Society of Ecological
Restoration
Sonoran Arthropod Studies
Institute
Sonoran Permaculture Guild
Southwestern Biological
Institute
Tortolita Homeowners
Association
Tucson Audubon Society
Tucson Herpetological
Society
Tucson Mountains
Association
The Wildlands Project
Wildlife Damage Review
Women for Sustainable
Technologies

C. H. Huckelberry, Administrator
Pima County
130 West Congress, 10th Floor
Tucson, Arizona 85701

RE: Conservation Easements / Protection in Perpetuity in Pima County's Multi-Species Conservation Plan

Dear Mr. Huckelberry:

Thank you for your on-going work on implementation of the Sonoran Desert Conservation Plan, and in particular Pima County's Multi-Species Conservation Plan (MSCP). Ensuring conservation easements on lands used as mitigation credit in the MSCP has been a long-standing goal of the Coalition for Sonoran Desert Protection. While we have noted this goal, and associated concerns, in our past comments on the MSCP, we have some remaining comments and questions on this issue.

The MSCP clearly states the County's intentions to protect mitigation lands in perpetuity through conservation easements. The latest draft of the Plan states on pp. 3-16 and 3-17:

Pima County will ensure the protection of mitigation lands in perpetuity through the recordation of conservation easements or other means on lands acquired or otherwise obtained by the County and the Regional Flood Control District...Mitigation lands secured through the application of CLS policy and other County environmental regulations pertaining to development on private property will be protected through one or more of the following methods:

- *Dedication/donation (transfer of ownership) of set-asides to Pima County with recordation of a conservation easement; or*
- *Donation of conservation easement with designation of Pima County as third party beneficiary; or*
- *Enforcement of Natural Open Space set-asides through the County's land use regulatory authority and enforcement of conservation easements; or*
- *Participation in conservation banks where USFWS is a named third party beneficiary.*

...Each conservation easement will be specifically tailored to the property it covers in order to best conserve the biological resources represented and/or desired.

The Coalition is concerned that these policies have not been applied as of yet and Pima County appears to be abandoning the commitments stated in the Plan, per county staff statements at the August 16, 2007 Science Commission meeting. At the end of 2006, 4,597 acres of land have been conserved through application of the CLS, and County and Regional Flood Control District lands committed to biological conservation in the draft MSCP totaled about 41,000 acres.

1. What is the timeline for securing conservation easements on CLS and county-owned lands?
2. What department in the County is responsible for securing and monitoring the conservation easements?
3. When will these lands be mapped and incorporated into the County's GIS database, and included as a component of the MSCP monitoring program.
4. A Conservation Easement Template is included as Attachment C to the MSCP. Will this template be used for all conservation easements under the MSCP? Or will it be modified depending on the type of land being preserved?

The Coalition strongly supports the use of conservation easements in the MSCP as a means to preserve mitigation lands in perpetuity. We look forward to a response to our questions and concerns, and the pursuit of conservation easements on CLS lands in the near future.

Sincerely,



Carolyn Campbell
Executive Director

cc: Nicole Fyffe, Executive Assistant to the County Administrator
Sherry Ruther, Environmental Planning Manager



