

United States Department of the Interior
U.S. Fish and Wildlife Service
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
02-21-04-F-0273

June 21, 2005

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

Dear Mr. Blankenbaker:

Thank you for your memorandum requesting formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for formal consultation was dated June 4, 2004, and received by us on June 10, 2004. At issue are impacts that may result from the grazing permit renewal and implementation of allotment management plans for the Buzzard Roost and Soldier Camp allotments, Gila County, Arizona. You requested formal consultation on the threatened Chiricahua leopard frog (*Rana chiricahuensis*).

In your memorandum, you requested our concurrence that the proposed action is not likely to adversely affect the Arizona agave (*Agave arizonica*), bald eagle (*Haliaeetus leucocephalus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Mexican spotted owl (*Strix occidentalis lucida*) and its critical habitat, loach minnow (*Tiaroga cobitis*), spikedace (*Meda fulgida*), and Gila topminnow (*Poeciliopsis occidentalis occidentalis*). The basis for our concurrence is found in Appendix A.

This biological opinion is based on information provided in the June 3, 2004 biological assessment, numerous telephone conversations, field investigations, and other sources of information. References cited in this biological and conference opinion are not a complete bibliography of all references available on the species of concern, the proposed activities 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

Previous consultations for the Buzzard Roost Allotment include:

- “On-going and Long Term Grazing Activities on the Tonto National Forest” with the BO completed in 2002 (AESO/SE 02-21-99-F-300).
- No previous consultation exists for the Soldier Camp Allotment.
- June 4, 2004-The Forest Service requested the initiation of formal consultation on these two allotments.
- July 19, 2004-FWS notified the Forest Service of initiation of formal consultation.
- December 17, 2004-Draft Biological Opinion sent to Forest Service.
- June 16, 2005-Email received from Forest Service indicating that they had no comments on the draft Biological Opinion.

DESCRIPTION OF THE PROPOSED ACTION

This consultation covers the effects of the proposed grazing permit renewal and implementation of the allotment management plans (AMPs) for the Buzzard Roost and Soldier Camp Allotments on the Pleasant Valley Ranger District, Tonto National Forest (Map 1). The AMP and this consultation cover 10 years, starting in January 1, 2005.

Buzzard Roost Allotment

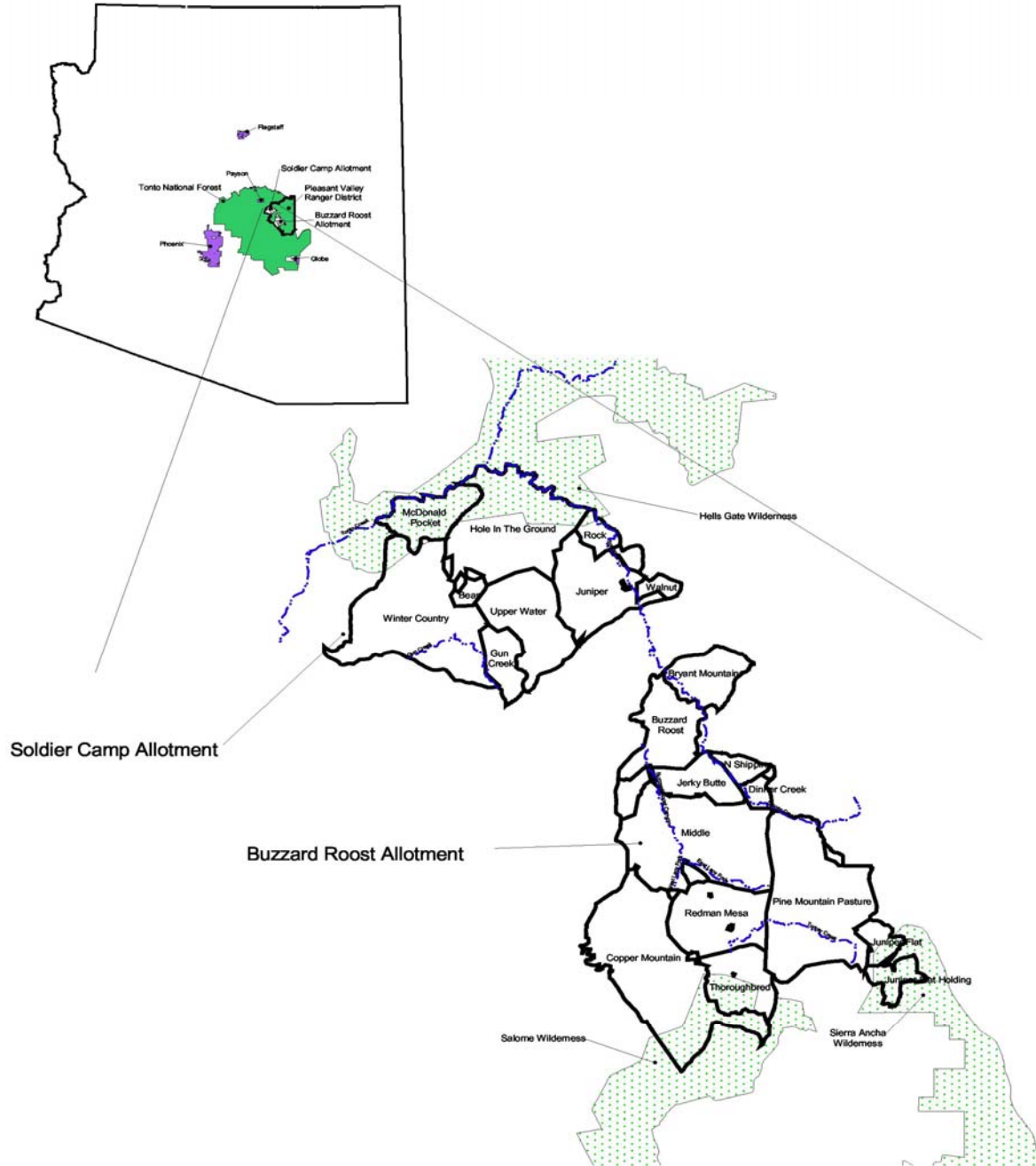
The Buzzard Roost Allotment is comprised of approximately 35,345 acres and is located approximately 12 miles southwest of the town of Young, Gila County, Arizona.

Grazing Permit: A ten-year Term Grazing Permit would be issued for 300 adult livestock for year-round grazing. The permit would begin with 225 head, with an opportunity to increase to up to 300 adult livestock or the equivalent of 2,700 to 3,600 AUM's. There would be no provision for yearling carryover. This is a reduction from the current permitted use of 5,451 AUMs.

Pasture Management: Pastures would be designated as winter (season of use is defined as October through April) and summer (season of use is defined as May through September) pastures.

Map 1

Soldier Camp and Buzzard Roost Analysis Project Vicinity Map



Winter Use - There are three designated winter pastures, combined into two units. One unit will be used each designated use period. This would allow each unit to receive growing season rest each year, and 17 months of complete rest between each use period. The designated winter units are:

- Copper Mountain Pasture
- Jerky and Pine pastures

Summer Use - The summer pastures will be used in a deferred, rest-rotation system. This implies that at least one unit will be completely rested each growing season, and when a unit is used for two consecutive years, that unit will be deferred (rested) the third year. Each unit will be used for 2.5 months each designated use period. There are four pastures combined into three units. This would allow each to receive between 12 and 19 months of complete rest between use periods. The designated summer units are:

- Buzzard Roost
- Middle
- Redmond and Thoroughbred

There are no scheduled range improvements for the Buzzard Roost Allotment.

Utilization Standards Utilization guidelines, following those described within the “Framework for Streamlining Informal Consultation for Livestock Grazing Activities” (March 31, 2004), for the Buzzard Roost Allotment is as follows:

Uplands -

- *Herbaceous in summer - 30 - 40%
- *Herbaceous in winter - 30 - 40%
- *Browse in winter - 30 - 40% current year's leaders

Riparian -

- Vegetation and streambank alteration guidelines will be implemented through the selection of key areas where measurement of these parameters is important for maintaining or restoring stream function.
- 30% on deergrass
- 8” stubble height on other emergent, herbaceous plants
- < 20% alteration on alterable streambanks, where applicable

*Key areas will normally be ¼ to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing. The size of key forage-monitoring areas may be 20-500 acres. Key areas are used because cattle generally use these areas first and thus utilization rates may be reached in these areas prior to steeper, less desirable slopes. Holechek (1998) recommends, for ranges in good condition, 30-40% utilization rates in pinyon-juniper, coniferous forest, and oak woodlands ranging from 9-50 inches annual precipitation (the analysis area receives approximately 21 inches annually).

