January 7, 2005

Ms. Jeanine A. Derby, Forest Supervisor
Coronado National Forest
300 West Congress Street, 6th Floor
Tucson, Arizona 85701

Dear Ms. Derby:

On May 18, 2004, we received your May 17, 2004, biological assessment (BA) and request for reinitiation of formal consultation on the effects of 10-year allotment management plans (AMPs) for the Duquesne, Hayfield, and Lochiel allotments, on the threatened Chiricahua leopard frog (*Rana chiricahuensis*) (CLF), the endangered Sonora tiger salamander (*Ambystoma tigrinum stebbinsi*) (STS), and the endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) (LLNB), in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act). These species were originally addressed in a biological opinion in 2002 (2002 BO; 02-21-98-F-0399).

You are also requesting our concurrence that your proposed action is not likely to adversely affect the threatened Mexican spotted owl (*Strix occidentalis lucida*) (MSO) and its designated critical habitat (MSO CH); the endangered Gila topminnow (*Poeciliopsis occidentalis occidentalis*); and the endangered jaguar (*Panthera onca*). We list our concurrences for MSO, MSO CH, Gila topminnow, and jaguar in Appendix A of this reinitiated BO.

The three allotments are located on the eastern side of the Patagonia Mountains, in the Huachuca Ecosystem Management Area (EMA) of the Sierra Vista Ranger District. You are requesting consultation on these three specific allotments now because the proposed action for their management has been changed from that considered in the 2002 BO. Effects to listed species, while reduced, remain measurable and reasonably certain to occur.

This BO is based on the 2002 BO and its supporting administrative record, information provided in your December 2003, project proposal; your May 17, 2004, BA; telephone conversations during 2004 between staff biologists and range conservationists; and other sources of information. References cited in this biological opinion are not a complete bibliography of all literature available on livestock grazing; species of concern; or other subjects considered in this opinion. A complete administrative record of this consultation is on file in our Phoenix office.
Consultation History

- July 26, 1999: We issued a BO (02-21-98-F-0399) for On-going and Long-Term Grazing on the Coronado National Forest for all allotments.

- October 24, 2002: We issued a reinitiated BO (02-21-98-F-0399-R1) for the Continuation of Livestock Grazing on the Coronado National Forest for all allotments.

- December 24, 2003: We issued a reinitiated BO (02-21-98-F-0399-R2) for Kunde and Papago 10-year allotment management plans (AMPs).

- September 27, 2004: We issued a reinitiated BO (02-21-98-F-0399-R3) for Livestock Grazing on the CNF for all allotments (with a concurrence for all allotments regarding proposed MSO critical habitat).

- November 5, 2004: We sent you the DRAFT of this BO (02-21-98-F-0399-R4).

- December 9, 2004: We received your comments to the DRAFT BO and they are addressed in this final BO.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

This reinitiation (02-21-21-98-0399-R4) is required because management actions will be changed for these three allotments, a greater amount of detailed, site-specific information is now available, and effects to listed species have changed from those described in the 2002 BO. Livestock grazing duration will continue to be yearlong on the Duquesne and Hayfield allotments; duration on the Lochiel allotment will be reduced from yearlong to nine months, from October to June, annually (“winter use”). Livestock grazing intensity will remain as established in the 2002 BO on all three allotments; a maximum use level of 45 percent in key areas (which are already established). Livestock movement through pastures (frequency and timing) will be determined by the results of your monitoring of livestock use levels and resource objectives. The following is a brief summary of actions and changes; greater detail is contained in the 2004 BA and accompanying maps. We are consulting on the highest permitted numbers of livestock and the longest permitted grazing use proposed, remaining aware that you may choose to manage the allotments at fewer numbers and lesser durations.

