



# United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Field Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to:

AESO/SE

22410-2007-I-0221

January 15, 2008

Mr. Gene Blankenbaker  
Forest Supervisor  
Tonto National Forest  
2324 East McDowell Road  
Phoenix, Arizona, 85006

Dear Mr. Blankenbaker:

Thank you for your February 6, 2007, letter received in our office on February 8, 2007, requesting consultation pursuant to section 7 of the Endangered Species Act (16 U.S.C. 1531-1544), as amended, in regard to the proposed livestock grazing on 33 allotments (832,302 acres) of the Tonto Basin, Globe, Payson, Pleasant Valley, and Mesa Ranger districts on the Tonto National Forest (TNF), Arizona. A complete description of the proposed action is found in your February 2007, biological evaluation and assessment and the accompanying maps sent to our office, and is summarized below in Appendix A.

We requested an extension for this project in March 13, 2007, and with you, we agreed to complete this project after completion of work on other TNF priority projects such as your previous request for consultation (Tonto 5 Grazing Allotments 22410-2007-F-0218). That grazing consultation is now under review by your office.

The TNF requests concurrence from the Fish and Wildlife Service (FWS) that all 33 allotments associated with the proposed project "may affect, but are not likely to adversely affect" the Chiricahua leopard frog (*Rana chiricahuensis*) (CLF), Gila topminnow (*Poeciliopsis occidentalis*), bald eagle (*Haliaeetus leucocephalus*), Arizona hedgehog cactus (*Enchinocereus triglochidius var. arizonicus*); and the southwestern willow flycatcher (*Empidonax traillii extimus*), razorback sucker (*Xyrauchen texanus*), Mexican spotted owl (*Strix occidentalis lucida*), Gila chub (*Gila intermedia*) and their designated critical habitat. A table of your effect determinations for each specific allotment can be found in Appendix B.

We concur with your determinations and provide our rationales below for the following allotments: Armer Mountain, Bar T Bar, Bar X/Haigler Creek/Young, Capitan, Center Mountain, Coolidge Parker, Devil's Canyon, Diamond, Hardscrabble, Haystack Butte, Jones, Lyons Fork,

OW, Poison Springs/Sierra Ancha, Potato Butte, Radium, Ranger Station, Schoolhouse, Sedow, Sunflower, Superior, Vosburg, and Winters allotments. Our concurrences are provided below in Appendix A. Species with "no effect" determinations do not require review from the Fish and Wildlife Service and are not addressed further. We further discuss the allotments where we did not concur with your determination below.

We also received a November 15, 2007, request from Gary Smith, District Ranger at the Tonto Basin Ranger District, for the H4 Allotment. The H4 Allotment is also one of the 33 allotments already included in this analysis. Our analysis for your determination for the flycatcher and its designated critical habitat for this and the November assessment is provided below.

The bald eagle is no longer listed under the Endangered Species Act but is protected by the Bald and Golden Eagle Protection Act (Eagle Act). As a result, evaluation under the Endangered Species Act is no longer necessary. However, we have recently defined the word "disturb" under the Eagle Act and have proposed regulations for incidental take. We will provide our technical assistance in response to your request in Appendix C.

#### Nonconcurrence

##### *Southwestern willow flycatcher and its designated critical habitat*

The flycatcher nests and is found migrating along lower Tonto Creek (from April into September), with detections occurring from near the 76 Ranch downstream to the Tonto Creek arm of Roosevelt Lake. Numbers and locations of breeding, migrating, foraging, and dispersing flycatchers will fluctuate due to the dynamic nature of riparian habitat and also water storage fluctuations at Roosevelt Lake. In 2006, 10 survey sites along Tonto Creek were examined for nesting birds, and a total of 62 territories at five sites were detected (primarily from Bar X Road downstream to Roosevelt Lake).

Flycatcher critical habitat is designated for the lower 19.7 miles of lower Tonto Creek from Rye Creek/Tonto Creek confluence near the 76 Ranch downstream to near A+ Road at the upper conservation space limit of Roosevelt Lake. The conservation space of Roosevelt Lake was not designated as critical habitat.

Based on the information you provided and our understanding of this project, we do not concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the flycatcher and its designated critical habitat for the Del Shay, H4, Hardt Creek, Seven K, Tonto Basin, and Walnut allotments. These six allotments exist within TNF Management Unit 6J. We base this determination on the following:

A complete description of the anticipated effects to the flycatcher can be found in our biological opinion for the Southwestern Regional Land Resource Management Plan (LRMP) (June 10, 2005, #2-22-03-F-366) in which we concluded that ongoing upland grazing associated with Management Area 6J (Code 1423) on the TNF would cause a sub-lethal response (-2) to the

flycatcher and its proposed critical habitat. We concluded in the LRMP that continued grazing at the proposed level can facilitate decreased bank stabilization, increased runoff, increased sedimentation, increased erosion, and reduced capacity of soils to hold water. These factors would reduce the occurrence, longevity, and quality of the habitat-based Primary Constituent Elements (PCEs) of flycatcher critical habitat. We also came to this same conclusion for the Boneyback Allotment found in the Tonto 5 Grazing Allotment consultation (also within Management Unit 6J). Due to the anticipated conditions persisting over the life of this project, we are unable to concur with your determination.

*Chiricahua leopard frog*

Immediately adjacent to the Crouch Mesa Allotment, CLF conservation and recovery actions recently have been implemented at Pine Spring on the Red Lake Allotment. During the summer of 2006, 400 CLF tadpoles and metamorphs were released within and just below Pine Spring. Approximately 0.5 mile downstream of Pine Spring (in the Pine Spring drainage), is the boundary for the Crouch Mesa Allotment, which is within a reasonable dispersal distance for the CLF. As a result of the proximity of livestock-grazing activities on the Crouch Mesa Allotment, the anticipated movement of frogs through shared drainages, and reasonable likelihood of direct and indirect effects to frogs and frog habitat from livestock grazing and management activities, and our understanding of the proposed action, we are unable to concur with your determination.

