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In Reply Refer To:
AESO/SE
22410-2007-F-0075

February 6, 2007

Mr. Lee Thornhill
District Ranger
Globe Ranger District
Tonto National Forest
7680 South Six Shooter Canyon Road
Globe, Arizona 85501

File Code: 2670-3 (Chrysotile Allotment)

Dear Mr. Thornhill:

Thank you for your request for formal consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated January 23, 2007, and received by us on January 25, 2007. At issue are impacts that may result from the proposed grazing on the Chrysotile Allotment located in Globe Ranger District of the Tonto National Forest (Tonto) in Gila County, Arizona. The Tonto concluded that the proposed action is likely to adversely affect the Chiricahua leopard frog (*Rana chiricahuensis*) (CLF).

In previous correspondence dated October 10, 2006, you requested our concurrence that the proposed action was not likely to adversely affect the Mexican spotted owl (*Strix lucida occidentalis*) (MSO), the bald eagle (*Haliaeetus leucocephalus*), and the razorback sucker (*Xyruchen texanus*) and its critical habitat. In our correspondence of November 28, 2006, we concurred with your effects determination for the razorback sucker and its critical habitat, but requested further clarification with respect to the other two species. After subsequent discussion between members of our staffs, it was decided to amend the proposed action by 1) lengthening the duration of the action (instead of concluding on February 28, the project will conclude on June 1, 2007); and 2) the geographic scope of the grazing proposal is limited to the Carol Pasture only. These amendments to the proposed action have changed the Tonto's previous effect determinations for the razorback sucker, bald eagle, and MSO referenced above to "no effect". Therefore, this biological opinion will only address potential effects to the CLF.

This biological opinion is based on information provided in the October 10, 2006, biological assessment and evaluation, written correspondence between our agencies, telephone conversations of January 18 and 22, 2007, between yourself and Craig Woods of your staff and Debra Bills and Jeff Servoss of my staff, and other sources of information. Literature cited in

this biological opinion is not a complete bibliography of all literature available on the species of concern, livestock grazing and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

- October 12, 2006: We received the Tonto's Biological Assessment and Evaluation for Fall/Winter Grazing on the Chrysotile Allotment.
- November 02 – 21, 2006: Various e-mail correspondence exchanged between our staff and those of the Tonto and Arizona Game and Fish Department to gather additional information on project details and species status.
- November 28, 2006: Written correspondence sent to Tonto providing our concurrence with a "may affect, not likely to adversely affect" determination for the razorback sucker and requesting additional information pertaining to project details and effects analysis.
- December 18, 2006: Written correspondence from the Tonto received by our office requesting further analysis of project effects.
- January 18, 2007: Telephone conversation between representatives of the Tonto and my staff about project details, effect determinations, and grazing framework guidance. Tentative concurrence was discussed for MSO and bald eagle. Formal consultation was recommended by my staff for adverse effects to the CLF.
- January 22, 2007: Telephone conversation between representatives of the Tonto and my staff confirming plans to initiate formal consultation on adverse effects to the CLF.
- January 23, 2007: Written correspondence received from the Tonto formally requesting initiation of section 7 consultation.
- January 31, 2007: E-mail received from Craig Woods, Globe District Biologist, requesting an amendment to the proposed action to include lengthening the duration of the action from concluding on February 28 to concluding on June 1, 2007, and restricting all grazing to the Carol Pasture. No other changes to the proposed action were requested.
- February 2, 2007: Draft biological opinion transmitted to Tonto for review.
- February 5, 2007: Verbal comments received from Steve Lohr, Forest Biologist, on draft biological opinion. Request made to finalize biological opinion with comments accepted.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

This project permits a maximum number of 227 adult cattle and their associated yearlings to graze the Carol Pasture on the Chrysotile Allotment from February 1 through June 1, 2007. No stock-tank-maintenance activities are proposed in this project.