Table 1. Current Management and Proposed Actions for the Buzzard Roost Allotment, Pleasant Valley Ranger District, Tonto National Forest

| Features | Current Management | Proposed Action |
|---------------------------|---|--|
| Permitted Use | 5451 AMs (423 adult cattle year-round, 75 yearlings Jan 1 – May 31 annually) | 2,700 to 3,600 AMs (300 adult cattle, initially start w/225; no yearlings) |
| Pasture Management | | |
| Copper Mountain | Winter Use (October through April; alternate years) | Same as Current Management |
| Middle | Winter Use (October through April; alternate years) | Changed to Spring-Summer use (2.5 months use, 1 growing season rest in 3) |
| Jerky Butte | Summer use, (combined with Buzzard Roost Pasture) Used 2.5 months, 1 growing season rest in 3 | Combined with Pine Pasture, now winter use (October through April; alternate years) |
| Pine | Summer use for 2.5 months, 1 growing season rest in 3 | Combined with Jerky Pasture, now winter use (October through April; alternate years) |
| Buzzard Roost | Summer use, (combined with Jerky Butte Pasture) Used 2.5 months, 1 growing season rest in 3 | Separated from Jerky Pasture Used 2.5 months, 1 growing season rest in 3 |
| Redman Mesa | Summer use, (combined with Thoroughbred Pasture) Used 2.5 months, 1 growing season rest in 3 | Same as Current Management |
| Thoroughbred | Summer use, (combined with Redman Mesa Pasture) Used 2.5 months, 1 growing season rest in 3 | Same as Current Management |

Soldier Camp Allotment

The Soldier Camp Allotment encompasses approximately 33,000 acres and is located approximately 8 miles west of Young, Gila County, Arizona.

Permit: A ten-year Term Grazing Permit would be issued for year-round grazing of 250 adult livestock initiating in 2005. The permit would begin with 200 head with an opportunity to

increase up to 250 adult livestock or the equivalent of 2,400 to 3,000 AUM's. There would be no provision for yearling carryover.

Pasture Management: Pastures would be designated as winter (season of use is defined as November through May) and summer (season of use is defined as June through October) pastures.

Winter Use - All pastures could be used each designated use period; however, use will be deferred from year to year. This would allow each pasture to receive almost complete growing-season rest every year. Livestock movements from pasture to pasture during any one use-period will be based upon approaching or meeting established utilization limits. The designated winter use pastures are:

- Upper and Lower Winter Country
- Gun Creek
- Bryant Mountain (due to the presence of Spring Creek in this pasture, use would only occur during the period of November through February)

Summer Use - The summer use pastures will be used in a deferred, rest-rotation system. This implies that at least one pasture will be completely rested each growing season, and when a pasture is used in two consecutive years, use will be deferred (rested) the third year. Each pasture will be used for 2-3 months each designated use period. This will allow each pasture to receive between 12-22 months of rest between use periods. The designated summer pastures are:

- Hole in the Ground
- Juniper
- Upper Water
- McDonald (this pasture would not be used for more than 1.5 month each designated use period)

In order to implement the proposed action and meet Forest Standards and Guidelines, the following range improvements would be constructed:

1. A fence has been approved and construction initiated to split the Winter Country Pasture into two separate pastures. Until the fence is completed, the number of livestock permitted to graze during the winter season will be 150 adult cattle.
2. A new fence will be constructed to exclude Spring Creek from the currently designated Spring Creek Pasture. The new pasture will be renamed Juniper Pasture.

Utilization Standards Utilization guidelines, following those described within the “Framework for Streamlining Informal Consultation for Livestock Grazing Activities” (March 31, 2004), for the Soldier Camp Allotment are the same as described for the Buzzard Roost Allotment.

Table 2. Current Management and Proposed Actions for the Soldier Camp Allotment, Pleasant Valley Ranger District, Tonto National Forest

| Features | Current Management | Proposed Action – Preferred Alternative |
|---------------------------|--|--|
| Permitted Use | 6808 AMs (559 adult cattle year-long; 20 yearlings Jan 1 – May 31) | 2,400-3,000 AMs (250 adult livestock initially start w/200; no yearlings) |
| Pasture Management | | |
| Winter Country | Winter Use (October through May) Herd split into Bryant and/or Spring Creek-Walnut Pastures October through December | Divided into 2 pastures: Upper and Lower Winter Country, Winter Use (November through May) Deferred from year to year. |
| Gun Creek | Winter Use (October through May) | (November through May) Deferred from year to year. |
| Bryant Mtn | Winter Use (1 to 1.5 months) during October to December period | Winter Use (4 months from November through February) Deferred from year to year. |
| Spring Creek | Summer Use (June through September) | Re-named Juniper Pasture. Spring Creek excluded from grazing by fencing |
| Hole-in-the-Ground | Summer Use (June through September) | Summer Use (June through September) 1 growing season rest in 3 |
| Upper Water | Summer Use (June through September) | Summer Use (June through September) 1 growing season rest in 3 |
| McDonald | Summer Use (June through September) | Summer Use for maximum 1.5 months during June through September. 1 growing season rest in 3 |

STATUS OF THE SPECIES

Chiricahua Leopard Frog

Listing History

The CLF was listed as a threatened species without critical habitat in a Federal Register notice dated June 13, 2002 (USFWS 2002), which includes a special rule to exempt operation and maintenance of livestock tanks on non-Federal lands from the section 9 take prohibitions of the Act.

Life History

The CLF is distinguished from other members of the *Rana pipiens* complex by a combination of characters, including a distinctive pattern on the rear of the thigh consisting of small, raised, cream-colored spots or tubercles on a dark background; dorso-lateral folds that are interrupted and deflected medially; stocky body proportions; relatively rough skin on the back and sides; and often green coloration on the head and back (Platz and Mecham 1979). The species also has a distinctive call consisting of a relatively long snore of 1 to 2 seconds in duration (Davidson 1996, Platz and Mecham 1979).

Distribution - The CLF is an inhabitant of cienegas, pools, livestock tanks, lakes, reservoirs, streams, and rivers at elevations of 3,281 to 8,890 ft in central and southeastern Arizona; west-central and southwestern New Mexico; and in Mexico (Platz and Mecham 1984, Degenhardt et al. 1996, Sredl et al. 1997, Sredl and Jennings *in press*). In Arizona, slightly more than half of all known historical Arizona localities are natural lotic systems, a little less than half are stock tanks, and the remainders are lakes and reservoirs (Sredl et al. 1997). Sixty-three percent of extant populations in Arizona from 1993-1996 were found in stock tanks (Sredl and Saylor 1998).

Rangewide Population Status - From 1983 to 1987, Clarkson and Rorabaugh (1989) found CLFs at only two of 36 Arizona localities that had supported the species in the 1960s and 1970s. Two new populations were reported. During subsequent extensive surveys from 1994 to 2001, the CLF was found at 87 sites in Arizona, including 21 northern localities and 66 southern localities (Rosen et al. 1996, Sredl et al. 1997, FWS files). The species has been extirpated from about 75 percent of its historical localities in Arizona and New Mexico.

The Arizona Game and Fish Department (AGFD) surveyed leopard frogs at 106 sites on the Tonto National Forest in 1992. In 1993, 68 sites were surveyed. One CLF was found in 1992, and three were found in 1993 in locations outside the dispersal range from either of these allotments (Sredl et al. 1995). The AGFD Heritage Database Management System has records at two additional locations, north of both of these allotments and outside expected dispersal range (Ginger Ritter, Wildlife Data Specialist, AGFD, email August 10, 2004).

Threats to this species - Numerous studies indicate that declines and extirpations of CLFs are at least in part caused by predation and possibly competition by nonindigenous organisms,

including fish in the family Centrarchidae (*Micropterus* spp., *Lepomis* spp.), bullfrogs (*Rana catesbeiana*), tiger salamanders (*Ambystoma tigrinum mavortium*), crayfish (*Orconectes virilis* and possibly others), and several other species of fish (Clarkson and Rorabaugh 1989; Sredl and Howland 1994; Rosen et al. 1994, 1996; Fernandez and Bagnara 1995; Fernandez and Rosen 1996, 1998). For instance, in the Chiricahua region of southeastern Arizona, Rosen et al. (1996) found that almost all perennial waters investigated that lacked introduced predatory vertebrates supported CLFs. All waters except three that supported introduced vertebrate predators lacked CLFs. Sredl and Howland (1994) noted that CLFs were nearly always absent from sites supporting bullfrogs and non-indigenous predatory fish.

Disruption of metapopulation dynamics is likely an important factor in regional loss of populations (Sredl and Howland 1994, Sredl et al. 1997). CLF populations are often small and habitats are dynamic, resulting in a relatively low probability of long-term population persistence. When sites would become unoccupied due to drought, disease, or other causes, extirpated sites could be re-colonized via immigration from nearby populations. However, as numbers of populations declined, populations became more isolated and were less likely to be re-colonized. Also, most of the larger source populations along major rivers have disappeared.

Maintenance of viable populations of CLFs is thought to be compatible with well-managed livestock grazing. Grazing occurs in most of the habitats occupied by this frog. For instance, a large and healthy population of CLFs coexists with cattle and horses on the Tularosa River, New Mexico (Randy Jennings, Western New Mexico University, pers. comm. to J. Rorabaugh, 1995). Throughout their range, CLFs are often found in dirt cattle tanks that are heavily used by livestock, especially cattle. However, livestock grazing and management activities can also adversely affect this frog and its habitats.

