United States Department of the Interior

U.S. Fish and Wildlife Service
Arizona Ecological Services Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 FAX: (602) 242-2513

In Reply Refer To:
AESO/SE
02EAAZ00-2012-F-0423
02EAAZ00-2007-I-0221

July 24, 2014

Mr. Neil Bosworth, Forest Supervisor
Tonto National Forest
2324 East McDowell Road
Phoenix, Arizona 85006

Dear Mr. Bosworth:

Thank you for your November 19, 2013, letter 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), received by our office November 22, 2013. At issue are impacts that may result from proposed grazing on the Tonto Basin, Walnut, and 7/K Allotments on the Tonto National Forest (TNF), Gila County, Arizona. You concluded the proposed action "may affect, is likely to adversely affect" the endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and requested initiation of formal consultation. All the information necessary to initiate formal consultation was received on March 2, 2014.

Your have also concluded the proposed project "may affect, but is not likely to adversely affect" designated critical habitat for the southwestern willow flycatcher, the threatened Mexican spotted owl (*Strix occidentalis lucida*) and its designated critical habitat, designated critical habitat for the endangered spikedace (*Meda fulgida*), the proposed yellow-billed cuckoo (*Coccyzus americanus*), the proposed northern Mexican gartersnake (*Thamnophis eques megalops*) and its proposed critical habitat, and the proposed narrow-headed gartersnake (*Thamnophis rufipunctatus*) and its proposed critical habitat. We concur with these determinations and provide our rationales in Appendix A.

Additionally, you have concluded the proposed action would have no effect on the threatened Chiricahua leopard frog (*Lithobates chiricahuensis*). "No effect" determinations do not require our review and are not addressed further. At your request, we also provide technical assistance with respect to the Bald and Golden Eagle Protection Act (Appendix B).

This biological opinion (BO) is based on information provided in the November 2013 amended biological assessment (BA), telephone conversations, electronic mail correspondence, 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

August 2, 2013: We received your August 2, 2013, request for concurrence that the proposed action "may affect, but is not likely to adversely affect" southwestern willow flycatcher and its critical habitat, Mexican spotted owl and its critical habitat, the Chiricahua leopard frog, and critical habitat for spikedace.

January 17, 2013: We provided correspondence, dated January 17, 2013, indicating that we could not concur with your August 2, 2013, request for concurrence.

September 6, 2013: You provided, via electronic mail, the draft Amendment to the BA.

November 4, 2013: We provided, via electronic mail, comments on the draft Amendment.

November 22, 2013: We received your November 19, 2013, request for formal consultation and the final Amendment to the BA.

February 19, 2014: We provided, via electronic mail, clarification language to ensure agreement on an accurate description of the proposed action.

March 2, 2014: You provided, via electronic mail, your agreement on the accuracy of the description of the proposed action, with a few minor corrections. Formal consultation initiated.

March 19, 2014: We provided our 30-day letter acknowledging that all the information necessary to initiate formal consultation was provided or is otherwise accessible for our consideration and reference.

June 4, 2014: You provided, via electronic mail, your determination that the proposed action would have no effect on Chiricahua leopard frog.

June 27, 2014: We requested a 20-day extension to the consultation timeframe to allow for the provision of additional information necessary to complete our analysis.

June 30, 2014: You provided additional information and agreed to an extension to August 5, 2014, for the biological opinion.

July 16, 2014: We transmitted the Draft BO to TNF.

July 21, 2014: You provided your review, via electronic mail, indicating you do not have any further comments on the Draft BO.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The TNF proposes to reauthorize permitted livestock grazing on Tonto Basin, 7/K, and Walnut allotments, located in the foothills of the Sierra Ancha and Mazatzal Mountains within the Tonto Basin Ranger District of the TNF, Gila County, Arizona. The allotments total approximately 147,944 acres and range in elevation from 2,150 feet at Roosevelt Lake to 7,100 feet in elevation in the Mazatzal mountain range. The allotments are depicted in Figure 1 in this BO, but we refer the reader to maps and figures available in the BA for a more detailed and accurate depiction of the location of pastures and proposed improvements within the action area.