The 54,743 acre Chrysotile Allotment primarily occurs in Management Area 2F but includes very small portions of 2B and 2C of the Tonto (USDA 1985, as amended). The allotment occurs in the northeast part of the Globe Ranger District and is bounded on the east by the San Carlos Apache Reservation and on the north by the Salt River. The Carol Pasture is 7,035 acres in size and lies in the southeastern portion of the allotment. The Carol Pasture is bordered on the north and west by the Timber Pasture, on the south by the Poverty Pasture, and on the east by the San Carlos Apache Reservation. We consider the action area, for the purposes of this section 7 consultation, to include Carol Pasture as well as any higher-order perennial and/or intermittent streams that drain the pasture for 0.5 mile downstream of its boundary to account for the effects of potential increased sedimentation resulting from the proposed action. Generally, in section 7 consultation on grazing projects, we consider indirect effects of sedimentation in streams to extend to greater distances from the project's footprint. However, due to the relatively short duration of this project and its limited geographic scope, we used the shorter estimate of 0.5 mile.

STATUS OF THE SPECIES

Chiricahua Leopard Frog

We listed the CLF as a threatened species without critical habitat on June 13, 2002 (USFWS 2002). We included a special rule to exempt operation and maintenance of livestock tanks on non-Federal lands from the section 9 take prohibitions of the Act. A draft recovery plan was completed in April 2006 (USFWS 2006) and is expected to be finalized early in 2007. This frog is distinguished from other members of the *Rana pipiens* complex by a combination of distinctive morphological and genetic characters, and a distinctive call (Platz and Mecham 1979, Davidson 1996, Stebbins 2003). Threats to CLF include predation by nonnative organisms, especially bullfrogs (*Rana catesbeiana*), fish (including fish in the family Centrarchidae, such as *Micropterus* spp. and *Lepomis* spp.), and crayfish (*Orconectes virilis* and possibly others); disease; drought; floods; degradation and loss of habitat as a result of water diversions and groundwater pumping, improper livestock management, altered fire regimes due to fire suppression and livestock grazing, mining, development, and other human activities; disruption of metapopulation dynamics; increased chance of extirpation or extinction resulting from small numbers of populations and individuals; and environmental contamination. CLF has disappeared from more than 75 percent of its historical localities (Clarkson and Rorabaugh 1989, Jennings 1995, Rosen *et al.* 1996, Sredl *et al.* 1997, Painter 2000, FWS files). Loss of CLF populations is part of a pattern of global amphibian decline, suggesting other regional or global causes of decline may be important as well (Carey *et al.* 2001).

The CLF is an inhabitant of cienegas, pools, livestock tanks, lakes, reservoirs, streams, and rivers at elevations of 3,281 to 8,890 feet in central and southeastern Arizona; west-central and southwestern New Mexico; and in Mexico, northern Sonora, and the Sierra Madre Occidental of Chihuahua (Platz and Mecham 1984, Degenhardt *et al.* 1996, Sredl *et al.* 1997, Sredl and Jennings 2005). In New Mexico, of sites occupied by CLFs from 1994-1999, 67 percent were creeks or rivers, 17 percent were springs or spring runs, and 12 percent were stock tanks (Painter 2000). In Arizona, slightly more than half of all known historical localities are natural lotic systems, a little less than half are stock tanks, and the remaining locations are lakes and reservoirs (Sredl *et al.* 1997). Sixty-three percent of populations extant in Arizona from 1993-1996 were found in stock tanks (Sredl and Saylor 1998).

Northern populations of the CLF along the Mogollon Rim and in the mountains of west-central New Mexico are disjunct from those in southeastern Arizona, southwestern New Mexico, and Mexico. Recent genetic analyses support describing the northern populations as a distinct species (Benedict and Quinn 1999, Platz and Grudzien 1999, Goldberg *et al.* 2004). Goldberg *et al.* (2004) present evidence that *R. subaquavocalis* (Ramsey Canyon leopard frog) and *R. chiricahuensis* may be conspecific.

The species is still extant in most major drainages in Arizona and adjacent areas of New Mexico where it occurred historically, with the exception of the Little Colorado River drainage in Arizona and possibly the Yaqui drainage in New Mexico (Painter 2000, Sredl *et al.* 1997, FWS files). However, it has not been found recently in many rivers, valleys, and mountain ranges, including the following in Arizona: White River, West Clear Creek, Tonto Creek, Verde River mainstem, San Francisco River, San Carlos River, upper San Pedro River mainstem, Santa Cruz River mainstem, Aravaipa Creek, Babocomari River mainstem, and Sonoita Creek mainstem. In southeastern Arizona, no recent records (1995 to the present) exist for the following mountain ranges or valleys: Pinaleno Mountains, Peloncillo Mountains, Sulphur Springs Valley, and Huachuca Mountains. Moreover, the species is now absent from all but one of the southeastern Arizona valley-bottom cienega complexes. In many of these regions, CLFs were not found for a decade or more despite repeated surveys. Recent surveys suggest that the species may have recently disappeared from some of the major drainages in New Mexico (R. Jennings pers. comm. 2004).