Effects of grazing on CLF habitat include both creation of habitat and loss and degradation of habitats (Sredl and Jennings, *in press*). Construction of tanks for livestock has created important leopard frog habitat and, in some cases, has replaced destroyed or altered natural wetland habitats (Sredl and Saylor 1998). Sixty-three percent of CLF extant populations in Arizona from 1993 to 1996 were located in stock tanks, versus only 35 percent of extirpated localities (Sredl and Saylor 1998). Stock tanks provide small patches of habitat, which are often dynamic and subject to drying and elimination of frog populations. However, Sredl and Saylor (1998) also found that stock tanks are occupied less frequently by non-native predators (with the exception of bullfrogs) than natural sites.

Adverse effects to the CLF and its habitat as a result of grazing occur under certain circumstances. Eggs, tadpoles, and metamorphosing CLFs are may be trampled by cattle on the perimeter of stock tanks and in pools along streams (US Fish and Wildlife Service 2002, Bartelt 1998). Juvenile and adult frogs can probably 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. Cattle can remove bankline vegetation that provides escape cover for frogs and a source of insect prey. However, dense shoreline or emergent vegetation in the absence of grazing may favor some predators, such as garter snakes (*Thamnophis* sp.), and the frogs may benefit from some open ground for basking and foraging. At a tank in the Chiricahua Mountains, Sredl et al. (1997) documented heavy cattle use at a stock

tank that resulted in degraded water quality, including elevated hydrogen sulfide concentrations. A die off of CLFs at the site was attributed to cattle-associated water quality problems, and the species has been extirpated from the site since the die off.

Recent evidence suggests a chytridiomycete skin fungi is responsible for observed worldwide declines of frogs, toads, and salamanders (Berger et al. 1998, Longcore et al. 1999, Speare and Berger 2000, Hale 2001). In Arizona, chytrid infections have been reported from four populations of CLFs (M. Sredl, pers. comm. 2000). In New Mexico, chytridiomycosis was identified in a declining population of CLFs near Hurley, and patterns of decline at three other populations are consistent with chytridiomycosis.

Movements and Dispersal - Leopard frogs are very capable of dispersing to new habitats. Suitable habitats documented to be unoccupied at one time may become occupied in the future. Dispersal of leopard frogs away from water in the arid Southwest may occur less commonly than in more mesic environments. However, there is evidence of substantial movements even in Arizona. In August 1996, Rosen and Schwalbe (1998) found up to 25 young adult and subadult CLFs at a roadside puddle in the San Bernardino Valley, Arizona. They believed that the only possible origin of these frogs was a stock tank located 3.4 miles away. Rosen et al. (1996) found small numbers of CLFs at two locations in Arizona that supported large populations of non-indigenous predators. Movements away from water do not appear to be random. Streams are important dispersal corridors for young northern leopard frogs (Seburn et al. 1997). Rainfall or humidity may be an important factor in dispersal because odors carry well in moist air, making it easier for frogs to find other wetland sites (Sinsch 1991). Also, once one frog finds a wetland and then begins calling, it probably attracts other frogs.

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.

Action Area Description

The action area is defined as the actual project area plus the areas outside the immediate project area that may be impacted by the proposed action. Since some impacts of livestock grazing can manifest downstream (see Effects of the Action), we define the action area to include the footprint of the two allotments and the area immediately downstream of the Buzzard Roost Allotment to approximately 3,300 feet elevation (Map 2). Five watersheds drain the action area: Spring Creek, Gun Creek, Rye-Tonto Creek, Salome Creek and Cherry Creek. The Spring Creek and Rye-Tonto Creek watersheds drain the majority of both allotments. The remaining three watersheds comprise a small portion of the analysis area and occur in what would be the headwaters of each watershed.

Buzzard Roost Allotment

The Buzzard Roost allotment was consulted on in 2002 (On-going and Long-term Grazing on the Tonto National Forest, AESO/SE 2-21-99-F-300). We concurred with the “may affect, not likely to adversely affect,” determination for MSO under existing management.

The Buzzard Roost Allotment is comprised of approximately 35,345 acres and is located approximately 12 miles southwest of Young, Arizona. Topography varies considerably, with flat mesas, rolling hills, and steep slopes and canyons. Elevation ranges from about 4,000 to 6,676 feet. Average precipitation is approximately 21 inches per year. The allotment eventually drains into Spring Creek to the north and Salome Creek to the south. Both are perennial streams with associated riparian vegetation that may contain suitable or potential CLF habitat (Table 7).

The north half of the allotment is drained by Buzzard Roost Canyon which flows into Rock Creek (Map 2). Rock Creek flows north approximately 2.5 miles to Spring Creek. Spring Creek continues north, eventually forming the eastern boundary of the Soldier Camp Allotment. The suitable or potential CLF habitats along Rock and Spring creeks, between the Buzzard Roost and Soldier Camp allotments, are included in the action area of this biological opinion.

The south half of the Buzzard Roost Allotment is drained by Cataract Canyon which flows south into Salome Creek (Map 2). Salome Creek flows south approximately 5.25 miles until it reaches the 3,300 feet elevation. The perennial portions within this reach may provide suitable or potential CLF habitat. The allotment(s) within the portions of Salome Creek, upstream of the 3,300 feet elevation are included in the action area of this biological opinion.

The current permit was issued on November 18, 1997. The permitted numbers are for 423 adult cattle from January 1 to December 31 of each year, and 75 yearling cattle from January 1 to May 31 of each year (Table 3). An AMP was prepared for the allotment in 1986. A new AMP is being prepared to address the following concerns:

1. The current permitted numbers do not reflect the current capacity of the allotment, as determined through recent capability and capacity studies, range trend studies, and utilization monitoring.
2. There are some impaired soil conditions on some of the mesa tops.
3. Based on the currently available capacity information, use of the Middle Pasture would be more appropriate in the summer due to its forage availability, and Pine Mountain Pasture would be more appropriate as a winter pasture.

Livestock grazing has not occurred in the allotment since 2002. This allotment was evaluated in a biological opinion in February 2002. The allotment is managed as a cow/calf operation, as described in the description of the proposed action, with yearling carryover in the spring. There are two designated winter pastures – Copper Mountain and Middle. Five pastures are combined into three separate summer-use units.

Table 3. Recent Actual Use on Buzzard Roost Allotment, Pleasant Valley Ranger District, Tonto National Forest.

| Year | Permitted AM | Actual Use AM | Percent Stocked |
|------|--------------|---------------|-----------------|
| 1993 | 5451 | 3437 | 63 |
| 1994 | 5451 | 5085 | 93 |
| 1995 | 5451 | 4907 | 90 |
| 1996 | 5451 | 4903 | 90 |
| 1997 | 5451 | 3968 | 73 |
| 1998 | 5451 | 3842 | 70 |
| 1999 | 5451 | 3961 | 73 |
| 2000 | 5451 | 3744 | 69 |
| 2001 | 5451 | 3396 | 62 |
| 2002 | 5451 | 3298 | 61 |
| 2003 | 5451 | 0 | 0 |

Summary of Buzzard Roost Allotment Pasture Vegetation Condition and Trends (as described in the Buzzard Roost and Soldier Camp Allotments EA 2004)

Buzzard Roost Pasture vegetation condition has improved from fair to good at one cluster site and one pace transect site. At three other pace transect sites on Buzzard Roost Mesa, vegetation condition has shown some improvement from low-fair to high-fair, or has remained static at high-fair. About 88% of the acreage in this pasture is in the more productive savannah or woodland vegetation types, with production ranging from 200 lbs/acre to over 1000 lbs/acre. Satisfactory range condition and production levels are being achieved in most areas of Buzzard Roost pasture at current stocking levels.

Middle Pasture has two Parker Three-Step cluster sites for evaluating range conditions. Vegetation condition decreased slightly from fair to poor/fair at both sites from 1963 to 2002. Cluster sites are located in the more productive vegetation types- alligator juniper woodlands, or pinyon/juniper/oak/blue grama types on flat to gentle slopes. These are key areas where livestock would be expected to congregate. About 50% of the pasture acreage is in the more productive vegetation types (producing 200-800 lbs/acre), while the rest of the acreage is in less productive P/J shrub types or ponderosa pine types. About 43% of the pasture is in moderate to steep terrain, with 30-60% or greater slopes. Vegetation condition in key areas has decreased slightly at the actual-use stocking levels. Current vegetation condition in key grassland areas is near satisfactory levels.

Redman Pasture vegetation condition has remained steady at high-poor at one site in the west part of the pasture, and increased from poor to low-fair at a site on Redman Mesa. Juniper thinning on Redman Mesa between the 1963 reading and the 2002 reading likely contributed to the improvement. Cluster sites are located in the more productive grass-dominated areas with flat or gentle terrain, such as the juniper savannah, juniper woodlands, or pinyon/juniper/oak/blue grama types. These types represent about 66% of the pasture acreage. Other pasture acreage is in less-productive P/J chaparral, oak chaparral, or ponderosa pine vegetation types. About 24% of the pasture is at slopes from 30-60% or greater. Vegetation

condition has not reached satisfactory levels in key areas at the actual-use stocking level. Utilization monitoring has shown that key areas have been used above the 50% standard in 1994, 1999, 2000 and 2002. This was during a period when the allotment was stocked at an average of 330 cattle year-long.