The allotments fall within Management Area 5G, 5D, 6F and 6J as described in the 1985 Tonto National Forest Land Management Plan (LMP). This action is needed to comply with the Rescissions Act (Public Law 104-19, 1995) and because current management plans do not include the application of adaptive management as described in Forest Service Handbook (FSH) 2209.13, Chapter 90. The purpose of this initiative is to authorize livestock grazing for a period of 10 years consistent with Forest Service policy to make forage from lands suitable for grazing available to qualified livestock operators (FSH 2201). Cattle graze on a rest rotation system across the three allotments in four separate herds with each herd entering any given pasture for a period of between one and five months. After being grazed each pasture is rested for at least one full growing season. Water developments and salt blocks are located throughout each pasture, and this allows for distribution of cattle across the pasture to limit concentrated use around water sources.

Tonto Basin Allotment (118,552 acres)

Cline and Wells Permits

The current permittees for the northern portion of Tonto Basin Allotment hold two permits. The permittees graze cattle under Cline permit and, as trustee for the other, have taken non-use for resource protection on Wells permit since 2006. Current permitted numbers for Cline permit are 66 cattle yearlong and 48 yearlings from January 1 through May 31 each year. Current permitted numbers for Wells permit are 217 cattle yearlong and 162 yearlings from January 1 through May 31. Both permits were reduced by 50 percent in 2001 for noncompliance with terms of these grazing permits. Proposed permitted numbers for the Cline permit are 125 cows/bulls yearlong, 100 yearlings from January 1 through May 31 each year; and for the Wells permit are 217 cattle yearlong and 162 yearlings from January 1 through May 31 each year.

Grazing is managed under a deferred rotation system with eight pastures in the Cline portion of the Tonto Basin Allotment. A number of fences and water developments were damaged by the Edge Complex Fire in 2006. The permittee's sons have assumed responsibility for managing the Cline Wells permits and have worked diligently over the past several months to repair or replace these facilities. Under the permit, existing water developments and pasture fences would continue to be maintained. The permittees plan to hold Edwards Park and the upper west portions of the allotment south of Mt. Ord in reserve to be used as necessary to alleviate use in

other parts of the allotment or when their cattle herd grows enough towards permitted numbers to warrant use.

The Cline permit has four pastures along the Tonto Creek Riparian Unit (TCRU). Cattle numbers have been below 60 head the last couple years and are slowly increasing. As cattle numbers increase, additional water sources may be needed and pasture usage may increase.

The Mesquite Flat Pasture also has most of its waters on the far western edge of the pasture. Major water sources include Park Creek, Walnut Canyon Spring and a pipeline that brings water to the eastern edge of the pasture boundary. Most of this pasture is within two miles of southwestern willow flycatcher (flycatcher) nesting habitat, but cattle are only known to occur alongside the western fence line near the Walnut Spring area.

The Malone Holding Pasture is used as a gathering point where cattle can be moved for approximately one month during the Gila County Cattle Sale. Cattle are worked, branded and shipped out of this area for the sale, which occurs sometime around May 15th. The forage in this pasture is almost completely annuals.

The Kayler Pasture is used at different times of the year including the summer. The water for this pasture comes from Chinaberry spring and is piped down to several troughs near the Malone Holding Pasture. The other water source comes from Hackberry Basin Spring and is piped down to two troughs along Quartz Ledge Canyon.

The Long Mesa Pasture is used at different times of the year depending on water availability. The major water sources are located at Buena Vista Spring, Reno Creek, and a trough at the far southwestern portion of the pasture. Cattle mostly graze on the far eastern side of this pasture and not on the western side of the mountain ridge that parallels Highway 188. Corrals are proposed to be built in the desert scrub vegetation community within three quarters of a mile from suitable flycatcher habitat. On the northern end of the pasture another corral is proposed within one half mile of suitable flycatcher habitat. However, there are other existing facilities in these areas that may attract cowbirds. There is a refuse transfer station off FS 491 within one quarter mile of the proposed southern corral and newly developed hay fields on private property between the proposed northern corral and flycatcher habitat. The TNF has not seen cattle in this area due to limited water and have not observed cowbirds in this pasture during flycatcher surveys.