Disruption of metapopulation dynamics is likely an important factor in regional loss of populations (Sredl *et al.* 1997, Sredl and Howland 1994). CLF populations are often small and habitats are dynamic, resulting in a relatively low probability of long-term population persistence. Historically, populations were more numerous and closer together. If populations were lost due to drought, disease, or other causes, extirpated sites could be recolonized via immigration from nearby populations. As numbers of populations declined, populations became more isolated and were less likely to be recolonized if extirpation occurred. Also, most of the larger source populations along major rivers and in cienega complexes have disappeared.

The dispersal abilities of CLFs are key to determining the likelihood that suitable habitats will be colonized from a nearby extant population. Evidence exists to show substantial movements of leopard frogs and passive movement of tadpoles along stream courses. Current guidance supported by scientific literature suggests dispersal of CLF can be up to one mile overland, three

miles within intermittent drainages, and five miles within perennial drainages. Dispersal of this species is largely thought to occur during the summer monsoon.

Within the last decade, a chytridiomycete skin fungus (*Batrachochytrium dendrobatidis*) has been recognized as an important contributor to global declines of frogs, toads, and salamanders (Speare and Berger 2000, Longcore *et al.* 1999, Berger *et al.* 1998, Daszak 2000, Hale 2001). The chytrid fungus does not have an airborne spore, so it must spread via other means. Amphibians in the international pet trade (Europe and USA), outdoor pond supplies (USA), zoo trade (Europe and USA), laboratory supply houses (USA), and species recently introduced (*Bufo marinus* in Australia and bullfrog in the USA) have been found infected with chytrids, suggesting human-induced spread of the disease (Daszak 2000, Mazzoni *et al.* 2003). Free-ranging healthy bullfrogs with low-level chytridiomycosis infections have been found in southern Arizona (Bradley *et al.* 2002). Tiger salamanders and bullfrogs can carry the disease without exhibiting clinically significant or lethal infections. When these animals move, or are moved by people, among aquatic sites, chytridiomycosis may be carried with them (Collins *et al.* 2003). Other native or nonnative frogs may serve as disease vectors or reservoirs of infection, as well (Bradley *et al.* 2002). If chytrids were introduced to the Southwest via escaped or released African clawed frogs, then the disease may have spread across the landscape by human introductions or natural movements of secondarily-infected American bullfrogs, tiger salamanders, leopard frogs, or other anurans.

Chytrids could also be spread by people (and terrestrial animals) moving among various tanks and/or by personnel sampling aquatic habitats (Halliday 1998). The fungus can exist in water or mud and could be spread by wet or muddy boots, vehicles, cattle, and other animals moving among aquatic sites, or during scientific sampling of fish, amphibians, or other aquatic organisms.

Numerous studies indicate that declines and extirpations of CLFs are at least in part caused by predation and possibly competition by nonnative organisms, including fish in the family Centrarchidae, bullfrogs, tiger salamanders (*Ambystoma tigrinum mavortium*), crayfish, and several other species of fish (Fernandez and Rosen 1996; 1998; Rosen *et al.* 1994; 1996; Snyder *et al.* 1996; Fernandez and Bagnara 1995; Sredl and Howland 1994; Clarkson and Rorabaugh 1989).