Duquesne: You propose stocking levels set between 120 to 180 cow-calf pairs for yearlong grazing. Initial stocking levels will be 120 +/- pairs (the low end). As range projects are completed and if monitoring demonstrates achievement of improved range conditions, the stocking level will be increased within the range defined above. A single herd will be rotated through the allotment, as per the original BO.
Proposed changes in range projects include new pipeline installation (from existing wells) to provide reliable water to upland portions of the allotment. This is expected to improve livestock distribution around stock ponds and/or tanks, lessening effects at these sites and in the lower elevations in general. The Santo Nino pasture will be cross-fenced to prevent livestock from moving out of higher portions of the pasture and reduce livestock impact in the lower portions. Small-diameter (less than nine inches) junipers would be hand-grubbed in the Harristeen, L&J, and Upper Mowry pastures to keep them from encroaching into the pastures.

**Hayfield:** You propose to set a stocking level no greater than 210 cow-calf pairs for yearlong grazing. This is a slight increase from the rate set in the 2002 BO (203 cow-calf pairs yearlong). You propose use of a deferred rest-rotation management system. Livestock movement will be dictated by the results from monitoring of livestock utilization levels in key areas, as well as forage and water conditions.

Originally, management actions involved three herds with a 14-pasture rotation. Changes include moving the livestock as a single herd with a 16-pasture rotation. Management goals are to reduce concentrated livestock use in the bottomlands, disperse more livestock use into the uplands (spreading out the grazing effects), and provide adequate growing season rest in unused pastures. Sixteen pastures will provide enough flexibility for management to use pasture rotations for forage and vegetation recovery. Within pastures, livestock distribution will be accomplished by fencing selected waters, fully or partially, or other water projects (such as double tanks). No new wells will be drilled, but if appropriate monitoring indicates the need for additional upland water sources to improve livestock distribution, the following new actions have been identified for future implementation:

- Construct a pipeline from an existing well on the Duquesne allotment to provide upland water to pastures one through nine on the Hayfield allotment.
- Construct a pipeline from an existing well on the Lochiel allotment to provide upland water to pasture 14 on the Hayfield allotment.

**Lochiel:** You propose to set a stocking level ranging between 50 to 61 cow-calf pairs for nine months of grazing, as opposed to the original, yearlong timeframe. The two-head private land permit will be discontinued. Livestock will be rotated between the two existing pastures during the winter (October through June) grazing period. The order in which the two pastures will be used will alternate each year in order to provide for cool-season plant species recovery in the pastures. Livestock will be removed from the allotment and placed on private land from July through September, annually (“growing season”), to provide annual growing season rest on the entire allotment. New fencing is not required, but a new water supply will be developed in the uplands where East and West pastures meet.

**Monitoring**

You agree to continue monitoring of incidental take of listed species and report any mortality along with implementation of terms and conditions in your annual report to us. Monitoring will remain as was originally consulted on in the 2002 BO.
Conservation measures

General and species-specific conservation measures identified in the 2002 BO (pages nine through 12) are in effect on the allotments and will continue to be implemented under the proposed action. These measures are incorporated by reference. For the Sonora tiger salamander and the Chiricahua leopard frog, additional measures are taken from the terms and conditions currently in effect for the species under the 2002 BO.

Species-specific Measures

Chiricahua leopard frog: The 2002 BO specifies terms and conditions for livestock-management activities necessary to minimize the take of Chiricahua leopard frogs. These include surveys for, and salvage of, frogs during stock pond and/or tank cleaning activities; measures designed to minimize the introduction of non-native species or chytrid contamination into occupied sites; measures to reduce direct mortality and damage to aquatic cover as a result of livestock impacts, and monitoring and reporting of incidental take. Permittees have been notified of these terms and conditions through annual operating instructions.

You agree to continue inventorying stock ponds and/or tanks within the range of the Chiricahua leopard frog with the objective of identifying sites where bankline vegetation can be enhanced to benefit frog habitat. Potential range projects include fencing of stock ponds and/or tanks or portions of them, creating double stock ponds and/or tanks, or modifying livestock management actions in ways that protect bankline cover. These actions will insure compliance with reasonable and prudent measure 3 in the 2002 BO.

Sonora tiger salamander: You have adopted the Stockpond Management and Maintenance Guidelines which are in effect and will continue implementing the conservation measures identified on pages nine through 11 of the 2002 BO. These measures will assure compliance with terms and conditions 2.a through 2.h in the 2002 BO.