Conclusion

In light of our review, we encourage you to reconsider your effect determinations for the flycatcher and its critical habitat on six allotments (Del Shay, H4, Hardt Creek, Seven K, Tonto Basin, and Walnut) and the CLF on the Crouch Mesa Allotment. In order for us to concur with your "may affect, but not likely to adversely affect" determination, all effects must be insignificant, discountable, or wholly beneficial.

We welcome the opportunity to review your revised proposed action. Should you determine that this project may adversely affect the above mentioned species, we will initiate formal consultation at your request.

We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. We appreciate your continued coordination. If you have any questions or if we can be of further assistance please contact Greg Beatty (x247) or Debra Bills (x239).

Sincerely,

  
Steven L. Spangle  
Field Supervisor

Mr. Gene Blankenbaker

4

cc: Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ  
Assistant Field Supervisor, Fish and Wildlife Service, Flagstaff, AZ  
Forest Biologist, Supervisor's Office, Tonto National Forest, Phoenix, AZ  
District Ranger, Tonto Basin Ranger District, Tonto National Forest, Roosevelt, AZ  
District Ranger, Mesa Ranger District, Tonto National Forest, Mesa, AZ  
District Ranger, Globe Ranger District, Tonto National Forest, Globe, AZ  
District Ranger, Payson Ranger District, Tonto National Forest, Payson, AZ  
District Ranger, Pleasant Valley Ranger District, Tonto National Forest, Pleasant Valley, AZ  
Dave Cook, Gila County Cattlegrowers Association, AZ

W:\greg beatty\fs tonto nf grazing\33 tonto allotments 2008.doc:cgg

## Appendix A - Concurrences

### Description of proposed action

The proposed action is to provide grazing opportunities and improve or maintain range and watershed conditions on 33 grazing allotments by employing conservative-use and deferred or rest-rotation strategies on the TNF. The objective of conservative-use is to manage grazed vegetation for the maintenance of good to excellent and enhancement of poor to fair watersheds and wildlife habitat. An adaptive management approach will be adopted as outlined in Chapter 90 of FSH 2209.13 to work toward this objective.

From a long-term perspective, conservative-use is designed to maintain forage utilization on key forage species between 30 and 40 percent (%) or less of annual forage production for herbaceous perennials and 50 % of woody browse. Measures are by weight as measured at the end of the growing season. These objectives are based on averages over time, entire pastures, and total forage production (Smith et al. 2005). If utilization levels exceed desired levels over multiple years, a change in management practices may be warranted (Smith et al. 2005). Management actions include but are not limited to adjustments of timing, intensity, frequency, and duration of grazing (FSH 2209.13 - Chapter 90).

From a short-term (within-year) perspective, wildlife habitat and watershed condition may be gauged by monitoring seasonal utilization on key forage species during the grazing period. Seasonal utilization is important because the end of the growing season is not well-defined for all plant communities on the TNF. The warm climate and mild winters provide an opportunity for year-long or multiple growing seasons for many species. Therefore, the growing periods for plants are often more related to variable precipitation than seasons of the year. Additionally, seasonal monitoring provides an opportunity to assess range condition during periods of use when listed species are most likely to be adversely affected by grazing activities. Smith et al. (2005) point out that "seasonal utilization may be an important factor in deciding when to move livestock out of a particular pasture and utilization levels may be the primary influence when adjusting numbers for next year." Flexibility to adjust livestock numbers throughout the season or year is essential to a successful adaptive management strategy. Smith et al. (2005) notes that seasonal utilization data can be used as a guideline for moving livestock within an allotment with due consideration to weather conditions and the availability of forage and water in pastures scheduled for use during the same grazing season.

Control features such as fences and cattle guards are designed to hold permitted livestock within the appropriate pastures. Livestock may occasionally access areas that are outside the area of planned use. In such cases, the TNF will work with the permittee to assist in correcting the situation through inspections and regular visits to occupied pastures and adjacent areas.

### **Arizona Hedgehog Cactus**

*Superior, Devils Canyon, Winters, Radium, Chrysotile, Lyons Fork, Ranger Station, Coolidge Parker, Sedow, and Capitan allotments*

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the Arizona hedgehog cactus. We base this concurrence on the following:

- Arizona hedgehog cacti are most commonly found in granite bedrock, narrow cracks between boulders, and the understory of shrubs. However, some plants (believed to be less than 3 % of the population) grow on areas with less than 60 % slope. These areas are locations where there is some risk of direct effects to plants from livestock.

Potential effects of grazing on Arizona hedgehog cactus have been assessed on the Devil's Canyon Allotment, where in a plot of over 100 plants accessible to livestock, no trampling was noted (C. Woods, TNF, pers. comm.). In another study, trampling by livestock occurred in less than 0.25 % (1.25 plants) of all plant observations (n=500) (Cedar Creek Associates, Inc. 1994). A trampled plant does not necessarily mean a dead plant, as these cacti will survive some vegetative damage, and continue to grow and reproduce.

As a result of these studies, there is a small possibility of direct damage to plants from livestock trampling. In most instances, however, livestock grazing, livestock concentrations, and/or feeding areas are not anticipated to occur where plants are found. When trampling does occur, which limited studies have shown to be rare, it is not known to what extent trampling would result in actual plant mortality. We believe it is reasonable to anticipate, until studies show otherwise, that the few instances of trampling by livestock would not result in cactus mortality. No herbivory by livestock has been observed on Arizona hedgehog cactus, therefore we anticipate no effects from livestock herbivory.