Coalition for Sonoran Desert Protection

300 E. University Blvd., Suite 120
Tucson, Arizona 85705
p (520) 388-9925 • f (520) 791-7709
www.sonorandesert.org

December 5, 2008

Arizona Center for Law in the Public Interest
Arizona League of Conservation Voters Education Fund
Arizona Native Plant Society
Center for Biological Diversity
Center for Environmental Connections
Center for Environmental Ethics
Defenders of Wildlife
Desert Watch
Drylands Institute
Environmental and Cultural Conservation Organization
Environmental Law Society
Friends of Cabeza Prieta
Friends of Tortolita
Gates Pass Area Neighborhood Association
Neighborhood Coalition of Greater Tucson
Northwest Neighborhoods Alliance
Oro Valley Neighborhood Coalition
Protect Land and Neighborhoods
Safford Peak Watershed Education Team
Save the Scenic Santa Ritas
Sierra Club-Grand Canyon Chapter
Sierra Club-Rincon Group
Silverbell Mountain Alliance
Sky Island Alliance
Sky Island Watch
Society of Ecological Restoration
Sonoran Arthropod Studies Institute
Sonoran Permaculture Guild
Southwestern Biological Institute
Tortolita Homeowners Association
Tucson Audubon Society
Tucson Herpetological Society
Tucson Mountains Association
The Wildlands Project
Women for Sustainable Technologies

Brian Powell
Office of Conservation Science
Pima County Natural Resources, Parks, and Recreation
3500 W. River Road
Tucson, AZ 85741

RE: Pima County Multiple Species Conservation Plan Monitoring Program: Recommended Approach

Dear Mr. Powell:

Thank you for soliciting stakeholder input on the recently released report entitled *Pima County Multiple Species Conservation Plan Monitoring Program: Recommended Approach*. The Coalition appreciates the concerted efforts undertaken by the county to produce a monitoring plan prior to submission of your application for a Section 10 Incidental Take Permit. We have reviewed this report and respectfully submit the attached comments.

In summary, our comments cover the following topics:

1. Clarification regarding the species chosen for single-species monitoring and those chosen for habitat, threats, and/or ecosystem-level monitoring. This includes specific comments on details in Table 2 of the report.
2. Questions regarding monitoring parameters for species-level monitoring efforts.
3. The importance of including a history and scientific rationale for the species selection process.
4. Other text-specific comments and clarifications.

Also, while initial cost estimates for single-species monitoring are included in the Recommended Approach report, the Coalition anticipates reviewing a more detailed description of an *assured* and *segregated* funding stream for the monitoring and management program. This portion of the MSCP is crucial to ensure widespread community support for such an ambitious effort.

If you have any questions on our comments, please do not hesitate to contact me. We look forward to continuing our work with the County on the MSCP and related monitoring and management efforts.

Sincerely,

Carolyn Campbell
Executive Director

Cc: Maeveen Behan, Pima County Natural Resources, Parks, and Recreation
Julia Fonseca, Pima County Natural Resources, Parks, and Recreation

The crux of the Recommended Approach for Pima County's Monitoring Program is the decision to choose some covered species for single-species monitoring and to monitor the remaining species through habitat, threats, and/or ecosystem monitoring. This is an innovative approach that has not been attempted before in a Multi-Species Conservation Plan (MSCP) and thus deserves critical review before its inclusion in the final MSCP. The Coalition appreciates the concerted efforts undertaken by the county to produce this monitoring plan prior to submission of your application for a Section 10 Incidental Take Permit. We also value your emphasis on the six management objectives developed by the Science Technical Advisory Team (presented on page 8). These objectives continue to be an important foundation and should remain at the forefront of the monitoring effort. Lastly, the Coalition's past comments on earlier drafts of the MSCP identified a list of "special species" that warrant special attention and protection under the MSCP. Many of these species were chosen for single-species monitoring under the Recommended Approach and we appreciate that there is such significant overlap between these two lists. With that said, the monitoring plan needs to retain the flexibility to add species for single-species monitoring if and when new information becomes available.

These comments reflect our review of the Recommended Approach and address the species chosen for single-species monitoring, the discussion of monitoring parameters, the lands covered by the monitoring plan, and a few text-specific questions and clarifications.