You agree to continue inventorying stock ponds and/or tanks within the range of the salamander with the objective of identifying sites where bankline vegetation or submerged aquatic cover can be enhanced to benefit salamander habitat. Potential range projects include fencing of stock ponds and/or tanks or portions of them, creating double stock ponds and/or tanks, placing logs or other underwater structures into stock ponds and/or tanks, or modifying livestock management actions in ways that protect bankline cover. These actions will insure compliance with terms and conditions 3.a and 3.b of the 2002 BO. Permittees have been notified of these terms and conditions through annual operating instructions.

Lesser long-nosed bat: No additional conservation measures, apart from those in the 2002 BO, will be implemented for the LLNB.

General Measures

General measures remain the same as those consulted on in the 2002 BO. Livestock grazing and management actions are described in much greater detail in the 2002 BO (02-21-98-F-0399-R1). Refer to the 2002 BO for a more complete discussion of Forest-wide livestock grazing.
Chiricahua leopard frog (CLF)

STATUS OF THE SPECIES

The status of the CLF remains similar to that described in the 2002 BO (available on our website at http://arizonaes.fws.gov, under Document Library; Biological Opinions), with the addition of the following recovery actions and planning. Recovery efforts in 2004 produced a Safe Harbor Agreement (SHA) with the Malapai Borderlands Group (southeastern Arizona). Efforts continue to complete an Altar Valley SHA and a statewide SHA by 2006, if not sooner. Chiricahua leopard frogs were translocated to Sierra Blanca Lake in the White Mountains, and a refugium population was established on a ranch in the Baboquivari Mountains in 2004. A draft recovery plan is in development and should be available for public review in spring of 2005.

ENVIRONMENTAL BASELINE

The environmental baseline remains the same as described in the 2002 BO and is included herein by reference. Habitat (stock ponds and/or tanks) likely to be inhabited by CLF exists on the allotments.

EFFECTS OF THE PROPOSED ACTION

Management changes that differ from the proposed action in 2002 BO are as follows:

1. Several stock ponds and/or tanks in the Duquesne and Hayfield allotments will be partially or completely fenced as soon as possible after the development of alternative sources of livestock water, which is expected to occur within three years of project initiation. “Complete fencing” means a gated fence will surround the stock pond and/or tank and livestock access will be allowed during pasture use.

2. Permitted numbers of livestock will be reduced from the 2002 BO, but actual numbers of livestock on the ground will remain at or near current numbers (which are well below permitted numbers).

3. Several additional water projects are proposed to aid in a more even livestock distribution on the allotments. No new wells will be drilled; water projects will result from the distribution of existing waters through pipelines to water troughs.

While these AMP changes may still affect any CLF in the stock ponds and/or tanks on the allotments, partial fencing of stock ponds and/or tanks to protect some portion of grasses and water (during CLF breeding season) for CLF juvenile survival will further reduce effects to any CLF that might inhabit the stock ponds and/or tanks on the allotments.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Traffic
through the action area by undocumented migrants and smugglers has increased, with associated increased impacts, including trails, fires, and accumulated trash. Otherwise, the analysis of cumulative effects remains unchanged from the 2002 BO.

CONCLUSION

After reviewing the anticipated effects of the revised proposed action and conservation measures for the proposed project, the environmental baseline for the action area, the current status of the CLF, and the cumulative effects, we affirm our previous conclusion from the 2002 BO that the proposed action is not likely to jeopardize the continued existence of the CLF. We base our determination on the rationale presented in our 2002 BO and the following:

1. Livestock grazing effects on CLF and their habitats on the allotments (stock ponds and/or tanks and associated waters) will be further reduced by fencing of several sites over the 10-year term of the project.
2. Improved overall dispersal of livestock is anticipated to reduce heavy livestock use at stock ponds and/or tanks.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. “Harass” is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. “Incidental take” is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

CLF occur in stock ponds and/or tanks and stream habitats on allotments in the watershed, and because occupancy of habitat is fluid and frogs could occur on these allotments over the life of the project, we anticipate take to remain the same as described in the 2002 BO (pages 27 and 28).