The permittees and TNF have been discussing a number of potential range improvements to improve livestock management and cattle distribution on this allotment. These potential projects include a boundary fence to divide the east portion of the allotment from the Ewing portion; development of a small unnamed spring near Punkin Center transfer station; and corrals near this transfer station and in Long Mesa Pasture near Highway 188 (BA Figure 2). The Forest Service will conduct surveys for listed and proposed species in these project areas once site-specific plans are developed and will consult with us as required. Because we have not received any specific proposals regarding these projects, they are not included in the proposed action analyzed in this BO.

Ewing Permit

The proposed action would continue the current permitted numbers of 266 cows/bulls yearlong and 193 yearlings from January 1 through May 31 under a rest rotation grazing system. The permittee recently extended a pasture fence to divide Bouquet and Cline Mesa pastures on the north side of Greenback Creek below private inholdings. Existing water developments and pasture fences would continue to be maintained.

Currently, the permittee is not using Clover/Bearhead pasture as part of his regular rotation. It has not been economically feasible for the permittee to consider moving cattle between pastures located below Picture Mountain and Clover/Bearhead pasture. Historic trails disappeared during years of nonuse resulting from drought conditions, and road maintenance makes trucking livestock costly. Under the proposed action, the Clover/Bearhead pasture would be grazed by a separate herd of approximately 20 cattle while the rest of the herd rotates through remaining pastures. Use of the Bearhead unit is restricted to dates outside the breeding season of the Mexican spotted owl (March 1-August 31). Cattle water at stock tanks, springs and creeks in the Clover/Bearhead pasture.

The Ewing permit has four pastures within two miles of nesting sites for the southwestern willow flycatcher: Bouquet, Cline Mesa, Lake, and Methodist. Cattle numbers are below those permitted and tend to be fairly well distributed across the pastures that are grazed. The permit was reduced by 50 percent in 1995 for noncompliance with terms of the grazing permit.

The Methodist Pasture is a large pasture that is proposed to be split into two separate pastures. The Southern portion that is along the Roosevelt Lake shore is traditionally used during the summer as water levels recede and cattle take advantage of the Bermuda grass that grows along the shore. Other water sources in this pasture allow for fairly good cattle distribution; however the majority of the herd tends to be located along the lake shore.

The Cline Mesa Pasture contains a large section of Greenback Creek that is traditionally used only in the winter to help protect riparian vegetation in the creek. However, due to varying rotations, ephemeral portions of the creek that lack riparian vegetation have been used during the summer at different times in the past.

The Bouquet Pasture has three water sources available to cattle in the pasture. The majority of these water sources are at the southeastern portion of the allotment provided by a water line to troughs from a storage tank.

The Lake Pasture is traditionally used during the spring to take advantage of annuals. The pasture has also been used while the lake is receding to take advantage of Bermuda grass that grows along the lake shore. The main water source while cattle are in this pasture is the lake, and the majority of the herd is usually found along the far southern portion of the pasture.

Approximately 0.75 miles of shoreline within the conservation space of Roosevelt Lake are accessed by cattle in the Lake Pasture. Cattle access the lake for water and forage, in the form of Bermuda grass. Typically, 30 cattle water and graze along the lakeshore with other groups of about six cattle distributed throughout the pasture. Three additional troughs in the pasture allow for cattle distribution throughout the pasture helping to lower concentrations of cattle in any

given area. Cattle will typically use this pasture on a rotation schedule for approximately three months out of the year.

When Roosevelt Lake reaches 45 percent of its full pool capacity, cattle are removed from the Lake Pasture because of difficulty in maintaining fences and access. Above the 45 percent level, cattle do not have access to the lower reaches of Tonto Creek because fencing becomes flooded, preventing cattle from leaving the Lake pasture. Cattle do not have access to historical habitat used by southwestern willow flycatchers.