Pine Mountain Pasture vegetation condition was rated as poor in 1966, and it was still poor in 2001. The one cluster that was monitored here is in a juniper woodland/grassland site, which is a small component of this pasture. The cluster area shows poor productivity due to the thickness of the juniper and poor vigor of herbaceous plants. Most of the pasture acreage (72%) is found in the ponderosa pine vegetation associations. Most of this type produces little herbaceous forage, often less than 100 lbs/acre. Some areas of good browse vegetation do exist. Less than 1% of the pasture is in the very steep category (over 60% slope). Satisfactory vegetation condition is not being achieved at the actual-use levels. The degree of canopy closure and thickness of needle-cast in the pine type has the most direct effect on herbaceous plant production.

Jerky Butte Pasture has not been recently evaluated for range condition. About 51% of the acreage is in oak chaparral vegetation. This type produces little herbaceous forage. More productive juniper woodland/grassland areas are found on about 35% of the pasture. Productivity varies greatly however, with the open areas bordering Buzzard Roost Mesa being the most productive, but representing only about 5% of the acreage. About 35% of the pasture is in moderate to very steep terrain (30-60+% slope). This pasture has traditionally been grazed in the summer. Livestock have tended to concentrate in the open grassland areas of the pasture bordering Buzzard Roost Mesa, and over-utilization was documented here in 1999 and 2000. The browse vegetation may be under-utilized in this pasture because of season of use, or because it is inaccessible.

Copper Mountain Pasture vegetation condition, as related to livestock grazing, has not been recently evaluated. This pasture contains mainly ponderosa pine vegetation types (about 75% of the acreage). The few juniper woodland/grassland areas that exist have dense tree cover, and offer little herbaceous production. About 47% of the pasture is in moderate to steep terrain (30-60+% slope). This pasture has traditionally been grazed in the winter (October-April). Vegetation condition for grazing is mostly a function of the degree of tree canopy-closure in this pasture. Desirable grasses are few, and may be negatively impacted by increases in stocking levels. Desirable browse does exist here, and provides most of the available forage. Over-use of the desirable browse species by livestock has not been documented in recent years, but use of over 50% on herbaceous species was documented in some juniper woodland/grassland areas in 2002.

Thoroughbred Pasture contains alligator juniper savannas or woodlands on about 37% of the acreage and more productive P/J/oak-blue grama vegetation on about 11% of the acreage. The rest of the pasture contains less-productive ponderosa pine or chaparral vegetation. About 41% of the pasture has moderate to very steep terrain (30-60+% slope). No recent vegetation condition data have been collected. Visits to the pasture show that productive grassland areas are few, mainly due to the degree of woody plant establishment. Grasses in the key juniper woodland/grassland areas show only fair to poor vigor.

Soldier Camp Allotment

The Soldier Camp Allotment encompasses approximately 33,000 acres and is located approximately 8 miles west of Young, Arizona. It is immediately northwest of the Buzzard Roost Allotment; the two allotment boundaries are not connected. Topography on the allotment varies from flat mesa, rolling hills, to very steep mountains and canyons. Elevations range from 4,000 feet in Hollow Brushy Draw to 6,325 feet on Bread Pan Mountain. The average precipitation in the area is approximately 18 inches per year. The three main perennial streams on the allotment are Spring, Tonto and Gun creeks.

Tonto Creek forms the western boundary of this allotment. Elevations along this creek are at the lower end of the accepted elevation range for CLF suitable or potential habitats. The action area, in relation to this allotment ends at the allotment boundaries (Map 3). Downstream Tonto Creek reaches are below the 3,300 feet elevation range for CLF suitable or potential habitats. Bryant and Thomas canyons, within the Bryant Mountain pasture of this allotment, are either inaccessible to livestock or do not provide suitable or potential CLF habitats.

The current permit was issued on April 5, 1996. The permitted numbers are for 559 adult cattle from January 1 to December 31 of each year, and 20 yearling cattle from January 1 to May 31 of each year. An Allotment Management Plan was prepared for the allotment in 1986. A new AMP is being prepared to address the following concerns:

1. The current permitted numbers do not reflect the current capacity of the allotment, as determined through recent capability and capacity studies, range trend studies, and utilization monitoring.
2. There are unsatisfactory and impaired soil conditions along the ridgetops.
3. The Juniper Pasture is better suited as a summer-use pasture, but the presence of a section of Spring Creek in the eastern portion of this pasture would make it difficult to protect riparian resources associated with this stream if used during the summer-use season.

The allotment is managed as a cow/calf operation, with yearling carryover in the spring. Winter Country is a designated winter-use only pasture. The use period is generally for 5 to 7 months during October through May. The entire herd is usually split between this pasture and Spring Creek/Walnut or Bryant Mountain pastures during October – December. Livestock grazing has not occurred on the allotment since the summer of 2002.

Seven pastures are combined into five separate summer-use units, as described in the Description of the Proposed Action.

Table 4. Recent Actual Use on Soldier Camp Allotment, Pleasant Valley Ranger District, Tonto National Forest.

| Year | Permitted AM | Actual Use AM | Percent Stocked |
|-------------|--------------|---------------|-----------------|
| 1993 | 6808 | 2544 | 38 |
| 1994 | 6808 | 2928 | 43 |
| 1995 | 6808 | 3565 | 52 |
| 1996 | 6808 | 5964 | 88 |
| 1997 | 6808 | 4061 | 60 |
| 1998 | 6808 | 2349 | 35 |
| 1999 | 6808 | 4380 | 65 |
| 2000 | 6808 | 3087 | 46 |
| 2001 | 6808 | 1548 | 23 |
| 2002 | 6808 | 708 | 10 |
| 2003 | 6808 | 0 | 0 |

A summary of Soldier Camp Pasture Vegetation Condition and Trends (as described in the Buzzard Roost and Soldier Camp Allotments EA 2004)

Hole-in-the-Ground Pasture vegetation condition was poor in 1974 at cluster sites. Cluster sites are located in the more open, productive juniper woodland/grassland sites. Alligator juniper savannas or woodlands, or pinyon/juniper/oak/blue grama vegetation makes up about 30% of the acreage of this pasture. This pasture has considerable moderate to steep terrain, with 52% of the pasture acreage on slopes of 30-60% or greater. In 2002, vegetation conditions remained poor at two pace transect sites in open grassland areas, and was fair at one site in the southwest part of the pasture. Vegetation condition has not improved much since 1974.

Upper Water Pasture (formerly called Upper/Lower Water pasture) has one cluster site that was monitored in 1974. Vegetation condition was at the upper end of very poor at that time. The cluster is located in more productive juniper woodland/grasslands. Alligator juniper woodlands or savannas, or pinyon/juniper/oak blue grama vegetation types cover 70% of the acreage in this pasture. In many areas, grasses show poor vigor or there are moderately thick juniper trees that are suppressing herbaceous production and vigor. Curlymesquite grass is a dominant species in many open grassland areas. Forage species composition lacks diversity. This pasture has only 28% of the acreage on slopes of 30-60% or greater. In 2002, four pace transects were established in open grassland areas in the pasture. Vegetation condition was very poor at two sites in the northwest part of the pasture, high-poor at one site in the southwest part of the pasture, and low-good at one site in the east part of the pasture on Houdon Mountain. Vegetation condition has shown limited improvement at the actual-use stocking level, and remains unsatisfactory in most key grassland areas.

McDonald Pocket Pasture does not have a Parker Three-Step cluster, nor was a pace transect established here in 2002. Most of the pasture acreage is in the woodland vegetation type (57%), which has variable herbaceous production. Production will most likely depend upon the degree of canopy closure of tree species. Curlymesquite grasslands and alligator juniper savanna

vegetation types are found on about 19% of the pasture acreage. These would likely be congregation areas for livestock. The pasture contains very steep terrain, with 77% of the pasture acreage in slope categories of 30-60% or greater. Livestock grazing effects would be very limited in the moderate to steep terrain. High utilization was recorded in this pasture in 1997 when the allotment was stocked at about 80% of the Term Permit number (Pleasant Valley Ranger District 2210 Files).

Spring Creek Pasture is used for shipping and gathering in the fall and winter. This use-period is advocated because a perennial portion of Spring Creek flows through the pasture. Two cluster sites were monitored in 1974; one in the western part of the pasture showed high-poor vegetation condition, and one in the southeast end of the pasture showed very poor vegetation condition. One pace transect established in the southeast part of the pasture showed high-poor vegetation condition in 2002. This pasture is typically used after grasses have gone dormant. This may have led to the observed improvement in vegetation condition in the southeast part. Grasses here still show poor vigor and density. Pace transects and cluster sites are in the more productive grassland areas. About 68% of the pasture acreage occurs in alligator juniper savannas, woodlands, or pinyon/juniper/oak grasslands. Pasture topography is varied, with about 43% of the pasture acreage at slopes of 30-60% or greater. High utilization has been documented in this pasture in 2002, 2001, 2000, and 1997 (Pleasant Valley Ranger District 2210 files), although the allotment was stocked very lightly in some of these years (see Exhibit D., Pleasant Valley Ranger District 2210 Files). It has been used to gather livestock for shipping during a short period of one or two months. Distribution in the pasture has likely been very poor because only a small portion is used during the gathering and shipping process. High use was most often seen in the flat, open ridge tops west of Spring Creek.