It is not known how landscape-level use of Arizona hedgehog cactus habitat by livestock may or may not impact the overall distribution, abundance, or establishment of the cactus (M. Falk, USFWS, pers. comm.), as no studies have been initiated to address these questions. Since the majority of known individuals occur in areas that are not accessible to livestock, we anticipate that indirect effects to the overall population and habitat are insignificant.

In summary, we do not expect livestock will eat Arizona hedgehog cactus, therefore no effects are anticipated to occur from herbivory. Additionally, we believe the likelihood of mortality, due to the rare occurrence of trampling Arizona hedgehog cactus is small, the indirect effect to plant populations and habitat to be insignificant; therefore, the effect of the proposed action is considered insignificant and discountable.

### **Chiricahua Leopard Frog**

We concur with your determination that the proposed action may affect, but is not likely to adversely affect the CLF, for the following allotments discussed below.

#### *Armer Mountain, Center Mountain, Hardscrabble, OW, Poison Springs/Sierra Ancha, Potato Butte, Tonto Basin, and Vosburg allotments*

- The proposed actions meet the “may affect, not likely to adversely affect” criteria for CLF established in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).
- Suitable CLF habitat may exist within appropriate elevations on the above grazing allotments, however CLF has not been historically recorded within these allotments.
- Surveys have not detected CLF on any of the above allotments.
- There are no known CLF within dispersal distance of any of the above allotments.

#### *Bar X/Haigler Creek/Young allotments*

On September 10, 2007, nearly 700 frogs and tadpoles were released into Upper Cherry Creek near Rock Springs just over three stream miles upstream of the Bar X/Haigler Creek/Young Allotment boundary with the Red Lake Allotment. Experts generally accept that CLF may disperse up to three miles within intermittent drainages such as Upper Cherry Creek. This new sub-population is a part of the Gentry Creek CLF Conservation Management Zone and will be monitored by the various partners engaged with CLF conservation and recovery efforts.

- Suitable CLF habitat exists within appropriate elevations on the allotments, however the frog has not been recorded within these areas.
- No recent surveys on these allotments have detected CLF on any of these three allotments.
- The reintroduced Upper Cherry Creek CLF population is just outside the anticipated three-mile dispersal distance to these three allotments and aggressive, ongoing CLF surveys within the adjacent Red Creek Allotment are anticipated to detect any downstream dispersal of CLF toward the Bar X/Haigler Creek/Young allotment.

*Haystack Butte and Sedow allotments*

- There is some potential for CLF habitat to exist within appropriate elevations on these two grazing allotments, however the frog has not been recorded within these areas or on the greater Globe Ranger District.
- The TNF reported a 2001 CLF observation on non-Forest Service land near the Chrysotile Allotment. This detection is greater than three miles overland to the Sedow and Haystack Butte allotments, which is outside of the anticipated range for CLF dispersal.
- The Salt River comprises the boundary that separates these allotments and adjacent non-Forest Service lands where CLF could occur. The Salt River Canyon acts as a physical barrier to potential CLF dispersal from non-Forest Service lands.
- Ongoing CLF survey efforts on the Chrysotile Allotment, east of the Haystack Butte and Sedow allotments, will provide advance notification of any dispersal of frogs within accepted dispersal distance.

**Mexican Spotted Owl and Critical Habitat**

The proposed actions meet the "May Affect, Not Likely to Adversely Affect" criteria 1 through 3, for MSO listed in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).

All MSO Protected Activity Centers (PAC) are considered "critical areas." Critical areas will be monitored throughout the season or year, and livestock use will be adjusted if conservative-use levels are exceeded. Monitoring of these areas will be conducted during the grazing season to ensure sufficient residual vegetation and streambank integrity (where appropriate) are maintained to mitigate flood disturbance throughout the year. Monitoring will be conducted along key stream reaches within the riparian area, which is expected to be selected with an interdisciplinary team (i.e. riparian ecologist, biologist, hydrologist, range staff, grazing permittee). Therefore, they will be monitored to ensure conservative-use is not exceeded and prey cover is maintained.

The Forest will implement conservative-use standards within MSO PACs. Conservative-use, as defined by the TNF, will be achieved by maintaining forage utilization on key forage species between 30 and 40% or less of annual forage production for herbaceous perennials and 50% of woody browse. As a result of maintaining the conservative-use standard and monitoring of PACs due to their designation as critical areas, we anticipate that PACs will be managed for levels that provide the woody and herbaceous vegetation necessary for cover for rodent prey species, the residual biomass that will support prescribed natural and ignited fires that would reduce the risk of high-severity, landscape wildfire in the Forest, and regeneration of riparian

trees. Therefore, we anticipate any potential indirect effects associated with livestock grazing on MSO habitat and prey species, will be insignificant.

MSO behavior (foraging, roosting, etc.) could be disrupted through livestock grazing management activities, such as herding, fence-building, etc., that occur outside the breeding season (in PACs) or during the breeding season (outside of PACs). The occurrence of these impacts to MSO is anticipated to be rare because human activity will be occurring in locations not commonly frequented by owls, when owls are not breeding, and during the day when owls are not typically active. As a result, we anticipate the effect of these grazing management/MSO interactions outside of the breeding season (in PACs) or during the breeding season (outside of PACs) to be insignificant.

There are six primary constituent elements for MSO critical habitat that are related to an area's ability to maintain adequate forest structure as well as an area's ability to maintain adequate prey species (USFWS 2004). The elements specific to forest structure include 1) a range in tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30 to 45 % of which are greater than 12 inches diameter at breast height (dbh); 2) a shade canopy created by the tree branches covering 40 % or more of the ground; and 3) large dead trees (snags) greater than 12 inches dbh. The elements specific to maintenance of prey species include 1) high volumes of fallen trees and woody debris; 2) a wide range of tree and plant species, including hardwoods; and 3) adequate levels of residual plant cover to maintain fruits, seeds, and allow plant regeneration.