Due to the proximity of the Lake Pasture to potential and suitable flycatcher habitat, use of this pasture will be seasonally restricted to outside of the flycatcher breeding season if the lake level remains below 60 percent, as flycatcher habitat develops in the areas around Indian Point, or if flycatcher territories are found during surveys. Seasonal restrictions will prevent cattle from entering this pasture from May 15 through August 15 (the southwestern willow flycatcher breeding season) to protect the critical incubation period and reduce parasitism by brown-headed cowbirds. Cattle will be over 2 miles from riparian habitat along Tonto Creek during this period.

The permittees and TNF have been discussing a number of potential range improvements to improve livestock management and cattle distribution on this allotment. These potential projects include a fence on the north side of Greenback Creek above private inholdings; and extending current pipelines and adding troughs in three pastures (Cline Mesa pasture, along the fence between Bouquet and Bathtub pastures, and in Bathtub pasture at Lion Spring) (BA Figure 2). The Forest Service will conduct surveys for listed and proposed species in these project areas once site-specific plans are developed and will consult with us as required. Because we have not received any specific proposals regarding these projects, they are not included in the proposed action analyzed in this BO.

Tonto Creek Riparian Unit

Established in 1989 as an amendment to the Roosevelt Lake Fish and Wildlife Coordination Act report, the TCRU addressed concerns for wildlife habitat lost when Roosevelt Dam was raised. TCRU was established as a special subunit of the Tonto Basin grazing allotment. Limited grazing was initially authorized within the unit; however grazing has not been authorized in recent years due to potential effects to threatened, endangered, and sensitive species within the unit. TCRU is a riparian exclosure, and excludes livestock grazing year-round.

7/K Allotment (17,615 acres)

The proposed action would continue permitted numbers of 150 cows/bulls year-round and 119 yearlings from January 1 through May 31. No new range improvements are proposed. The permittee would continue to repair existing water developments and fences that were not sufficiently maintained during a period of nonuse. If new projects are deemed necessary during the term of this permit, those projects would be analyzed for potential effects to listed or proposed species and critical habitat, and TNF would consult with us as required.

Allotment boundaries include Sycamore Creek on the north, the top of the Mazatzal Mountains on the west, Bumblebee Creek on the south, and Tonto Creek on the east.

The 7/K Allotment has three pastures along Tonto Creek that are within two miles of occupied flycatcher habitat: Ash Creek Pasture, Red Hills Pasture, and Corral Pasture. The permittee runs Corriente cattle that are lighter in weight and used primarily as roping steers.

The Corral Pasture is used as a holding pasture and is the only pasture that has a shipping corral where cattle can be trucked off the allotment; therefore this corral is critical to the operation of the permit. Cattle are sorted through the corral and most cows are trucked off to regional rodeos. Those cattle not chosen will stay in the Corral Pasture for about a week until the rodeo cattle are brought back and the cows are moved back with the rest of the herd. This occurs approximately four or five times throughout the year.

The Red Hill pasture and Ash Creek Pasture are currently managed together through herding, which has been shown to be effective through pasture inspections. Current strategy is to keep cattle in the Red Hills area for approximately three months and then in the southern Ash Creek Pasture the next three months. A fire destroyed the fence line between these two pastures, and reconstruction is expected to be completed in the next two years. The Red Hills area has two main water sources that cattle use, including the Red Hills Horizontal Well and Ash Creek. Cattle can also use seasonal water in a few dirt tanks and intermittent streams when available. Cattle tend to stay in the western portions of the pasture due to availability of forage. The limy sodic soils on the eastern half of this pasture is lower quality forage than the upper bench lands in the western half, though cattle tend to use the eastern half occasionally.

When cattle move to the southern Ash Creek Pasture they concentrate at water sources around Bumblebee Creek and the well. Water availability in the creek and the lake usually determines the location of the cattle in this pasture. If the lake is at full pool then cattle will stay down next to the water's edge where the creek reaches the lake. However, during the flycatcher breeding season, the lake level is usually low enough that cattle cannot access the lake, and Bumblebee Creek and a spring at the far western edge of the Pasture are the only sources of water.