Actions that result in changes to the water and structural quality and quantity of the leopard frog's habitats can result in negative impacts on the species. These actions include wildfire suppression, prescribed fire, wildland fire use, road management activities, recreational use, water extraction, and livestock grazing among other actions. Some of these actions in habitat and upslope may result in soil or ash depositing in occupied waters, decreasing the quantity or quality of water, and reducing riparian vegetation. The inflow of ash and sediment into a water body is capable of smothering eggs and tadpoles, resulting in a change in numbers of individuals. Sediment and ash flow can also inhibit respiration in macroinvertebrates, resulting in reduced density and composition of this primary food source for the CLFs. A reduction in the amount of prey can ultimately affect leopard frog numbers and reproduction. The lack of vegetation in and upslope of habitat may result in less dependable water quantity and other structural characteristics that CLFs may require. These indirect effects have the capability of affecting the

numbers and reproduction of the species and may result in a change in its distribution, if isolated populations are locally extirpated and recolonization from adjacent sites is not feasible.

The draft Recovery Plan for CLF (USFWS 2006) delineated eight recovery units in key areas that were targeted as valuable in the recovery of this species. The action area for this proposed action lies within Recovery Unit 5, which is delineated on the west by the Verde River southeast of Camp Verde, to the north along the interface between the forested mountains and the grasslands and pinyon-juniper woodlands of the Colorado Plateau, to the east where elevations rise into the White Mountains, and to the south where elevations drop below about 4,000 feet which corresponds to the presumed lower limit of the frog's distribution within the recovery unit. Five management units have been delineated within Recovery Unit 5. However, the action area for this project does not reside within any of these management units.

Within Recovery Unit 5, the CLF is currently known from three presumed metapopulations: 1) the Buckskin Hills area of the Coconino National Forest (Fossil Creek drainage); 2) the upper Ellison Creek drainage within the Payson Ranger District of the Tonto; and 3) the Cherry and Crouch creek area near Young within the Pleasant Valley Ranger District on the Tonto, which is also referred to as the Gentry Creek Conservation Management Zone (CMZ).

In the Buckskin Hills, CLF were observed at 15 different livestock tanks during the 1990s and early 2000s. However, invasion by non-native predators and drought reduced the number of occupied tanks dramatically by the end of 2002. In 2002, Chiricahua leopard frogs were salvaged from Walt's Tank as it was going dry and were transferred to the Arizona-Sonora Desert Museum for temporary holding. The tank was renovated and refilled, and the frogs were repatriated in 2003. Water was pumped to Sycamore Basin Tank to prevent it from drying and to conserve the frog population there. Five tanks in the area have been recently renovated, which is expected to provide additional habitat for the frogs. Currently only a small number of frogs occupy two tanks. In September 2005, four frogs were salvaged and taken to the Phoenix Zoo for captive breeding in the hope of creating a source of animals for reestablishment projects. Crayfish control via trapping was investigated in the Buckskin Hills by the Arizona Game and Fish Department (AGFD).

Little is known about the current status of CLF in the upper Ellison Creek drainage. In June 2006, multi-agency survey efforts yielded the observation of three adult CLF in small tributaries to Ellison Creek within the Moore and Ellison Creek pastures of the Little Green Valley Complex Allotment. These were the first observations of this species in this area since the last recorded observation which occurred in 1998 (USFWS 2004). Complex and abundant potential habitat in this area require significant survey effort to more accurately describe the status of this CLF metapopulation. Multi-agency plans for significant additional survey work are underway for the 2007 and 2008 field seasons.

As of 2005, four distinct, occupied subpopulations comprised the metapopulation of CLF within the Gentry Creek CMZ: 1) Bottle Spring; 2) Carroll Spring; 3) Crouch Creek; and 4) west Prong Gentry Creek. In 2005 and 2006, several habitat-improvement projects, which included sediment removal and fence reconstruction, were initiated in occupied sites or sites where CLF reintroductions were planned within the Gentry Creek CMZ. In 2006 and subsequent to those efforts, 25 tadpoles and metamorphs were released at both Bottle Spring and Carroll Spring to

augment the extant populations at those sites. Additionally, a total of 49 tadpoles and metamorphs were released at Crouch Creek to augment the extant population and that locality. Finally, two historical sites that were since extirpated of CLF, Ramer Tank and Pine Spring, were reintroduced with 662 and 400 tadpoles and metamorphs, respectively. In total, a net gain of two extant localities of CLF in the Gentry Creek CMZ resulted from this multi-agency conservation and recovery effort. Currently, the Gentry Creek CMZ is comprised of six extant, discrete CLF populations although the long term sustainability of the two reintroduced populations has yet to be verified.