We concur with your determination that the proposed action may affect, but is not likely to adversely affect the MSO and its designated critical habitat for the following allotments as discussed below.

*Bar T Bar, Diamond, H4 Allotment, Seven K, Sunflower, and Tonto Basin allotments (Mazatzal Mountain Range)*

- On the Bar T Bar Allotment, none of the four PACs (Pigeon Springs, Deer Creek, Maple Draw, and Y Bar Basin) will be used by livestock during the breeding season (March 1 – August 31). On the Seven K Allotment, the Buck Basin PAC will not be grazed during the breeding season. Similarly, on the Diamond, H4, and Tonto Basin allotments, the Mount Ord PAC (shared by all three allotments) will not be grazed during the breeding season. As a result, no grazing, human disturbance, or construction actions associated with grazing are anticipated to result in any direct impacts to breeding MSO. You concluded no effect to MSO on the Sunflower Allotment.
- Within the Mazatzal Mountain range there is MSO critical habitat designated for the Bar T Bar (20,046 acres), Diamond (12,823 acres), Sunflower (approximately 9,000 acres), H4 (7,136 acres), Seven K (5,585 acres), and Tonto Basin (9,522 acres) allotments with little to no restricted habitat.

Livestock grazing will not affect characteristics of the existing canopy, fallen trees or debris, or large diameter trees. Due to the conservative-use standard of 30 to 40 % and associated monitoring of habitat conditions in PACs (due to their classification as critical areas), it is not likely that the proposed action will result in an adverse effect to the regenerative capability of the tree species or adversely affect the residual plant cover for prey.

*Bar X/Haigler Creek/Young, Hardscrabble, and OW allotments (Mogollon Rim)*

- On the Bar X/Haigler Creek/Young Allotment, there are seven PACs (Colcord, Turkey Peak NE, Turkey Peak NW, Turkey Peak SW, Lost Salt, Parallel Canyon, and Chamberlain) and in the nearby area just outside an allotment there is another PAC (Colcord Canyon). The Turkey Peak NE, Turkey Peak NW, Turkey Peak SW, Colcord, Chamberlain, and Lost Salt PACs are in pastures that are not proposed for grazing. A portion of the Parallel Canyon PAC falls within the Bar X/Haigler Creek/Young Allotment that will be used by livestock, but not during the breeding season (March 1 – August 31). You concluded no effect to MSO on the Hardscrabble Allotment. On the OW Allotment, all six PACs (Bear Springs, Reservation, Valentine-Lower, Rose, Canyon-Lower, and Lion) were severely impacted by the Rodeo Chediski fire in 2002. All PACs were informally monitored in 2003 and 2004, with owls found in association with only the Reservation PAC. The TNF reports that grasses and forbs have responded well to the fire on the OW and should increase prey base available to MSO, but mature forested habitat due to the fire may limit MSO presence and/or success. All PACs on the OW Allotment are located on steeper slopes where livestock grazing is excluded or very limited. As a result of either not grazing PACs or preventing grazing in PACs during the breeding season, we anticipate there will not be any direct effects from grazing, human disturbance, or construction actions to breeding MSO.
- Within the Mogollon Mountain range there is MSO critical habitat designated for the Bar X/Haigler Creek/Young (Bar X/7,237 acres, Haigler/6,895 acres, Young/ 2,457 acres, total 16,579 acres), Hardscrabble (527 acres), and OW (4,205 acres) allotments. On the OW Allotment, much of Canyon Creek is fenced to exclude grazing by cattle and elk, which should promote cover for owl prey.

Livestock grazing will not affect characteristics of the existing canopy, fallen trees or debris, or large-diameter trees. Due to the conservative-use standard of 30 to 40 % and associated monitoring of habitat conditions in PACs (due to their classification as critical areas), it is not likely that the proposed action will result in an adverse effect to the regenerative capability of the tree species or adversely affect the residual plant cover for prey.

*Coolidge Parker, Capitan, Jones, Lyons Fork, and Ranger Station allotments (Pinal Mountain Range)*

- On the Coolidge Parker Allotment, there are two PACs (Ferndell Spring and Pioneer Pass). On the Capitan Allotment, a portion of the Pioneer Pass PAC exists within the allotment boundaries. The Jones Allotment contains two PACs: Madera Peak North and Frio Spring. The Lyons Fork Allotment contains the Sulfide del Rey and Mill Creek PACs and the Ranger Station Allotment contains the Icehouse Canyon PAC. No grazing-related management activities (herding, fence-building, etc.) will occur in any of these PACs during the MSO breeding season. As a result, none of these types of management actions are anticipated to affect breeding MSOs.
- Some grazing is anticipated to occur during the breeding season in MSO PACs within the Pinal Mountain Range: the Coolidge-Parker allotment is specifically described as an allotment where grazing could occur.

The Forest will implement conservative-use standards within MSO PACs. Conservative-use, as defined by the TNF, will be achieved by maintaining forage utilization on key forage species between 30 and 40% or less of annual forage production for herbaceous perennials and 50% of woody browse.

- Monitoring of "critical areas" within PACs is anticipated to occur during the MSO breeding season (where PACs are grazed during the breeding season). The Biological Assessment describes that MSO PAC critical areas will be monitored throughout the season or year, and use will be adjusted if conservative-use levels are exceeded. While no duration is provided, we anticipate the associated road-use, hiking, or other means necessary to determine whether conservative-use levels are exceeded will be low-impact trips with minimal disturbance by a few individuals. These activities are anticipated to be short duration and not comprise more than a total of approximately seven days throughout the breeding season per PAC. We also anticipate that monitoring will occur during the daylight hours when MSOs are not actively foraging. As a result of this low-impact, short-duration activity, we anticipate any potential disturbance to roosting, foraging, or nesting MSOs within PACs during the breeding season will be insignificant.
- Within the Pinal Mountain Range, there is MSO critical habitat designated on the Coolidge Parker (9,534 acres), Capitan (6,666 acres), Jones (11,500 acres), Lyons Fork (14,355 acres), and Ranger Station (5,679 acres) allotments.