Occupancy of suitable habitats by CLF is dynamic. Discovery of new populations, recolonization of extirpated sites, and extirpation of occupied sites are common occurrences with this species; therefore, we expect that over the life of this action, sites where take may occur (sites occupied by CLF) will change across the allotments. The anticipated take of the 2002 BO
takes into account the dynamic nature of frog occupancy; thus, we do not believe reinitiation is needed whenever a new population of CLF is found, or a population is extirpated.

EFFECT OF THE TAKE

We determine that this level of anticipated take is not likely to result in jeopardy to the CLF.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

All reasonable and prudent measures and their accompanying terms and conditions remain as consulted on in the 2002 BO. Actions taken in this project continue to implement the 2002 BO requirements.

CONSERVATION RECOMMENDATIONS

No additional conservation recommendations are added to those described in the 2002 BO.

Sonora Tiger Salamander (STS)

STATUS OF THE SPECIES

The status of the STS remains similar to that described in the 2002 BO (available on our website at http://arizonaes.fws.gov, under Document Library; Biological Opinions) and is incorporated herein by reference. Sonora tiger salamanders have been documented on the Duquesne (six sites) and Hayfield (three sites) allotments, and you are treating all stock ponds and/or tanks on these three allotments as potential and occupied sites for this species.

ENVIRONMENTAL BASELINE

The environmental baseline remains the same as described in the 2002 BO and is included herein by reference.

EFFECTS OF THE PROPOSED ACTION

1. Several stock ponds and/or tanks in the Duquesne and Hayfield allotments will be partially or entirely fenced to exclude livestock, as soon as possible after development of alternative sources of livestock water.

2. Permitted numbers of livestock will be reduced from the 2002 BO, but actual numbers of livestock on the ground will remain at or near current numbers (which are well below permitted numbers).

3. Several additional water projects are proposed to aid in a more even livestock distribution on the allotments. No new wells will be drilled; water projects will consist of the distribution of existing waters through pipelines to water troughs.
While these AMP changes may still affect any STS in the stock ponds and/or tanks on the allotments, partial fencing of stock ponds and/or tanks to protect some portion of grasses and water for STS survival will further reduce effects to any STS that might inhabit the stock ponds and/or tanks on the allotments.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Traffic through the action area by undocumented migrants and smugglers has increased, with associated increased impacts, including trails, fires, and accumulated trash. Otherwise, the analysis of cumulative effects remains unchanged from the 2002 BO.

CONCLUSION

After reviewing the anticipated effects of the revised proposed action and conservation measures for the proposed project, the environmental baseline for the action area, the current status of the STS, and the cumulative effects, we affirm our previous conclusion from the 2002 BO that the proposed action is not likely to jeopardize the continued existence of the STS. We base our determination on the rational presented in our 2002 BO and the following:

1. Livestock grazing effects on STS and its habitats on the allotments (stock ponds and/or tanks and associated waters) will be further reduced by fencing of several such sites. These will be fenced as soon as possible after the development of alternative sources of livestock water, which is expected to occur within three years of project initiation.

2. Overall redistribution of livestock is anticipated to reduce heavy livestock use effects at stock ponds and/or tanks.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. “Harass” is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. “Incidental take” is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.
AMOUNT OR EXTENT OF TAKE ANTICIPATED

Because STS occur in stock ponds and/or tanks on the Duquesne and Hayfield allotments, we anticipate take to remain the same as described in the 2002 BO (pages 50 and 51). See the 2002 BO for further details.

EFFECT OF THE TAKE

We determine that this level of anticipated take is not likely to result in jeopardy to the CLF.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

All reasonable and prudent measures and their accompanying terms and conditions remain as consulted on in the 2002 BO. Actions taken in this project continue to implement the 2002 BO requirements.

CONSERVATION RECOMMENDATIONS

No additional conservation recommendations are added to those described in the 2002 BO.