1. Single-species monitoring

Lesser long-nosed bat

Pima County should support the ongoing hummingbird feeder and tracking studies coordinated by the U.S. Fish and Wildlife Service, the Arizona Game and Fish Department, the Arizona-Sonora Desert Museum, the Town of Marana, and the City of Tucson. The studies cover two areas: 1) a team of citizen-scientists that monitor bat activity at their hummingbird feeders in both the eastern and western Tucson basin, and 2) tracking bats via radio transmitters. According to the Town of Marana website, the hummingbird feeder study seeks to gather "data on where bats are feeding [and] when they arrive and leave the Tucson Basin." The tracking study involves "tracking a few bats with radio transmitters [so] we can gain a better understanding of their foraging habitat, how they travel from their roosts to foraging sites, and the locations of their roosts." Since both studies could potentially provide information on roost locations, they complement the monitoring plan's goal to "investigate potential roost sites on County-owned or leased lands."

We also recommend that foraging habitat for the lesser long-nosed bat be included in the habitat, threats, and ecosystem monitoring portions of the monitoring plan, as they are developed.

Lowland leopard frog, Longfin dace, and Mexican garter snake

During monitoring of these riparian species, direction should be included in monitoring protocols to also monitor for non-native aquatic species such as bullfrogs. This intention should be included in the "Notes" section for these species in Table 2.

Sonoran desert tortoise

The Sonoran desert tortoise should be included in the species proposed for single-species monitoring. A petition was recently submitted by Wild Earth Guardians and Western Watersheds Project to the U.S. Fish and Wildlife Service to list the Sonoran desert tortoise as a federally endangered species. This petition, coupled with the threats posed to Sonoran desert tortoise and its habitat by development, domestic animals, disease, and roadway and other linear developments, indicates they should be monitored as a single species. In addition, a recent refinement of habitat modeling performed by Pima County, Arizona Game and Fish Department, the City of Tucson and academic researchers needs to be ground-truthed and gives a very good baseline for monitoring.

Chiricahua leopard frog

The Chiricahua leopard frog could easily be monitored concurrently with other riparian species in appropriate habitat, i.e. Ciénega Creek and Davidson Canyon. Globally, amphibians are among the most sensitive and endangered taxon. Additional justifications for monitoring include potential for disease introductions that could quickly wipe out populations and be undetected, along with the potential impacts of climate change to species' populations as temperatures continue to rise in the Southwest.

Talus snails

Talus snails are not included in the Recommended Approach report. Clarify where these species fit within the overall monitoring program.

Cactus ferruginous pygmy owl

The cactus ferruginous pygmy owl (CFPO) should be proposed for single-species monitoring. While there have been no CFPO's detected recently in the Tucson basin, there are individuals that have been detected in the wild in western Pima County, the Altar Valley, southern Pinal County, and on the Tohono O'Odham Nation. Potential exists for some of these individuals on adjacent lands to disperse into eastern Pima County and start breeding. In addition, the potential for the augmentation program to be successful necessitates the need for monitoring. Finally, with the potential for re-listing and no monitoring in place, the chance for take could be very high on individuals as they start dispersing back into the Tucson Basin.

Burrowing owl

We support the choice to include the burrowing owl in habitat, threats, and/or ecosystem-level monitoring as long as there is an established regional approach with other local jurisdictions that will also be monitoring this species. In addition, Table 5 states that "Habitat monitoring may be difficult for this species." Please elaborate on this point. Remote sensing could possibly be used to monitor burrowing owl habitat, and this option would be worth exploring.

Abert's towhee, Bell's vireo

While we support these two species' inclusion in the habitat, threats, and/or ecosystem-level monitoring approach, their presence in riparian areas can easily be monitored concurrently with the southwestern willow flycatcher and western yellow-billed cuckoo. In addition, although these

two species are not strictly riparian obligate, and thus this type of presence monitoring would not be an exhaustive survey, including these two species in the general protocol for the southwestern willow flycatcher and western yellow-billed cuckoo could produce some useful data on the Abert's towhee and Bell's vireo.

2. Monitoring parameters

On page 11, under section 4.1.1, the report states that due to cost issues, "the discussion of potential parameters will be limited to those that seek to detect changes in a population over time." We strongly recommend that the other parameters cited, such as reproductive success, ratio of females to males, and immigration, be explicitly kept in the "toolbox" in case they are needed to detect causality if a species population numbers decrease. For instance, if monitoring parameters detect that a species' abundance is decreasing rapidly, we will need to determine why and these other parameters may be helpful in answering this critical question.