Livestock grazing will not affect characteristics of the existing canopy, fallen trees or debris, or large-diameter trees. Due to the conservative-use standard of 30 to 40 % and associated monitoring of habitat conditions in PACs (due to their classification as critical areas), it is not likely that the proposed action will result in an adverse effect to the regenerative capability of the tree species or adversely affect the residual plant cover for prey.

*Armer Mountain, Center Mountain, Poison Springs/Sierra Ancha, Tonto Basin Allotment (Sierra Ancha Mountains)*

- All of the Bearhead Canyon PAC and parts of the Mount Ord and Copper Mountain PAC lie within the Tonto Basin Allotment. The Center Mountain Allotment contains five PACs (Center Mountain, Devil's Chasm, Cold Water Canyon, Pueblo Canyon, and Cold Springs). The Sierra Ancha Allotment contains the all of the Coon Creek PAC and portions of the Devil's Chasm, Cold Springs Canyon, Pueblo Canyon, Reynolds Creek, Center Mountain, and Cienega Springs PACs. No PACs are designated within the Armer Mountain or Poison Springs allotments. In all allotments, grazing is either excluded during the breeding season (Sierra Ancha and Tonto Basin allotments), slope and/or lack of water limit livestock accessibility to PACs (Center Mountain Allotment), or no PACs exist within the allotment boundaries (Armer Mountain and Poison Springs allotments). No grazing-related management activities (herding, fence-building, etc.) will occur in any of these PACs during the MSO breeding season. We anticipate there will not be any direct effects from grazing, human disturbance, or construction actions to breeding MSO.
- MSO behavior (foraging, roosting, etc.) could be disrupted through livestock grazing management activities, such as herding, fence building, etc, that occurs outside of the breeding season (in PACs) or during the breeding season (outside of PACs). The occurrence of these impacts to MSO is anticipated to be rare because human activity will be occurring in locations not commonly frequented by owls, when owls are not breeding, and during the day when owls are not typically active. As a result, we anticipate the effect of these grazing management/MSO interactions outside of the breeding season (in PACs) or during the breeding season (outside of PACs) to be insignificant.
- The Forest will implement conservative-use standards within MSO PACs. Conservative-use, as defined by the TNF, will be achieved by maintaining forage utilization on key forage species between 30 and 40% or less of annual forage production for herbaceous perennials and 50% of woody browse.
- Within the Sierra Ancha Mountain range there is MSO critical habitat designated for the Armer Mountain (19,285 acres), Center Mountain (9,015 acres), Sierra Ancha (13,332 acres), and Tonto Basin (19,292 acres) allotments.

Livestock grazing will not affect characteristics of the existing canopy, fallen trees or debris, or large-diameter trees. Due to the conservative-use standard of 30 to 40 % and associated monitoring of habitat conditions in PACs (due to their classification as critical areas), it is not likely that the proposed action will result in an adverse effect to the regenerative capability of the tree species or adversely affect the residual plant cover for prey.

### **Razorback Sucker and Critical Habitat**

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the razorback sucker and its designated critical habitat. We base this concurrence on the following:

#### *Haystack Butte, Poison Springs/Sierra Ancha, and Sedow allotments*

Razorback suckers were stocked into the Salt River in the 1980s and early 1990s, but stocking ceased in 1993. The effort was largely considered a failure due to predation by nonnative fish, primarily flathead catfish. It is unlikely that the species currently occurs in the action area of the proposed project based on the abundance of nonnative fish, termination of razorback sucker stocking, and the lack of any confirmed records during subsequent surveys. However, fish sampling has its limitations, so there may be some individual fish persisting in the Salt River.

- The proposed actions meet the “May Affect, Not Likely to Adversely Affect” criteria for razorback sucker in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).
- There is no proposed grazing within the Salt River and surrounding riparian area on all four allotments because livestock are excluded from the river by fences or by natural barriers. As a result of the lack of grazing activities in the river and riparian area and the small possibility that razorback suckers persist, we do not anticipate any direct or indirect effects to razorback suckers from the proposed action.
- Due to the lack of grazing within the Salt River floodplain and the natural history of razorback sucker adaptation to turbid water, it is not anticipated that upland grazing impacts that can occur will adversely affect razorback sucker or its critical habitat in a measurable manner.

### **Gila Chub and Critical Habitat**

We concur with your determination that the proposed action may affect, but is not likely to adversely affect the Gila chub and its designated critical habitat. We base this concurrence on the following:

#### *Lyons Fork Allotment*

- The proposed actions meet the “May Affect, Not Likely to Adversely Affect” criteria for Gila chub in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).

- On the Lyons Fork Allotment, Mineral Creek currently provides potential habitat for the Gila chub. This short section of stream found on the TNF does not have perennial water. Further downstream off of Forest Service land, perennial water exists. Gila chub were documented in areas downstream of the TNF in 2000 but now may be rare or absent in those locations. No Gila chub are known to exist farther upstream from the designated critical habitat. As a result, because of the lack of perennial water on the allotment and rarity or absence of Gila chub in the stream, we anticipate the proposed action will not directly or indirectly affect Gila chub.
- Within the Lyons Fork Allotment on the TNF, there is approximately a three-mile long segment of Gila chub critical habitat along Mineral Creek. The critical habitat segment continues downstream off National Forest boundaries for approximately another six miles.