The only place cattle have access to Roosevelt Lake is a canyon that fills up above the allotment boundary fence when the lake is above 95 percent of full pool capacity. When the lake is above 95 percent, there is no habitat available to breeding flycatchers in this pasture, and the nearest available habitat is just below A-Cross road. When the lake level is below 95 percent, cattle do not have access to habitat used by breeding flycatchers. The only currently available water for cattle in this pasture is a seasonal spring at Red Hills Horizontal Well. There is perennial water at the western-most section of Ash Creek in this pasture, but it is not used by cattle because it is located in an inaccessible canyon. There is also an existing well called Solar Well that is currently in disrepair and will be replaced or repaired sometime in the future.

Cattle are well distributed in this pasture and typically use the pasture on a deferred rotational basis for approximately four months of the year. At most, 150 adult cows and 119 yearlings will be in this pasture. Highway 188 also lies between this pasture and occupied breeding flycatcher habitat. Highway 188 is fenced and prevents cattle access to flycatcher habitat.

Walnut Allotment (11,777 acres)

Proposed permitted numbers are 150 cows/bulls yearlong with 120 yearlings as carryover from January 1 through May 31, which differs from the current permit. The current permit authorizes 75 cattle yearlong and 60 yearlings from January 1 through May 31. Permitted numbers were reduced by 50 percent in 2002 for noncompliance. The permittee has worked for more than a year now to rebuild fences and repair water developments on the allotment. Additional pasture fencing and pipeline extensions have been approved to improve livestock distribution as restocking occurs. The permittee is replacing and repairing aging range improvements.

Walnut allotment borders FR 71 on the north, encompasses Walnut Spring and runs along a ridgeline above Oak Creek to the east, and borders FR 423 (Ewing Trail) on the west. This allotment does not contain a portion of TCRU.

The Walnut allotment has three pastures that are within two miles of Tonto Creek: Lann, Cottonwood and Haystack. Cattle were removed after the 2002 drought and 13 head were restocked in 2009. Since then cattle numbers have slowly been increasing. As more cattle are placed on the allotment it is expected that distribution across the pastures will change as cattle search for forage.

The Lann Pasture is managed with the permittee's base property and is usually stocked near the end of February and the middle of May. This pasture's main forage is annuals. Cattle are typically moved into this pasture to coincide with the Gila County Cattle Sale. Cattle are brought down to the headquarters to be sorted and shipped off to the local sale.

The Cottonwood Pasture traditionally is used alternatively with the Haystack pasture either prior to entering the Lann pasture or after entering the Lann pasture. The Cottonwood Pasture has several water sources located at the far eastern edge of the pasture, over two miles away from occupied flycatcher habitat. There is a storage tank and two additional troughs that can be used to keep cattle on the eastern side of this pasture. Cattle do typically spend most of their time in this pasture in the eastern edge due to better forage availability. The lower western portion of the pasture is comprised of mostly annuals whereas the eastern higher terrain provides jojoba, mendora, globe mallow, along with annuals.

The Haystack Pasture has not been used recently because cattle were only on the allotment for a few years after being pulled off in 2002. Traditionally this pasture is used alternatively with the Cottonwood Pasture either before or after moving into the Lann Pasture. Water sources in this pasture include a proposed water development providing a trough near Haystack Tank and also at Lambing Creek Spring. It is therefore expected that cattle will mostly stay in the eastern part of the pasture. Currently all of this pasture is over two miles away from occupied nesting sites of the flycatcher.

The permittees and TNF have been discussing a number of potential range improvements to improve livestock management and cattle distribution on this allotment. The Forest Service will conduct surveys for listed and proposed species in these project areas once site-specific plans are developed and will consult with us as required. Because we have not received any specific proposals regarding these projects, they are not included in the proposed action analyzed in this BO. These potential projects include the following (see BA Figure 4):

Mr. Neil Bosworth, Forest Supervisor

- Construction of a fence to split Edwards Spring Pasture.
- Addition of a pipeline and trough to the existing development at Edwards Spring to provide water to lower portions of the allotment.
- Added storage to the existing development at an artesian well to supplement water in Cottonwood Pasture.
- Addition to an existing pipeline from Grapevine Spring, tying into an existing line and trough below Hymn Book Spring, which no longer produces enough water.
- Construction of a pipeline from a well on private property down an existing fence line to a corral in Lann Pasture.