Bryant Mountain Pasture also contains a portion of Spring Creek, so it has been used during the fall or winter, when riparian vegetation is dormant. Vegetation condition in this pasture was rated as very poor in 1974. No pace transects were established in 2002. More productive vegetation types are found in about 55% of the pasture; these vegetation types are alligator juniper savannas, alligator juniper woodlands, or pinyon/juniper/oak grasslands. Pasture terrain is relatively easy, with only 33% of pasture acreage at slopes of 30-60% or greater. High utilization was documented in 1997 and 2000, when the allotment was stocked at about 73% of Term Permit number, on average (2210 Files).

Walnut Pasture also contains portions of Spring Creek, and has been used during the winter for shipping and gathering. High utilization has been observed in the flat grassland areas of this pasture. Stocking to the Term Permit level would likely lead to even higher utilization levels. Winter Country Pasture and Gun Creek Pasture are used concurrently during the winter months. About 80% of the acreage in the Winter Country pasture contains pinyon/juniper/shrub oak chaparral or shrub oak/mountain mahogany chaparral. This vegetation type is most suited to winter use. Less than 10% of pasture acreage is in mainly open juniper grassland vegetation types. One cluster site was monitored in 1974, and two pace transects were established in 2002. These are located in the more open juniper woodland/grassland vegetation types, which do not represent most of the pasture acreage. Vegetation condition in 1974 was poor, and it was poor to high-poor in 2002. Little improvement has occurred in the grassland areas at the actual-use stocking level, even though the pasture was grazed while grasses are dormant.

Status of the Species within the Action Area

The CLF analyzed within this biological opinion is the rim form, found along the Mogollon Rim and White Mountains, north of the Gila River (Sredl et al. 1997). CLFs have not been surveyed at suitable/potential sites in the analysis area and none are known to occur. There are 24 identified sites, including stock tanks and springs on the Buzzard Roost Allotment which may support CLF (Table 5). The Soldier Camp Allotment has 25 identified sites (Table 6). These identified sites do not include habitats along perennial streams located within these two allotments (Table 7).

Due to the lack of surveys within Spring and Salome creeks, and Cataract Canyon, and Tonto Creek within dispersal range of occupied CLF habitat, it is unknown whether either of these allotments drains into occupied CLF habitats (Sredl et al. 1995). Off-allotment affects to CLF from the proposed action on the Buzzards Roost Allotment on Salome Creek, as it flows 5.25 miles until it reaches the 3,300 feet elevation and Spring Creek, flowing between the two allotments, can not be determined.

Table 5. Known potential/suitable CLF habitats (springs and tanks) on Buzzard Roost Allotment, Pleasant Valley Ranger District, Tonto National Forest.

| Pasture | Name of Tank or Spring | Proposed Pasture Management |
|----------------|-------------------------------|------------------------------|
| Pine Mtn. | Park Tank | Winter, alternate years |
| | Turkey Spring | Winter, alternate years |
| Thoroughbred | Thoroughbred Pasture Tank | Summer |
| Copper Mtn | Greenback Saddle Tank | Winter, alternate years |
| | Buckaroo Tank | Winter, alternate years |
| | Copper Mtn. Tank ¹ | Winter, alternate years |
| | W. Copper Mtn. Tank | Winter, alternate years |
| | Cataract Tank | Winter, alternate years |
| | Copper Mtn. Points tank | Winter, alternate years |
| Jerky Butte | Jerky Butte Tank | Winter, alternate years |
| Redman | Indian Camp Reservoir | Summer, deferred 1 year in 3 |
| | Big Turkey Tank | Summer, deferred 1 year in 3 |
| | Redman Mesa Tank | Summer, deferred 1 year in 3 |
| North Shipping | No-name Tank | Summer, deferred 1 year in 3 |
| | Shipping Pasture Tank | Summer, deferred 1 year in 3 |
| Middle | Little Copper Mtn Tank | Summer, deferred 1 year in 3 |
| | McBride Tank | Summer |
| | Pine Flat Tank | Summer |
| | Pine Mtn. Tank | Summer |
| Buzzard Roost | S. Buzzard Roost Mesa Tank | Summer |
| | N. “ “ “ “ | Summer |
| | Mile Tank | Summer |
| | Buzzard Roost Tank #1 | Summer |
| | “ “ “ #2 | Summer |

Table 6. Known potential/suitable CLF habitats (springs and tanks) on Soldier Camp Allotment, Pleasant Valley Ranger District, Tonto National Forest.

| Pasture | Name of Tank or Spring | Proposed Pasture Management | |
|---|-------------------------------|--|--|
| Winter Country | Brushy Tank | Winter-use, deferred from year to year | |
| | Lost Tank | Winter-use, deferred from year to year | |
| | Round Tank | Winter-use, deferred from year to year | |
| | Neal Mtn. | Winter-use, deferred from year to year | |
| | Duck Tank | Winter-use, deferred from year to year | |
| McDonald Pocket | Pocket Tank | Summer-use, 1.5 months 1 growing season rest in 3 | |
| | Pocket Spring | Summer-use, 1.5 months 1 growing season rest in 3 | |
| Hole-in-the-Ground | Black Jack Tank | Summer-use, 1 growing season rest in 3 | |
| | McDonald Mtn. Tank | Summer-use, 1 growing season rest in 3 | |
| | Cottonwood Spring | Summer-use, 1 growing season rest in 3 | |
| | Needed Tank | Summer-use, 1 growing season rest in 3 | |
| | Sand Tank | Summer-use, 1 growing season rest in 3 | |
| | Hole-in-the-Ground Tank | Summer-use, 1 growing season rest in 3 | |
| Walnut | Pasture Tank | Gathering/Shipping during Nov – Dec. | |
| Spring Creek (re-named Juniper Pasture) | Juniper Tank | Summer-use, 1 growing season rest in 3 | |
| | Bread Pan Spring | Summer-use, 1 growing season rest in 3 | |
| | Houdon Tank | Summer-use, 1 growing season rest in 3 | |
| | Double Corral Tank | Summer-use, 1 growing season rest in 3 | |
| | Upper Water Pasture | Leady Tank | Summer-use, 1 growing season rest in 3 |
| Upper Water Pasture | Bread Pan Tank | Summer-use, 1 growing season rest in 3 | |
| | Header Tank | Summer-use, 1 growing season rest in 3 | |
| | Fresno Tank | Summer-use, 1 growing season rest in 3 | |
| | Bryant Mtn. | McDonald Mtn. Tank | Winter-use (November through February, deferred from year to year) |
| | | Bryant Canyon Spring | Winter-use (November through February, deferred from year to year) |
| Thomas Spring | | Winter-use (November through February, deferred from year to year) | |

Table 7. Perennial streams on Soldier Camp and Buzzard Roost Allotments which may contain potential/suitable CLF habitat. (Stream reach locations are based on allotment maps in Buzzard Roost and Soldier Camp Allotments Environmental Assessment.)

| Name of Stream | Summer Pasture | Winter Pasture | Holding Pasture |
|---|--|---|------------------------|
| Spring Creek Watershed- Soldier Camp Allotment Spring Creek | Walnut Rock Hole-in-the-Ground | Bryant Mountain ¹ | Holding |
| Rye-Tonto Creek Watershed Soldier Camp Allotment Soldier Camp Creek | Upper Water Hole-in-the-Ground | | |
| Gun Creek Watershed Soldier Camp Allotment Gun Creek | | Winter Country ² | |
| Salome Creek Watershed Buzzard Roost Allotment Salome Creek Cataract Canyon JR Canyon Dupont Canyon ³ | Redman Mesa ¹ Redman Mesa ¹ | Copper Mountain ¹ Copper Mountain Copper Mountain Copper Mountain | |

¹Believed to be inaccessible to livestock

²Intermittent with perennial reaches and pools

³No flow regime information given in biological assessment

Numerous perennial stream reaches are located within these allotments, any of which could be suitable CLF habitat (Table 7). These listed reaches do not include un-named perennial drainages and tributaries which may also contain suitable/potential CLF habitat. These perennial reaches may be occupied habitats. In Arizona, slightly more than half of all known historical Arizona localities are natural stream (lotic) systems (Sredl et al. 1997). There may be additional perennial reaches in un-assessed drainages. National Wetlands Inventory (NWI) was used to map and determine the extent of perennial streams on these two allotments. NWI maps riparian wetland areas by vegetation type, not by the presence of perennial water (Jim Dick, FWS, pers. comm. August 24, 2004). Therefore, the amount of perennial reaches and CLF potential/suitable habitat may be underestimated on these two allotments.