There are seven primary constituent elements for Gila chub critical habitat that are important to sustain essential life history functions (USFWS 2005). These primary constituent elements are described in detail in the final rule (USFWS 2005) and generally consist of: 1) perennial pools, 2) appropriate water temperature, 3) uncontaminated water quality, 4) vertebrate and invertebrate prey base, 5) in-stream and streamside habitat (downed logs, root wads, large rocks, undercut banks, healthy riparian vegetation, etc.), 6) absence of detrimental aquatic nonnative species, and 7) a natural hydrologic stream regime.

The loss of perennial stream flow through the section of critical habitat on the Forest impacts the quality or existence of other primary constituent elements. For example, without perennial water there are no persistent pools, appropriate water temperature/quality, or consistent prey base. The lack of perennial water also impacts the quality and abundance of streamside herbaceous vegetation and woody riparian habitat. Similarly, the lack of water and streamside habitat may result in dispersal of livestock.

We anticipate that due to the degraded condition of this segment of critical habitat as a result of the lack of water, the conservative-use standards on upland ranges and herbaceous and woody riparian plants, will prevent the proposed action from adversely affecting designated critical habitat.

### **Gila Topminnow**

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the Gila topminnow. We base this concurrence on the following:

#### *Del Shay and Tonto Basin allotments*

The Kayler Spring population of Gila topminnow is located adjacent to the boundaries of the Del Shay and Tonto Basin allotments, but the area is fenced to exclude livestock.

- The proposed actions meet the “May Affect, Not Likely to Adversely Affect” criteria for Gila topminnow in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).
- Due to year-round exclusion of livestock from Kayler Spring and inspection and repair of fencing surrounding the spring prior to entry of livestock to either the Windmill Pasture (Del Shay Allotment) or Kayler Pasture (Tonto Basin Allotment), we do not anticipate any direct effects to Gila topminnow from the proposed action.
- Implementation of the conservative-use standard should not result in indirect watershed effects that can be detected to adversely affect Gila topminnow in a measurable manner.

#### **Southwestern Willow Flycatcher and Critical Habitat**

The proposed actions meet the “May Affect, Not Likely to Adversely Affect” criteria for southwestern willow flycatcher established in the March 31, 2004, Framework for Streamlining Informal Consultation for Livestock Grazing Activities (USFS 2005).

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the southwestern willow flycatcher and its designated critical habitat. We base this concurrence on the following:

*Bar X/Haigler Creek/Young, Center Mountain, Crouch Mesa, Potato Butte, OW, and Vosburg allotments*

- There is no known occupied southwestern willow flycatcher breeding habitat, or suitable/potential flycatcher breeding habitat on these allotments. As a result, we do not anticipate any direct impacts to breeding southwestern willow flycatchers from livestock, livestock management, or herbivory of riparian vegetation on these allotments.
- There is riparian habitat on these allotments that may be suitable for shelter and foraging during migration by southwestern willow flycatchers. The proposed standard of conservative-use, in addition to non-use of riparian habitat through fencing, rest, and/or natural barriers is anticipated to maintain and/or improve the broad quality of habitat needed by migratory flycatchers. As a result, we do not anticipate that the proposed action will directly impact migratory flycatchers on these allotments.
- The closest nesting pair of flycatchers to these allotments is found at Roosevelt Lake, approximately 12 miles away. As a result of the long distance between livestock grazing and flycatcher nesting areas, we do not anticipate that adverse effects to breeding flycatchers could reasonably be attributed to any potential increase in cowbird populations from the proposed grazing activities. Therefore, we do not anticipate that

the presence of livestock on these allotments will indirectly affect any flycatchers through increases in cowbird parasitism.

- All known allotments are part of the Salt River watershed near Roosevelt Lake, and nesting flycatchers are approximately 12 miles away within the exposed conservation space of Roosevelt Lake. Within the conservation space, flycatcher habitat is spread out across the broad area of the lake. As a result, the impact of watershed effects due to upland grazing are minimized as a result of the storage of water. Additionally, the TNF has restricted grazing along the Salt River, which likely offsets some potential impact from effects of upland grazing. Therefore, any contribution to adverse watershed effects to flycatcher and its habitat as a result of upland grazing on these allotments is undetectable.

*Poison Springs/Sierra Ancha, Armer Mountain, and Schoolhouse allotments*

- There are portions of these allotments that border Roosevelt Lake and the Salt River inflow to Roosevelt Lake where occupied southwestern willow flycatcher breeding habitat, and suitable/potential flycatcher breeding habitat exists. The presence of breeding habitat within these allotments can be influenced by the fluctuating levels of Roosevelt Lake. Under this proposed action, livestock will not be allowed to graze in potential, suitable or occupied habitat on any of these allotments. Livestock will not have access to the Salt River, nor will they have access to the bed of Roosevelt Lake as lake levels recede. As a result, we do not anticipate any direct impacts to breeding, migrating, or dispersing southwestern willow flycatchers from livestock, livestock management, or herbivory of riparian vegetation within the Salt River or Roosevelt Lake portions of these allotments.
- To prevent adverse effects to nesting flycatchers from livestock grazing due to increasing natural populations of cowbirds and subsequent parasitism, livestock are proposed to stay two miles away from flycatcher nesting habitat during the breeding season. Previous monitoring of flycatcher productivity and parasitism rates along with livestock grazing (with and without cowbird trapping) at Roosevelt Lake (since 1997) has measured parasitism rates of less than four % annually (with the exception of 2002). In 2002, parasitism was the highest (37%) recorded, and was largely believed to be the result of extreme drought. Reductions in productivity were observed rangewide.