Additional information about the CLF can be found in Painter (2000), Sredl *et al.* (1997), Jennings (1995), Degenhardt *et al.* (1996), Rosen *et al.* (1994, 1996), Sredl and Howland (1994), Platz and Mecham (1979, 1984), Sredl and Jennings (2005), and USFWS (2006).

Given the range of this species, several Federal actions affect this species every year. A complete list of all consultations affecting this species can be found on our website (<http://www.fws.gov/southwest/es/arizona/>) by clicking on the “Document Library” tab and then on the “Section 7 Biological Opinions” tab. Survey work and recovery projects also occur periodically, and are summarized in the appropriate land-management agency or AGFD documents as well as in the BAE associated with this project.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

The action area is located within the Central Highlands. The vegetation is variable, occurring mostly within the woodland zone but extending into the ponderosa pine zone at higher elevations and to the Sonoran Desert at lower elevations. The dominant vegetation types are pinyon-juniper woodlands, chaparral, and semi-arid grasslands. Small areas of riparian vegetation occur in drainages. Topographical features range from nearly level valley and elevated plains to very steep mountains and canyons. Based on Terrestrial Ecosystems (TES) gradient analysis the mean annual precipitation ranges from about 16 inches to 28 inches.

According to the draft report from the Tonto’s riparian specialist, 21.6 perennial stream miles and 25.25 intermittent stream miles exist within the Chrysotile Allotment, with 10.4 those stream miles having riparian vegetative cover exceeding 30 percent. Within the Carol Pasture and according to the riparian specialist report referenced above, 1.6 miles of intermittent streams with high riparian vegetation cover, 1.5 miles of intermittent stream with no or low riparian vegetation cover, and five spring sources have been identified. The riparian specialist report identified five stock tanks within the Carol Pasture; however, our review of the map of the Chrysotile Allotment indicated a total of seven stock tanks occur within the boundaries of this pasture.

For more detailed information pertaining vegetative communities, soil condition, etc. for the action area, please see the BAE on file at our office. This information is incorporated by reference in this biological opinion.

Status of the Chiricahua Leopard Frog in the Action Area

The seven stock tanks shown on the map of the Carol Pasture include: Carol Tank, Carol No. 1 Tank, Carol No. 2 Tank, Pine Tree Tank, Reservation Tank, Hicks Tank, and Borrow Pit Tank. Carol Tank No. 1, Carol Tank No. 2, and Pine Tree Tank have been recently surveyed for CLF with negative results. The CLF has never been documented within the Globe Ranger District of the Tonto. Recent, additional surveys of other water sources on the Chrysotile Allotment were also negative. Furthermore, additional surveys most-recently conducted for CLF on neighboring lands not administered by the Tonto were also negative for CLF. Many of these surveys documented the presence of nonnative predators including tiger salamanders, crayfish, and bullfrogs. Heavy recreation is also a concern at some tanks. Collectively, the survey data are conclusive in their negative findings for CLF at surveyed locations.

A recent observation of CLF was reported by the Tonto in the vicinity of the Chrysotile Allotment (Carol Pasture) in 2001. The action area for this project resides between known occupied localities for the CLF within its northern distribution along and adjacent to the Mogollon Rim, extending into New Mexico. The action area also contains thousands of acres within suitable elevation ranges for the CLF.

As stated previously and discussed in greater detail in specialist reports by Tonto riparian staff and maintained in the administrative record for this project, the Chrysotile Allotment contains many water sources that provide suitable habitat for CLF but that have never been surveyed for this species. These sources include perennial streams, intermittent streams, stock tanks, and remote spring sources. The sources that provide the highest likelihood for CLF occupation in the action area are those that are not readily accessible, disjunct, or remote in nature, such as intermittent reaches (groundwater upwellings, not seasonal waters) separated by lengthy dry reaches, and spring sources. The isolated nature of these habitats not only provides a buffer from potential nonnative predator invasions, but also from many adverse effects that could occur from human land uses.

Although unconfirmed, there remains the potential for CLF to co-occur with lowland leopard frogs (*Rana yavapaiensis*) in a healthy population of that species that exists within Ash Creek Canyon. These taxa are very similar in appearance and can be difficult to correctly identify. Even in the event that dozens or hundreds of specimens are identified in this population as lowland leopard frogs, the possibility for CLF to occur in this population is reasonable. Ash Creek is not within the action area delineated for this proposed action, but could serve as a source population for CLF within the vicinity, should they occur there.