EFFECTS OF THE PROPOSED ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent

actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Effects Common to Both Allotments

As shown in Tables 5, 6, and 7, and described in the biological assessment, there are numerous perennial and intermittent streams (with perennial reaches), stock tanks, and springs on these two allotments. This effects analysis will also include those downstream reaches of Cataract Canyon and Rock Canyon, as they flow from the Buzzard Roost Allotment to approximately 3,300 feet in elevation. Any of these perennial waters may be potential/suitable CLF habitat. Buzzard Roost and Soldier Camp allotments have late terminal dates for winter pastures; April 30 and May 31 respectively. Fall-winter grazing is often used to rehabilitate riparian areas that are impacted by grazing regimes that do not allow the system to achieve functionality or the desired natural plant community. Late spring grazing, under rest-rotation or deferred grazing systems can still result in negative impacts to the riparian and aquatic system (Leonard et. al. 1997). During warmer periods, the presence of shade and water encourage livestock to concentrate in riparian areas. Concentrated use on riparian vegetation during the growing season can result in the elimination of seedlings and young plants, poor vegetative vigor, and adverse effects to growth form from excessive hedging. This vegetative removal can result in streambank instability and excessive erosion into downstream stock tanks, perennial streams, and springs. Excessive siltation of stock tanks can indirectly affect CLF when heavy equipment is brought in to remove sediment. CLF that are hibernating or hiding in the bottom substrate can be injured or killed. Indirectly, habitat will be lost if the stock tanks or springs fill in and lose water-storage capacity dry.

Excessive removal of finer sediments in stream banks and flood plains, due to the removal of riparian/wetland vegetation, can reduce water-storage capacity. Perennial reaches can become ephemeral, reducing the sites' suitability for CLF. These impacts can affect CLF at perennial stream reaches (Table 7), stock tanks, and un-fenced springs (Tables 5 and 6).

For example, evidence of heavy livestock use on riparian areas in late spring was documented by the Cave Creek Ranger District at Tangle Creek. The Tangle Mountain Pasture of the Red Creek Allotment was assessed in spring of 2003. Streambank alteration was at or below the 20% threshold on April 15. A field trip on May 7 showed the alteration at 65%. Livestock use on browse leaders went from 13.2 to 53.8% during the same time period. On another portion of Tangle Creek, in Peso Pasture, streambank alteration went from 30% (April 15, 2003) to 98% (May 22, 2003). Livestock use on browse leaders went from 25.7 to 41% during the same time period (Tonto National Forest Riparian Monitoring Report 2003). This indicates how fast these use thresholds can be exceeded prior to and/or at late spring terminal dates. The Tangle Creek study sites are at lower elevations (~2,800-2,900 feet) than the riparian areas on Buzzard Roost and Soldier Camp allotments (~3,200 – 5,800 feet). Woody browse species on the Buzzard Roost and Soldier Camp allotments may begin leafing out at a later date at these higher elevations. However, it can be expected that riparian/wetland vegetation would have begun seasonal growth, seedlings have germinated, and livestock would be likely to begin concentrating in these areas on these allotments by the proposed late terminal dates. Utilization standards are in place to ensure protective upland and riparian use.

Late spring livestock use in areas with the potential to support riparian/wetland vegetation will reduce the suitability of these areas for CLF. Livestock use on vegetation, if excessive at the later terminal dates, can reduce streambank cover resulting in excessive erosion and down cutting. Erosion will cause channel incision which can lower water-table depths, reducing the site suitability for emergent vegetation and CLF habitat. Erosion will also result in lateral widening of the channel, reducing the space available for vegetation establishment. In boulder-dominated reaches, which are naturally stable, these streambank alterations are not as likely to occur.

Buzzard Roost Allotment

The Buzzard Roost Allotment would see a 33% reduction in permitted numbers. This allotment would have a new permitted use (2,700-3,600 AMs) that is less than the 10-year average actual use (4,054 AMs). This in combination with the proposed livestock forage use threshold reductions (50% to 30-40% on herbaceous vegetation in summer and winter; 50% to 30-40% current year's leaders on winter browse), and pasture deferments will allow vegetation condition to improve on this allotment. Current soil conditions are 97% satisfactory. Improved conditions will increase infiltration and decrease sedimentation into springs and stock tanks. Decreased siltation into stock tanks will decrease the need of maintenance and cleaning. This will decrease the likelihood of direct mortality of CLFs from heavy equipment use within the stock ponds if CLFs are present. Upland forage production should increase with increased vegetation condition. Increased forage in the uplands will reduce grazing pressure on vegetation at springs and stock tanks that support potential/suitable CLF habitat.

Middle Pasture will be changed from a winter to summer grazing pasture, which would allow for livestock grazing within Salt Log Canyon, East Lacy Fork, Buzzard Roost Canyon, and Jakes Tank Canyon creeks during the growing season. Livestock will graze this pasture for 2.5 months, two years out of three. Unnamed perennial reaches within these drainages may be potential/suitable CLF habitat. Livestock use on emergent and/or dense herbaceous vegetation will affect habitat suitability at these sites.

Pine Mountain and Jerky Butte, currently summer-use pastures, will become winter-use pastures. There are no perennial streams in either pasture. There are two stock tanks and one spring which may contain potential/suitable Chiricahua leopard habitat (Table 5). Emergent and/or dense herbaceous vegetation may establish at these two sites as a result of fall-winter grazing (if not currently present). Changes in season-of-use from spring-summer to fall-winter will continue to allow emergent vegetation to become established and maintain itself in many southwestern wetland areas. Winter livestock use, if frogs are hibernating in the stock pond bottoms, may result in direct mortality from trampling.

Buzzard Roost Pasture will no longer be combined in a single unit with Jerky Pasture. It will still be used 2.5 months in the summer; 2 years out of 3. The same livestock numbers will be using a smaller area for the same amount of time. The duration of livestock presence in this pasture will be dependant upon the proposed utilization thresholds. The five stock tanks (Table 5) will likely receive heavier use, impacting vegetation that may be present. Livestock use on emergent and or dense herbaceous vegetation may affect habitat suitability at these sites.

Copper Mountain Pasture will remain a winter pasture. The six stock tanks (Table 5) may contain potential/suitable Chiricahua leopard habitat. Any vegetation that becomes established under this management would likely remain if upland vegetation conditions improve under the proposed stocking reductions. Increased forage production and availability in the uplands would decrease livestock dependency on emergent and/or dense vegetation at the stock tanks. Winter livestock use, if frogs are hibernating in the stock pond bottoms, may result in direct mortality from trampling.

Redman Mesa and Thoroughbred pastures would remain summer pastures. Livestock use on emergent and or dense herbaceous vegetation during the growing season will affect habitat suitability at these sites. Concentrated livestock use of these riparian areas will occur for those 2.5 month periods; the 2 years in 3 that livestock are present. Livestock use on riparian vegetation may have an adverse affect when the previous season's vegetative growth is removed. This can be expected in isolated springs, stock tanks, and perennial stream reaches the first season livestock are moved into the allotment. Any re-growth after livestock are moved will be impacted during the next use period, whether in one year or two years.

Soldier Camp Allotment

Soldier Camp Allotment would see a 54% reduction in permitted numbers. This allotment would have permitted use (2,400-3,000 AMs) that is slightly less than the 10-year average actual use (3,113 AMs). This, in combination with the proposed livestock forage use threshold reductions (50% to 30-40% on herbaceous vegetation in summer and winter; 50% to 30-40% current year's leaders on winter browse), will allow vegetation condition to improve on this allotment. However, the current poor vegetation conditions on the Soldier Camp Allotment pastures occur at livestock actual-use levels close to the proposed permitted use. The additional rest for summer pastures deferred for one year out of three may help in vegetation condition recovery. Upland vegetation in the six pastures proposed for deferment should benefit from the change of annual summer use to deferred use, one year in three, if conditions (climate, length of rest, etc.) are adequate to allow re-growth and regeneration.

Current soil conditions are 86% satisfactory. Under the proposed action, improved conditions will increase infiltration and decrease sedimentation into springs and stock tanks. Decreased siltation into stock tanks will decrease the need of maintenance and cleaning. This will decrease the likelihood of direct mortality of CLFs, if present, from heavy equipment use. Complete siltation from excessive erosion will also eliminate existing suitable/potential CLF habitat. Upland forage production should increase with increased vegetation condition. Increased forage in the uplands would reduce grazing pressure on vegetation at springs and stock tanks that support potential/suitable CLF habitat.

Winter Country Pasture will be divided into two pastures which would allow each half to be deferred each year. The grazing season will start one month later (November instead of October). The riparian/wetland vegetation and CLF potential/suitable habitat within the perennial reaches in Gun Creek and the five stock tanks (Tables 6 and 7) may be impacted by the late “winter” season May 31 terminal date. This pasture will be deferred from year to year.

Gun Creek Pasture will be grazed in alternate years with Winter Country Pasture. The grazing season will start one month later (November instead of October). Gun Creek forms the boundary between Winter Country and Gun Creek pastures. The riparian/wetland vegetation and CLF potential/suitable habitat within the perennial reaches in this portion of Gun Creek may be impacted by the late “winter” season May 31 terminal date.

Bryant Mountain Pasture, due to the presence of Spring Creek, livestock will only use this pasture for four months, November through February. This is an increase of use from the current 1-1.5-month use season. Despite the longer use season, terminating the use at the end of February will remove livestock prior to the initiation of spring growth. Riparian/wetland vegetation and CLF potential/suitable habitat in Spring Creek and the two springs and one stock tank (Tables 6 and 7) should be able to maintain itself as a result of this management. This pasture will be deferred in consecutive years, allowing upland vegetation to receive less grazing pressure and more rest than under the current conditions.

Spring Creek Pasture will be re-named Juniper Pasture after Spring Creek has been excluded from grazing. Riparian conditions and CLF habitat in Spring Creek and the three stock tanks and spring (Table 6) are expected to improve.