For at least the past three seasons, livestock have been placed at least two miles from flycatcher nesting habitat during the breeding season, and parasitism has been only two, three, and four % annually. Cowbirds are a natural part of the landscape, plus there are other non-federal sources of cowbird attractants in the area (housing, agriculture, etc.). As a result, we expect some parasitism to occur. Because the occurrence of parasitism is so low, we cannot reasonably attribute the occurrence of existing levels of parasitism to the presence and proximity of livestock. As a result, we anticipate that continuing to

maintain the two-mile distance away from flycatcher nesting habitat during the breeding season will result in similar parasitism rates as those recorded over the last three years. Therefore, with respect to the influence of livestock and cowbird parasitism rates of flycatchers on these allotments, the effect of the proposed action is expected to be insignificant.

- The impact of watershed effects to flycatcher's and their habitat within the Roosevelt Lake conservation space due to upland grazing is expected to be minimized as a result of the storage of water. Additionally, the TNF has restricted grazing within the exposed conservation space of Roosevelt Lake, which likely offsets some potential impact from effects of upland grazing. Therefore, any contribution to adverse watershed effects to flycatcher and its habitat as a result of upland grazing on these allotments is undetectable.

#### *Devils Canyon and Hardscrabble allotments*

- There is no known occupied southwestern willow flycatcher breeding habitat, or suitable/potential flycatcher breeding habitat on these allotments. As a result, we do not anticipate any direct impacts to breeding southwestern willow flycatchers from livestock, livestock management, or herbivory of riparian vegetation on these allotments.
- There is riparian habitat on these allotments that may be suitable for shelter and foraging during migration by southwestern willow flycatchers. The proposed standard of conservative-use grazing in addition to non-use of riparian habitat through fencing, rest, and/or natural barriers is anticipated to maintain and/or improve the broad quality of habitat expected to be needed by migratory flycatchers. As a result, we do not anticipate that the proposed action will directly impact migratory flycatchers on these allotments.
- Both of these allotments are located far distances (over 15 air miles) from the nearest known nesting pair of flycatchers (Devil's Canyon/Gila River, Hardscrabble/Horseshoe Lake). As a result of the far distance between grazing and flycatcher nesting areas, we do not anticipate that adverse effects to breeding flycatchers could reasonably be attributed to any potential increase in cowbird populations from the proposed grazing activity. Therefore, we do not anticipate the presence of livestock on these allotments will indirectly affect any flycatchers through increases in cowbird parasitism.
- The Hardscrabble Allotment is part of the East Verde River watershed and Devil's Canyon part of the Pinto Creek watershed. No flycatchers are known to nest on either stream. These streams flow into streams/lakes where flycatchers are known to nest (Roosevelt Lake/Verde River-Horseshoe Lake). Within the Roosevelt and Horseshoe Lake conservation space, flycatcher habitat is spread out across the broad area of these lakes. As a result, the impact of watershed effects due to upland grazing are minimized as a result of the storage of water. Additionally, the TNF has restricted grazing within

the Salt River/Roosevelt Lake and the Verde River/Horseshoe Lake, which likely offsets some potential impact from effects of upland grazing. Therefore, any contribution to adverse watershed effects to flycatcher and its habitat as a result of upland grazing on these allotments is undetectable.

*Sedow and Haystack Butte allotments*

- There is no known occupied southwestern willow flycatcher breeding habitat, or suitable/potential flycatcher breeding habitat on these allotments. Additionally, the Salt River corridor is excluded from grazing either by fencing or by topography. As a result, we do not anticipate any direct impacts to breeding southwestern willow flycatchers from livestock, livestock management, or herbivory of riparian vegetation on these allotments.
- There is riparian habitat on these allotments that may be suitable for shelter and foraging during migration by southwestern willow flycatchers. The proposed exclusion of grazing along the Salt River and the standard of conservative-use grazing in addition to non-use of riparian habitat through fencing, rest, and/or natural barriers on tributaries is anticipated to maintain and/or improve the broad quality of habitat expected to be needed by migratory flycatchers. As a result, we do not anticipate the proposed action will directly impact migratory flycatchers on these allotments.
- The closest nesting pair of flycatchers to these allotments is approximately 10 air miles away at Roosevelt Lake. Suitable and potential unsurveyed flycatcher breeding habitat is present on the adjacent Chrysotile Allotment at Gleason Flat. Because of the long distance to Roosevelt Lake, we do not anticipate that adverse effects to breeding flycatchers could reasonably be attributed to any potential increase in cowbird populations from the proposed grazing activity. Grazing on the Haystack Butte and Sedow allotments is about two miles away from the unsurveyed riparian habitat on the Chrysotile Allotment. Therefore, due to the two-mile distance, we do not believe adverse effects to undetected nesting flycatchers can be reasonably attributed to any potential increase in cowbird populations from the proposed action. Therefore, we do not anticipate that the presence of livestock on these allotments will indirectly affect any flycatchers through increases in cowbird parasitism.
- The closest known flycatcher breeding territory is approximately 20 to 30 river miles downstream within the exposed conservation space of Roosevelt Lake. The impact of watershed effects due to upland grazing is minimized as a result of the storage of water. Additionally, the TNF has restricted grazing along the Salt River, which likely offsets some potential impact from effects of upland grazing. Therefore, any contribution to adverse watershed effects to the flycatcher and its habitat as a result of upland grazing on these allotments is expected to be undetectable.

*Poison Springs/ Sierra Ancha allotments (southwestern willow flycatcher critical habitat)*

- There are portions of these allotments at the Salt River inflow to Roosevelt Lake where southwestern willow flycatcher critical habitat is designated. Under this proposed action, livestock will not be allowed to graze in designated critical habitat on these allotments. As a result, we do not anticipate any direct impacts to southwestern willow flycatcher critical habitat from livestock, livestock management, or herbivory of riparian vegetation on these allotments.
- Both of these allotments are part of the Salt River and Roosevelt Lake watershed. They surround the downstream end of approximately the last two miles of designated critical habitat on the Salt River (outside of the perimeter of Roosevelt Lake). We do not believe there will be significant adverse effects to the habitat-based primary constituent elements of flycatcher critical habitat because of the small portion of critical habitat affected by these allotments and elimination of grazing within the Salt River riparian area.