All Allotments

In the proposed action, use of Haystack, Cottonwood, Bouquet, Kayler, Malone and Cline pastures would be limited to years with abundant annual forb and grass production (100 pounds/acre based on visual estimate) while providing rest in drier years, and use would also be limited to 50 percent of current year's production (utilization limit for Sonoran desert).

Within Tonto Basin Cline allotment (Kayler and Malone Pastures), abundant annual forbs and grasses can also be produced in years with plentiful winter precipitation. The proposed action for this allotment will also limit use of these pastures to years with abundant annual forb and grass production while providing rest in drier years.

Monitoring plots will be located at sample points established for Terrestrial Ecological Unit Inventory (TEUI). TNF range staff and the permittees will annually monitor vegetative cover and diversity in 0.10 acre plots to track changes, using TEUI sample data from 2000-2005 as a baseline, since the allotment was destocked or very lightly stocked during that sample period.

In Walnut Allotment (Haystack, Lann and Cottonwood Pastures), livestock grazing use in Haystack Pasture will only occur in years when annual forbs and grasses are abundant. Cottonwood Pasture will be used as a regular part of annual rotations.

Adaptive Management

The proposed action would implement the use of adaptive management as described in FSH 2209.13, Ch. 90. Adaptive management uses monitoring results to continually modify management in order to achieve specific objectives. The proposed action and grazing alternatives will provide sufficient flexibility to adapt management to changing circumstances. If monitoring indicates that desired resource conditions, as described in the BA, are not being achieved, adaptive management would be used to modify range management strategies. Such changes may include annual administrative decisions to adjust the specific number of livestock, specific dates for grazing, class of animal, or pasture rotations. These changes would not exceed the limits for timing, intensity, duration and frequency as defined in the term grazing permit. Adaptive management would be implemented through annual operating instructions, which would adjust livestock numbers and the timing of grazing so that use is consistent with current productivity and capacity and is meeting management objectives. Specific management objectives are developed through an Allotment Management Plan (AMP) that is required to be written within 90 days of a grazing National Environmental Policy Act (NEPA) decision being

implemented. The AMP must be within the scope of the NEPA decision, BO and the Environmental Analysis for these allotments.

Adaptive management also includes monitoring to determine whether identified structural improvements are necessary or need to be modified. If changing circumstances require physical improvements or management actions not disclosed or analyzed, further interdisciplinary review would occur. The review would consider the changed circumstances and site-specific environmental effects of the improvements in the context of the overall project. Based on the results of the interdisciplinary review, the District Ranger would determine whether correction, supplementation or revision of the environmental assessment is necessary in accordance with Forest Service policy or whether further analysis under the National Environmental Policy Act is required. If the TNF determines that improvements or management actions to be implemented through adaptive management may affect listed species in a manner not considered in this BO, they will reinitiate section 7 consultation with FWS.

Conservation Measures

The TNF has committed to implement the following conservation measures as part of the proposed grazing action on the Tonto Basin, 7/K, and Walnut allotments.

Southwestern willow flycatcher

1. No grazing will occur within habitat used by breeding flycatchers or designated critical habitat.
    a. Tonto Basin Ranger District has continued to prohibit grazing on lower Tonto Creek to help alleviate the broader negative impacts from historical upland overuse and promote dynamic developing habitat.
2. Due to the proximity of Lake Pasture (Tonto Basin Allotment) and Ash Creek Pasture (7/K Allotment) to breeding flycatcher habitat, these pastures will be seasonally restricted if the lake levels drops below 60 percent of full pool, flycatcher habitat develops in the areas around Indian Point, and flycatcher territories are found during surveys. Seasonal restrictions will prevent cattle from entering these pastures from May 15 through August 15 to protect the critical incubation period and reduce risk of parasitism by brown-headed cowbirds.
3. Due to the proximity of Lann Pasture (Walnut Allotment) to occupied breeding flycatcher habitat, seasonal restrictions will be implemented in this pasture from May 15 to August 15.
4. In the following pastures adjacent to the TCRU, water will be shut off within 1 mile of occupied flycatcher breeding habitat to keep cattle from concentrating in areas in proximity to Tonto Creek and flycatcher nesting areas to reduce the risk of cowbird parasitism during the flycatcher nesting period (May 15 to August 15). The pastures are Bouquet/Cline Mesa, Holding, Kayler, Long Mesa, and Mesquite on Tonto Basin Allotment, and Red Hill on 7/K Allotment.
    a. Habitat will be considered occupied if flycatchers are detected in any of the previous three years of presence/absence surveys conducted by the District Biologist.