Hole-in-the-Ground Pasture will receive summer use (June through September) two years out of three instead of annual summer use. Spring Creek, which flows through this pasture, could receive growing season use two years out of three. However, FS personnel concluded that Spring Creek is mostly inaccessible to livestock. Riparian/wetland vegetation and CLF potential/suitable habitat in Spring Creek would not be impacted under this grazing system. There are 5 stock tanks that may contain CLF potential/suitable habitat (Table 6). This habitat and riparian/wetland vegetation will likely be impacted by livestock use during the growing season two years out of three.

Upper Water Pasture would receive summer use (June through September) two years out of three instead of annual summer use. Soldier Camp Creek, which flows intermittently through this pasture with perennial pools, would receive growing season use two years out of three. Documented high livestock use will likely continue in this area. There are four stock tanks that may contain CLF potential/suitable habitat (Tables 6 and 7). This habitat and riparian/wetland vegetation would likely be impacted by livestock use during the growing season two years out of three.

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 following section 7 of the Act.

The town of Young lies east-northeast of the action area and includes a population of 561 residents. Demand for groundwater is an issue and may ultimately affect groundwater recharge, springs, and surface flow, thus affecting CLF and other species associated with aquatic habitats.

There are two small parcels of private lands within the Buzzard Roost Allotment. There are no private lands within the Soldier Camp Allotment; therefore there are no cumulative effects. Private property and ranch in-holdings within the action area are limited, but will likely include road use and maintenance in and out of base property. Because much of the allotments are in rugged terrain, road use has historically been in the creek bottoms and may be serving as sources of sedimentation depending on soils.

CONCLUSION

After reviewing the current status of CLF, the environmental baseline for the action area, the effects of the proposed permit renewals and AMPs, and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the threatened CLF. No critical habitat has been designated, thus, none would be affected. We base these conclusions on the following:

1. The population of CLFs in the area is unknown due to insufficient surveys. We do not believe that CLFs are reasonably certain to occur. Both allotments and their actions areas are outside of the known CLF dispersal range from occupied CLF habitats.
2. The CLF occurs over a large area of eastern Arizona, western New Mexico, and portions of northwestern Mexico. The proposed action affects a small portion of the species' potential range;
3. The ecological condition of the area should be maintained and improved during the 10-year life of the AMPs.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation 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.

I. AMOUNT OR EXTENT OF TAKE

Recent court cases have brought attention to many grazing biological opinions in Arizona. The courts have specified that two standards must be met in biological opinions. The Fish and Wildlife Service, together with the action agency, must determine that 1) a listed species occurs or is reasonably certain to occur in the project area during the life of the proposed action, and 2) take will or is reasonably certain to result from the action under consultation.

Although suitable habitat exists, the presence of CLFs on these allotments is not documented in the Biological Assessments and Evaluations. Surveys for CLFs have not been conducted on these allotments specifically for this species. Therefore we can not anticipate that incidental take will occur.

Available information on CLFs on the allotments does not meet the guidance set in the grazing guidance criteria which would allow us to conclude the species is likely to be present in unsurveyed, suitable habitat. According to the 2004 grazing guidance criteria, habitat, likely to be occupied by the CLF includes: 1) currently suitable habitat where the frog has been documented within the last 5 years, but is apparently now absent or 2) suitable habitat that is (a) within 1 mile overland of occupied habitat, (b) within 3 miles along an ephemeral or intermittent drainage from occupied habitat, or (c) within 5 miles along a perennial stream from occupied habitat. Suitable/potential habitats on these two allotments are unsurveyed and are located at greater distances than the above-mentioned criteria from known occupied habitats. Generally, there are no restrictions for cattle use in riparian areas that may be “likely to be occupied” other than season-use and utilization limits. There are several unsurveyed suitable/potential perennial or intermittent streams, springs, and stock tanks on both allotments. According to the 2004 grazing guidance criteria, the “may effect, not likely to adversely affect” determination could not be made because of the above rationale.

In conclusion, we anticipate no take of CLFs as a result of the proposed action. If CLFs are documented in the future in the action area, the Forest Service should determine whether re-initiation of consultation is necessary.

II. EFFECT OF THE TAKE

No take is anticipated.

III. REASONABLE AND PRUDENT MEASURES and TERMS AND CONDITIONS

In order to be exempt from prohibitions of section 9 of the Act, the Tonto NF would have to comply with any terms and conditions, which implement reasonable and prudent measures and outline required reporting and monitoring requirements. Terms and conditions are non-discretionary; however, no terms and conditions are contained in this opinion.

Disposition of Dead or Injured Listed Animals

Upon finding a dead or injured threatened or endangered animal, initial notification must be made to the Fish and Wildlife Service's Law Enforcement Office, 2450 W. Broadway Rd. #113, Mesa, Arizona 85202 (480/967-7900) 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, and any other pertinent information. Care must be taken in handling injured animals to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible condition. If feasible, the remains of intact specimens of listed animal species shall be submitted as soon as possible to this office or the nearest AGFD office, educational, or research institutions (e.g., Arizona State University in Tempe) holding appropriate State and Federal permits.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution before implementation of the action. A qualified biologist should transport injured animals to a qualified veterinarian. Should any treated listed animal survive, FWS should be contacted regarding the final disposition of the animal.

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 recommend that the Pleasant Valley Ranger District survey all suitable/potential habitats (springs, stock tanks, and perennial stream reaches) for the presence of CLFs, using the accepted protocol on these allotments.
- We recommend that the PVRD coordinate with the FWS and AGFD to reestablish the CLF to suitable habitats.
- We recommend that the PVRD work with the FWS and AGFD to begin an aggressive program to ensure that non-indigenous aquatic organisms (bullfrogs, crayfish, etc.) are not introduced to the action area and, if they are, to support actions to control them.
- We recommend that the PVRD investigate the feasibility of excluding livestock from some or all of Soldier Camp Creek in the holding pen in Hole-in-the-Ground Pasture. The BA

describes this area as being highly impacted, but with high potential for recovery. Restoring this reach may benefit CLFs and other riparian and aquatic species.

- We recommend that the PVRD investigate the feasibility of changing the terminus of the fall-winter grazing period from 31 May to 1 April on both allotments. Riparian vegetation has usually begun leafing out and becomes attractive to livestock by that time. If the dates can not be changed, we recommend site inspections in early-mid-April to monitor and prevent exceeding established use thresholds.
- We recommend that the PVRD investigate the feasibility of providing alternative watering sources at springs with potential/suitable CLF habitat. Installation of spring boxes and troughs would protect spring wetland vegetation and provide fresh water to livestock.

In order for 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 STATEMENT

This concludes the formal consultation and conference on the Tonto National Forest's proposal to renew the 10-year grazing permit and implement the allotment management plans for the Buzzard Roost and Soldier Camp Allotments. As provided in 50 CFR 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (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 adversely 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 way that causes an effect to a listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation, if it is determined that the impact of such taking will cause an irreversible and adverse impact to the species.

We appreciate the Tonto National Forest's efforts to identify and minimize effects to listed species on the Buzzard Roost and Soldier Camp Allotments. For further information please contact Dave Smith (928) 226-0614 x 109 or Debra Bills (602) 242-0210 x 239. Please refer to consultation number 02-21-04-F-0273 in future correspondence concerning this project.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
District Ranger, Pleasant Valley Ranger District, Tonto National Forest
Bob Broscheid, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Dan Fenn, D.G. Fenn Construction, Inc., Phoenix, AZ

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Appendix A: Concurrences

Arizona agave

To date no Arizona agaves have been documented on either the Soldier Camp or Buzzard Roost allotments. Potential habitat exists in McDonald Pocket, Hole in the Ground and Winter Country pastures on the Soldier Camp allotment. Since detailed surveys have not been conducted over all suitable habitats, there is the possibility that Arizona agave is present and has gone undetected.

We concur with the finding of “may affect, not likely to adversely affect” for the Arizona agave from the proposed action for the following reasons and conclude that the proposed action meets the “no effect” determination in the 2004 guidance criteria for the species:

- The listed plant is not present within the action area.

Southwestern willow flycatcher

There is no documented occupied habitat on either the Buzzard Roost or Soldier Camp allotments. Tonto Creek, which borders the northern boundary of the Soldier Camp allotment, has suitable unoccupied or recoverable habitat, but the species has not been located there. Direct access by livestock to this unoccupied habitat is unlikely due to steep terrain and general topography (Biological Assessment Buzzard Roost/Soldier Camp allotments 2004). The Buzzard Roost allotment lies higher in the Spring Creek and Salome watersheds. Habitat parameters for this species are generally absent from this allotment, but effects from past grazing may influence watershed parameters downstream.

The soil/riparian conditions that are impaired in the Spring Creek pasture are being fenced to help facilitate improvement. Although not necessarily being fenced for endangered species purposes, this mitigation may improve habitat conditions in the Spring Creek and Rye-Tonto Creek sub-watersheds. According to ArcView analysis done by the Tonto NF, the closest occupied habitat is approximately 20 miles downstream at the Tonto Creek inflow at Roosevelt Lake.