**Literature Cited**

- Smith, L., G. Ruyle, J. Maynard, S. Barker, W. Meyer, D. Stewart, B. Coulloudon, S. Williams, J. Dyess. 2005. Principles of obtaining and interpreting utilization data on Southwest rangelands. University of Arizona Cooperative Extension. Tucson, AZ. 11 pp.
- USFS. 2005. Framework for streamlining informal consultation for livestock grazing activities. Southwestern Region of the FS. 108 pp.
- USFWS. 2004. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl; Final Rule. Federal Register 69(168):53182-53297. August 31, 2004.
- USFWS. 2005. Endangered and Threatened Wildlife and Plants: Listing Gila Chub as Endangered with Critical Habitat. *Federal Register*, Vol. 70: 66664-66721.

**Appendix B – Determination of Effects by Allotment**

**Determinations of Effect Summary by Allotment by Species<sup>12</sup>**

Allotment	BAKA	MSO	MSO CH	GLF	SWWF	SWWF CH	ILNE	GIM	GCH	GCH CH	SD	IM	RBS	RBS CH	ASHG
Armer Mountain	NE	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Bar T Bar	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Bar X/ Haigler Creek/ Young	NE	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Capitan	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA
Center Mountain	NLAA	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Coolidge Parker	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA
Crouch Mesa	NE	NE	N/A	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Del Shay	NLAA	NE	N/A	NE	NLAA	NLAA	NE	NLAA	NE	N/A	NE	NE	NE	N/A	NE
Devils Canyon	NE	NE	N/A	NE	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA
Diamond	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
H4	NE	NLAA	NLAA	NE	NLAA	NLAA	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Hardscrabble	NE	NE	NLAA	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Hardt Creek	NLAA	NE	N/A	NE	NLAA	NLAA	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Haystack Butte	NLAA	NE	N/A	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NLAA	NLAA	NE
Jones	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Lyons Fork	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE	N/A	NLAA
OW	NLAA	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Poison Springs/ Sierra Ancha	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NE	NE	NE	N/A	NE	NE	NLAA	NLAA	NE
Potato Butte	NE	NE	N/A	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Radium	NE	NE	N/A	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA
Ranger Station	NE	NLAA	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA
Schoolhouse	NE	NE	N/A	NE	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Sedow	NLAA	NE	N/A	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NLAA	NLAA	NLAA
Seven K	NLAA	NLAA	NLAA	NE	NLAA	NLAA	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Sunflower	NE	NE	NLAA	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Superior	NE	NE	N/A	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA

Alphabet	BAA	MSO	MSO CH	CLF	SWWF	SWWF CH	LLNB	GTM	GCH	GCH CH	SD	LM	RBS	RBS CH	AHHC
Tonto Basin	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NE	NLAA	NE	N/A	NE	NE	NE	N/A	NE
Vosburg	NE	NE	N/A	NLAA	NLAA	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Walnut	NLAA	NE	N/A	NE	NLAA	NLAA	NE	NE	NE	N/A	NE	NE	NE	N/A	NE
Winters	NE	NE	N/A	NE	NE	NE	NE	NE	NE	N/A	NE	NE	NE	N/A	NLAA

<sup>1</sup>MSO – Mexican spotted owl; MSO CH – Mexican spotted owl Critical Habitat; SWWF – southwestern willow flycatcher; CLF – Chiricahua leopard frog; AHHC – Arizona hedgehog cactus; GTM – Gila topminnow; GCH – Gila chub; GC C.H. – Gila chub critical habitat; SD – spikedace; LM – loachminnow; LLNB – lesser long-nosed bat; RBS – razorback sucker; RBS C.H. – razorback sucker critical habitat.

<sup>2</sup>NLAA – May Affect, Not Likely to Adversely Affect; NE – No Effect; N/A – Not Applicable.

## APPENDIX C – Technical Assistance

This appendix contains strategies proposed by the TNF to reduce the likelihood of take of bald eagles resulting from implementation of the proposed grazing project on the Center Mountain, Del Shay, Hardt Creek, Haystack Butte, OW, Poison Springs/Sierra Ancha, Sedow, Seven K, Tonto Basin, and Walnut allotments.

The final rule to remove the bald eagle from the Federal List of Threatened and Endangered Species was published in the Federal Register on July 9, 2007, and took effect on August 8, 2007. However, the bald and golden eagle continue to be protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The Eagle Act prohibits anyone, without a permit issued by the Secretary of the Interior, from taking eagles, including their parts, nests, or eggs. "Take" is defined under the Eagle Act as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" eagles. "Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior."

The Forest Service developed the following conservation measures to minimize impacts to bald eagles in the project area associated with the Canyon, Redmond, Pinto, Pinal, 76, Sheep, and Tonto bald eagle breeding areas. We agree that if these measures are implemented, the potential for take to occur to bald and golden eagles in the project area is reduced.

### Bald Eagle

- The Salt River, Canyon Creek, and Tonto Creek are streams associated with primary bald eagle nesting and foraging areas will not be grazed by livestock on the Center Mountain, Del Shay, Hardt Creek, Haystack Butte, OW, Poison Springs/Sierra Ancha, Sedow, Seven K, Tonto Basin, and Walnut allotments.
- Grazing management activities (herding, fence-building, etc.) will not occur within 0.25 miles of bald eagle nest areas during the breeding season (January through June).

The Forest will implement conservative-use standards within upland ranges and tributary riparian areas surrounding bald eagle breeding areas. Conservative-use is designed to maintain forage utilization on key forage species between 30 and 40% or less of annual forage production for herbaceous perennials and 50% of woody browse.