5. The TCRU, which runs through portions of the Walnut and Tonto Basin Allotments and includes areas where flycatchers nest, is fenced from cattle grazing year-round. Fences are, and will continue to be, monitored by the permittee and Forest Service District staff. When cattle are seen trespassing, permittees will be notified and cattle will be removed from the TRCU.
6. Upland ranges and riparian areas are grazed at conservative levels.
7. TNF biologist will conduct willow flycatcher surveys annually if and when suitable habitat is present.

Additional management objectives

- Provide at least 40 percent ground cover around springs and riparian areas for wildlife hiding cover.
- Continue to provide access to water for game and non-game species. Wildlife escape ramps and access ramps will be provided and maintained on all cattle troughs.
- In riparian areas across the allotment, provide for regeneration of vegetation to achieve multiple age classes and complex vegetative structure for wildlife habitat.
- To provide for the needs of special status species, desired conditions for the next 10 years are to:
    - Maintain conservative use in upland areas to minimize impacts on riparian habitat in the watershed to provide for the southwestern willow flycatcher and yellow-billed cuckoo.
    - Allow for continued recovery and development of riparian areas in Greenback Creek for spikedace, southwestern willow flycatcher, northern Mexican gartersnake, and yellow-billed cuckoo.
    - Create exclosures for Buena Vista Spring and Clover Spring. This will allow for riparian recovery, bank stabilization, and enhance habitat for native aquatic species such as Gila longfin dace, lowland leopard frog, and canyon tree frog.

STATUS OF THE SPECIES

Southwestern Willow Flycatcher

Description

The southwestern willow flycatcher is a small grayish-green passerine bird (Family Tyrannidae) measuring approximately 5.75 inches. The song is a sneezy “fitz-bew” or a “fit-a-bew”, the call is a repeated “whit.” It is one of four currently recognized willow flycatcher subspecies (Phillips 1948, Unitt 1987, Browning 1993). It is a neotropical migrant that breeds in the southwestern U.S. and migrates to Mexico, Central America, and possibly northern South America during the non-breeding season (Phillips 1948, Stiles and Skutch 1989, Peterson 1990, Ridgely and Tudor 1994, Howell and Webb 1995). The historical breeding range of the southwestern willow flycatcher included southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern Utah, extreme southern Nevada, and extreme northwestern Mexico (Sonora and Baja) (Unitt 1987).

Listing and critical habitat

The southwestern willow flycatcher was listed as endangered, without critical habitat on February 27, 1995 (60 FR 10694). Critical habitat was later designated on July 22, 1997 (62 FR 39129). A correction notice was published in the Federal Register on August 20, 1997 to clarify the lateral extent of the designation (62 FR 44228). On October 19, 2005, the FWS re-designated critical habitat for the southwestern willow flycatcher (70 FR 60886). On August 15, 2011, the FWS proposed a revision to the critical habitat designation, identifying stream segments in each of the 29 Management Units where there are recovery goals (76 FR 50542). On January 3, 2013, the FWS completed its flycatcher critical habitat revision by designating approximately 1,227 stream miles as critical habitat (78 FR 344). These areas are designated as stream segments, with the lateral extent including the riparian areas and streams that occur within the 100-year floodplain or flood-prone areas encompassing a total area of approximately 208,973 acres. About 948 stream miles of proposed critical habitat were excluded from the final revised designation.