3. Lands proposed for monitoring

While some of the figures and maps make implications about the suite of lands that will be monitored, clarify the geographical scope of the monitoring plan. Specifically, will lands set aside through the development process be proposed for mitigation credit and the monitoring plan?

4. Citizen-science monitoring efforts

The Tucson and Christmas bird counts, coordinated by the Tucson Audubon Society, or any other annual counts, could serve as useful databases for species such as Bell's vireo and Abert's towhee. These efforts provide long-term data and trends and utilize low-cost citizen science.

5. History and rationale of the species selection process

To better present this approach to the USFWS and the public at large, a summary of the species selection process should be included in the monitoring plan, starting from the initial list of 100+ species, to the 56 priority vulnerable species included in the SDCP, to the 36 chosen for coverage under the MSCP, and finally to the 10 currently identified for species-specific monitoring. The report should also consider how and to what degree the species not selected for definite single-species monitoring would be covered under habitat, threats, and/or ecosystem monitoring. While such analysis might be forthcoming in another report, expected coverage or lack thereof should be a factor in selecting species for direct monitoring. Insightful analysis is needed to convince potential skeptics that habitat, threats, and ecosystem-based approaches will work to protect vulnerable species in lieu of single-species monitoring. Explaining the scientific rationale for this selection process, including the role of peer review, is an important component of the monitoring plan, and will help with clarity and understanding of the entire process during public review.

6. Monitoring program assessment

We understand that forthcoming documents will more fully explain the habitat, threats, and ecosystem portions of the monitoring program. However, since this report is a "Recommended Approach," there needs to be an assessment of the proposed monitoring program's ability to prevent irreversible habitat loss and ecosystem degradation. By the time adverse land changes

become apparent, monitoring may do little more than document what should have been anticipated and prevented in terms of irreversible loss of habitat.

An alternative approach might be to establish thresholds for land (habitat) changes beyond which species recovery would not be possible, and ensure that changes (e.g., caused by development) are prevented through county planning *before* they occur. Established thresholds are mentioned in the report (pp. 30-31) but only in the context of “adaptive management,” which would be too late to conserve vulnerable species once irreversible loss of essential habitat takes place.

We look forward to future review of the habitat, threat, and ecosystem portions of the monitoring program.

7. Text-specific comments and clarifications

p. 8, last paragraph – Remove the word “vague” in line 2. This sentence has a negative connotation that is not necessary. The sentence could easily be revised to read, “They are good starting objectives for the proposed monitoring program; however, they would need to be ‘stepped down’ to conform to the standards outlined above.”

p. 8, last paragraph, #4 – Clarify what specific native species pose a threat to the region’s biodiversity.

p. 17, paragraph 1 – Include a short summary paragraph of the referenced “site x time interaction.”

p. 22, paragraph 2 – Remove the word “easily” from line 2.

p. 22, paragraph 2 – Include information on the hummingbird feeder study and the radio tracking study currently being conducted by U.S. Fish and Wildlife Service, Arizona Game and Fish Department, the Town of Marana, and the City of Tucson. Both of these studies could provide valuable information related to roost locations, population numbers, and foraging habitat of the lesser-long nosed bat.

p. 22, paragraph 3 – Clarify and provide more information on the discussion of the cactus ferruginous pygmy owl. Additionally, the Town of Marana should also be considered for a cooperative monitoring program since a significant amount of CFPO habitat exists within Marana town limits.

p. 32, paragraph 4 – Other partners for the coordination of monitoring activities include the U.S. Forest Service, Arizona State Land Department, University of Arizona, U.S. Fish and Wildlife Service, Arizona-Sonora Desert Museum, The Nature Conservancy, the Tucson Audubon Society, and Audubon Arizona.