Lesser long-nosed bat (LLNB)

STATUS OF THE SPECIES

The status of the LLNB remains similar to that described in the 2002 BO (available on our website at [http://arizonaes.fws.gov](http://arizonaes.fws.gov), under Document Library; Biological Opinions). One large roost site is known to exist six miles north (in the Patagonia Mountains). Numerous mines, adits, and caves exist in the Huachuca Mountains and significant roosts exist at Coronado National Memorial and Fort Huachuca.

ENVIRONMENTAL BASELINE

The environmental baseline remains the same as described in the 2002 BO and is included herein by reference. Field observations from 2003 and 2004 indicate agaves (bat food sources) are neither common nor well distributed in the allotments. No known roost sites exist on the allotments.

EFFECTS OF THE PROPOSED ACTION

Management changes that differ from the 2002 BO are as follows:

1. Permitted numbers of livestock will be reduced from the 2002 BO, but actual numbers of livestock on the ground will remain at or near current numbers (which are well below permitted numbers).

Because agaves are so scarce and scattered on these three allotments, none are likely to suffer effects from water developments (pipelines and water trough placement). The conservation
measure from the 2002 BO states that no more than one percent of agaves or saguaros within 0.50 mile of a range project will be destroyed; this remains the same for this reinitiation.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Traffic through the action area by undocumented migrants and smugglers has increased, with associated increased impacts, including trails, fires, and accumulated trash. Otherwise, the analysis of cumulative effects remains unchanged from the 2002 BO.

CONCLUSION

After reviewing the anticipated effects of the proposed action and modified conservation measures for the proposed project, the environmental baseline for the action area, the current status of the LLNB, and the cumulative effects, we affirm our previous conclusion from the 2002 BO that the proposed action is not likely to jeopardize the continued existence of the LLNB. We base our determination on the rationale presented in the 2002 BO.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. “Harass” is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. “Incidental take” is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

Consistent with the 2002 BO, and for the reasons given in that BO, we do not anticipate incidental take of LLNB.

CONSERVATION RECOMMENDATIONS

No additional conservation recommendations are added to those described in the 2002 BO.

Disposition of Dead or Injured Listed Species
Upon locating a dead, injured, or sick listed species, your initial notification must be made to our Law Enforcement Office, 2450 West Broadway Road, Suite 113, Mesa, Arizona 85202 (telephone: 480/835-8289) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

**REINITIATION NOTICE**

This concludes reinitiation of formal consultation on the actions outlined in your request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of your action that affects listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) your action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

We appreciate your efforts to identify and minimize effects to listed species from this project. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. For further information please contact Thetis Gamberg (520) 670-6150 (x 231) or Jim Rorabaugh (602) 242-0210 (x 238). Please refer to consultation number 02-21-98-F-0399-R4 in future correspondence concerning this project.

Sincerely,

/s/  Steven L. Spangle  
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)  
   Field Supervisor, Fish and Wildlife Service, Albuquerque, NM  
   Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ  
   Assistant Field Supervisor, Fish and Wildlife Service, Flagstaff, AZ  
   Resource Assistant, U.S. Forest Service, Coronado National Forest, Tucson, AZ *  
   (Attn: Paula Medlock) (*e-mail transmission –hard copy not required  
   Pmedlock@fs.fed.us)

Bob Broscheid, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ  
Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ
REFERENCES CITED

All references from the 1999 BO, and the 2002 and 2004 reinitiations of that BO, are included herein by reference.


APPENDIX A
CONCURRENCES

Mexican spotted owl (MSO) and critical habitat

Your proposed action and its anticipated effects are expected to result in reduced effects as compared to those consulted on in the 2004 reinitiation (regarding MSO CH). These effects remain measurable and reasonably certain to occur. We reaffirm our concurrence that your proposed action is not likely to adversely affect the MSO and MSO CH.

Gila topminnow (GTM)

We anticipate that your proposed action will be insignificant and discountable to the GTM; therefore, we concur that your proposed action is not likely to adversely affect the GTM.

Jaguar

We anticipate that your proposed action will be insignificant and discountable to the jaguar; therefore, we concur that your proposed action is not likely to adversely affect the jaguar.