We concur with the finding of “may affect, not likely to adversely affect,” for the flycatcher from the proposed action for the following reasons, and further conclude that the proposed action meets the “no effect” determination in the 2004 guidance criteria:

- No suitable breeding or known migration willow flycatcher habitat is found on either allotment.
- Utilization rates are set at 30- 40% for the summer pastures and are within the parameters for maintaining Uplands and Watershed Conditions parameters as outlined on page G-27 of the Southwestern Willow Flycatcher Recovery Plan (2002b). Riparian utilization rates are also established (see the description of the proposed actions).

- Riparian areas found on these allotments are located within narrow canyons at elevations not known to be used by breeding willow flycatchers.

Bald Eagle

The two off-site nest territories that may be affected by the proposed action as related to the Soldier Camp allotment are the Seventy-six and Sheep Breeding Areas. Both nests lie downstream, off of the allotment, but are within the Rye-Tonto Creek 5th code watershed. The Dupont Breeding Area is located on the Buzzard Roost allotment. According to AGFD and Salt River Project, there are two nests in ponderosa pine snags. The northernmost nest appears to have been occupied in 1997-1998 and again in 2003. In the last six years, this nest has fledged one documented eaglet (Arizona Game and Fish Department 2002).

We concur with the finding of “may affect, not likely to adversely affect,” for the bald eagle from the proposed action because the 2004 grazing guidance criteria are met and for the following reasons:

- Livestock management activities on the Buzzard Roost Allotment (Dupont Breeding Area) would not occur during the January to June nesting period. Guidelines established as part of the Annual Operating Instructions determine where livestock can be moved depending upon the presence of nesting bald eagles. Range improvements would not be maintained or constructed during the breeding season.
- Implementing the utilization rates proposed that are recommended in the Southwestern Willow Flycatcher Recovery Plan will benefit bald eagles by maintaining healthy upland and riparian conditions on these allotments. This will maintain forage and nesting resources, used by bald eagle, within and downstream of these allotments.

Mexican Spotted Owl

In the analysis area three Protected Activity Centers (PAC) occur on the Buzzard Roost allotment in the Copper Mountain, Pine Mountain, and Juniper Flat Holding pastures. Protected and/or restricted habitat is limited on the Buzzard Roost allotment and is absent on the Soldier Camp allotment. Critical habitat is designated and consists of 3,983,042 acres in Arizona. A portion of Critical Habitat Unit BR-W-5 is located in the southern portion of the Buzzard Roost Allotment; within the Copper Mountain, Redman Mesa, Thoroughbred, Pine Mountain, and Juniper Flat pastures.

We concur with the finding of “may affect, not likely to adversely affect,” for the Mexican spotted owl and critical habitat from the proposed action because the 2004 grazing guidance criteria are met and for the following reasons:

- Winter livestock grazing (October through April) would occur in the PACs in the Juniper Flat, Pine Mountain, and Cooper pastures on the Buzzard Roost Allotment. The PACs located in the Pine Mountain and Copper Mountain pastures are located in steep terrain where herbaceous productivity is low due to canopy crown closure and pine needle cast. The

Juniper Flat holding pasture is used primarily in conjunction with the Pine Mountain pasture (Oct-April use) and serves as a large corral for holding cattle for a few days, doctoring sick or hurt cattle, branding, etc. Because of this designated use, there are no utilization limits or season of use assigned to this pasture. The PAC associated with this holding pasture exhibits very steep, rugged terrain, with little herbaceous component due to soils, slope, and degree of canopy closure. Due to the lack of herbaceous component inside the PAC, the absence of a utilization limit is not anticipated to be a factor in affecting prey availability.

- Mountain meadows in the analysis area are absent. Riparian conditions, generally speaking, will improve on both allotments from the reduction in grazing pressure and the incorporation of lighter use standards. Primary constituent elements are not expected to experience significant negative impacts if the Allotment Operation Plan is followed.
- In addition to the above, an existing biological opinion (On-going and Long-term Grazing on the Tonto National Forest, AESO/SE 02-21-99-F-300) for the Buzzard Roost allotment concurred with the “may affect, not likely to adversely affect,” determination for MSO under existing management. The new proposed action should lead to improving conditions for MSO by addressing concerns of impaired and unsatisfactory soils, and riparian tree and shrub composition which may be important for dispersing or wintering Mexican spotted owls.

Loach minnow and Spikedace

We concur with the finding of “may affect, not likely to adversely affect,” for the loach minnow and spikedace from the proposed action and conclude that this project meets the 2004 grazing guidance criteria for the following reason:

Loach minnow and spikedace currently do not occupy the analysis area.

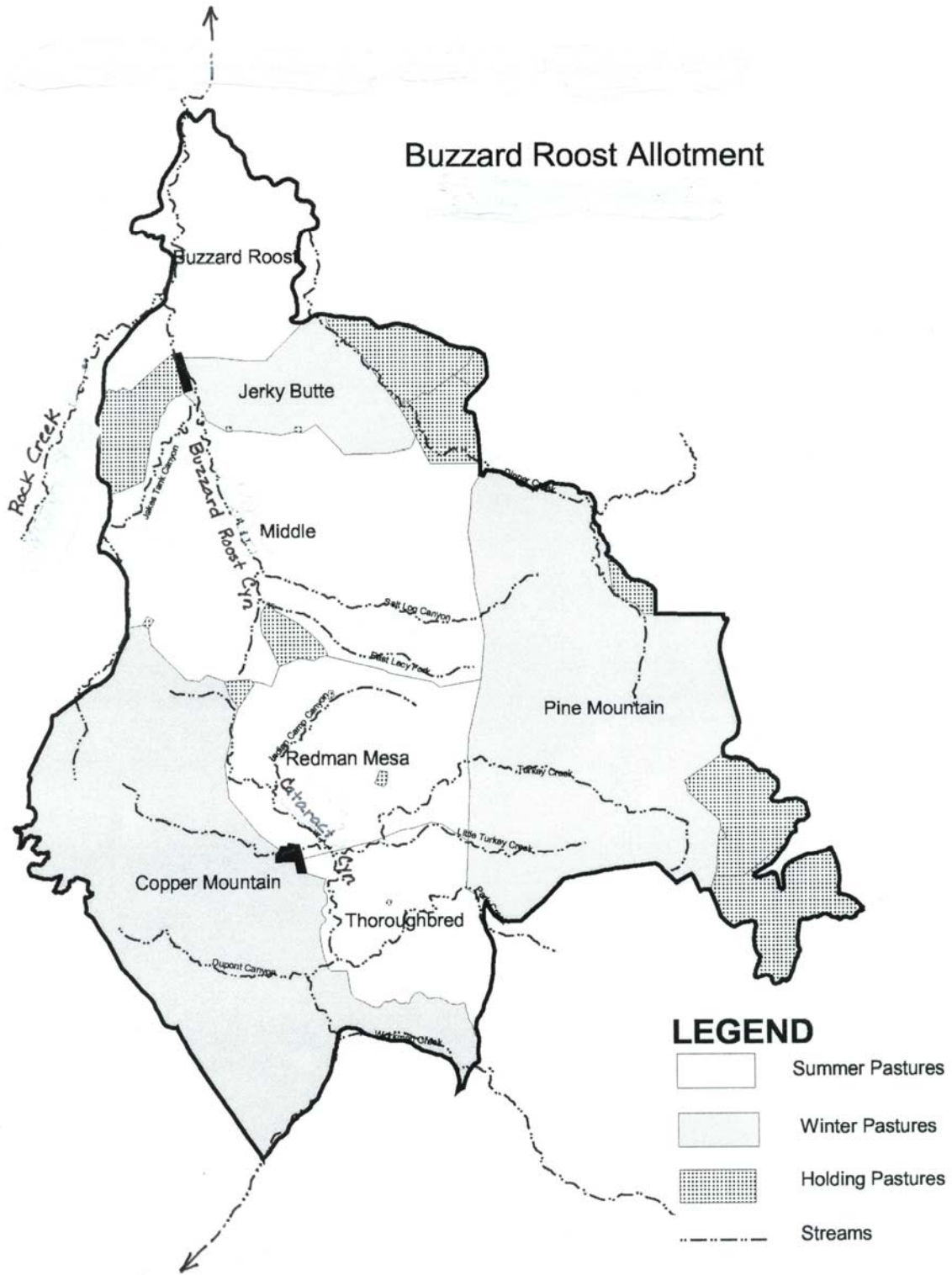
Gila topminnow

Historical Gila topminnow habitat does not exist on either allotment, but does occur downstream approximately 4 miles near the town of Gisela. Occupied habitat exists approximately seventeen miles downstream in the Gun Creek sub-watershed. Direct effects from the proposed action are not anticipated as Gila topminnow presence and habitat are not associated with either allotment.

We concur with the finding of “may affect, not likely to adversely affect,” for the Gila topminnow from the proposed action and conclude the project meets the “no effect” determination in the 2004 grazing guidance criteria for the following reason:

Gila topminnow currently does not occupy the analysis area.

Map 2. Buzzard Roost Allotment showing major drainages and the pasture management under the preferred alternative.



Map 3. Soldier Camp Allotment showing major drainages and the pasture management under the preferred alternative.