EFFECTS OF THE ACTION

Chiricahua Leopard Frog

The effects of livestock grazing on leopard frog populations are not well-studied. Livestock are adapted to mesic habitats and select riparian habitats for water, shade, and cooler temperatures. They spend a disproportionate amount of their time in riparian zones and can adversely affect these systems in a number of important ways (see Fleischner 1994, Belsky *et al.* 1999, Jones 2000, and references therein). The Draft Chiricahua Leopard Frog Recovery Plan (USFWS 2006) provides a lengthy discussion of potential effects to CLF from livestock grazing activities with emphasis on affects to CLF during the warmer periods of the year when the species is assumed to be surface-active and/or reproductive.

Both direct and indirect adverse effects may occur through a variety of means during the non-active seasons of the year for CLFs, which include trampling of hibernating frogs or tadpoles; erosion and/or siltation of stream courses; elimination of undercut banks that provide cover for frogs; loss of wetland and riparian vegetation and backwater pools; and spread of disease and non-native predators (Arizona State University 1979, Hendrickson and Minckley 1984, Ohmart 1995, Jancovich *et al.* 1997, Belsky *et al.* 1999, Ross *et al.* 1999, USFWS 2000, Sredl and Jennings 2005). Increased watershed erosion caused by grazing can accelerate sedimentation of deep pools used by frogs (Gunderson 1968). Sediment can alter primary productivity and fill interstitial spaces in streambed materials with fine particulates that impede water flow, reduce oxygen levels, and restrict waste removal (Chapman 1988).

Trampling of Chiricahua leopard frogs by cattle has not been documented; however, it likely occurs. Juvenile and adult frogs can probably often avoid trampling when they are active; however, leopard frogs are known to hibernate on the bottom of ponds (Harding 1997), where they may be subject to trampling during the winter months.

We are reasonably certain that increased risks of trampling hibernating or surface-active frogs, carry-over tadpoles from last year which have not yet metamorphosed, or egg masses may occur at sites which have not been surveyed where the CLF may be extant within the action area.

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. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Since the land within the action area is managed by a Federal agency (Tonto National Forest), most activities that could potentially affect listed species are Federal activities and subject to additional section 7 consultation.

CONCLUSION

After reviewing the current status of the CLF, the environmental baseline for the action area, the effects of the proposed livestock grazing and the potential for cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the CLF. No critical habitat has been designated for this species; therefore, none will be affected.

We present this conclusion on the CLF because surveys have not documented frog presence on this allotment, and unsurveyed areas likely to support CLF are generally remote and unlikely to be heavily used by cattle. Most of the primary waters in the pasture are occupied by non-native species or otherwise unsuitable for use by CLF. Further, this pasture is not within any management unit identified in the species' draft recovery plan for CLF management emphasis. Finally, the relatively short duration of this proposed activity lessens the likelihood for adverse effects to occur.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act 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 Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

We do not anticipate that incidental take is reasonably certain to result from this action because we are uncertain of the abundance and distribution of this species within the action area or within dispersal distance to the Carol Pasture, and because cattle watering is likely to be concentrated at waters unsuitable to support CLF.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and

threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. We provide the following recommendations for your consideration:

1. We recommend that your agency continue to survey isolated and other water sources that could provide habitat for CLF. An aggressive survey plan for the Chrysotile Allotment will greatly benefit our mutual understanding of the current distribution of CLF among the northern populations and may facilitate in the recovery of this species, should CLF be found extant in this area.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action outlined herein. 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 the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency 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 the Tonto's efforts to identify and minimize effects to listed species from this project. We encourage you to coordinate review of this project with the Arizona Game and Fish Department. For further information please contact Jeff Servoss at (x237) or Debra Bills at (x239). Please refer to consultation number, 22410-2007-F-0075 in future correspondence concerning this project.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Jim Rorabaugh, Fish and Wildlife Service, Phoenix, AZ
Steve Lohr, Supervisor's Office, Tonto National Forest, Phoenix, AZ

Habitat Branch Chief, Arizona Game and Fish Department, Phoenix, AZ

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