A final recovery plan for the southwestern willow flycatcher was signed by the FWS Region 2 Director and released to the public in March 2003 (USFWS 2002). The Plan describes the reasons for endangerment, current status of the flycatcher, addresses important recovery actions, includes detailed issue papers on management issues, and provides recovery goals. Recovery is based on reaching numerical and habitat related goals for each specific Management Unit established throughout the subspecies range and establishing long-term conservation plans (USFWS 2002).

Habitat

The southwestern willow flycatcher breeds in dense riparian habitats from sea level in California to approximately 8,500 feet in Arizona and southwestern Colorado. Historical egg/nest collections and species' descriptions throughout its range describe the southwestern willow flycatcher's widespread use of willow (*Salix* spp.) for nesting (Phillips 1948, Phillips *et al.* 1964, Hubbard 1987, Unitt 1987, San Diego Natural History Museum 1995). Currently, southwestern willow flycatchers primarily use Geyer willow (*Salix geyeriana*), coyote willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), boxelder (*Acer negundo*), saltcedar (*Tamarix* sp.), Russian olive (*Elaeagnus angustifolio*), and live oak (*Quercus agrifolia*) for nesting. Other plant species less commonly used for nesting include: buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood (*Populus* spp.), white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Based on the diversity of plant species composition and complexity of habitat structure, four basic habitat types can be described for the southwestern willow flycatcher: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al.* 1997).

The flycatcher's habitat is dynamic and can change rapidly: nesting habitat can grow out of suitability; saltcedar habitat can develop from seeds to suitability in about four to five years; heavy runoff can remove/reduce habitat suitability in a day; or river channels, floodplain width, location, and vegetation density may change over time. The flycatcher's use of habitat in different successional stages may also be dynamic. For example, over-mature or young habitat not suitable for nest placement can be occupied and used for foraging and shelter by migrating, breeding, dispersing, or non-territorial southwestern willow flycatchers (McLeod *et al.* 2005,

Cardinal and Paxton 2005). Flycatcher habitat can quickly change and vary in suitability, location, use, and occupancy over time (Finch and Stoleson 2000).

Tamarisk is an important component of the flycatcher's nesting and foraging habitat in the central part of the flycatcher's breeding range in Arizona, southern Nevada and Utah, and western New Mexico. In 2001 in Arizona, 323 of the 404 (80 percent) known flycatcher nests (in 346 territories) were built in a tamarisk tree (Smith *et al.* 2002). Tamarisk had been believed by some to be a habitat type of lesser quality for the southwestern willow flycatcher, however comparisons of reproductive performance (USFWS 2002), prey populations (Durst 2004) and physiological conditions (Owen and Sogge 2002) of flycatchers breeding in native and exotic vegetation has revealed no difference (Sogge *et al.* 2005).

The introduced tamarisk leaf beetle was first detected affecting tamarisk within the range of the southwestern willow flycatcher in 2008 along the Virgin River in St. George, Utah. Initially, this insect was not believed to be able to move into or survive within the southwestern United States in the breeding range of the flycatcher. Along this Virgin River site in 2009, 13 of 15 flycatcher nests failed following vegetation defoliation (Paxton *et al.* 2010). As of 2012, the beetle has been found in southern Nevada/Utah and northern Arizona/New Mexico within the flycatcher's breeding range. It was believed to have been detected along the Colorado River below Hoover Dam in 2012. Because tamarisk is a component of about 50 percent of all known flycatcher territories (Durst *et al.* 2008), continued spread of the beetle has the potential to significantly alter the distribution, abundance, and quality of flycatcher nesting habitat and impact breeding attempts.

Rangewide distribution and abundance

There are currently 288 known southwestern willow flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2007 where a territorial flycatcher has been detected) holding an estimated 1,299 territories (Durst *et al.* 2008). It is difficult to arrive at a grand total of flycatcher territories since not all sites are surveyed annually. Numbers have increased since the bird was listed and some habitat remains unsurveyed; however, after nearly a decade of intense surveys, the existing numbers are just past the upper end of Unitt's (1987) estimate of 20 years ago (500-1000 pairs). About 50 percent of the 1,299 estimated territories throughout the subspecies range are located at four general locations (Cliff/Gila Valley – New Mexico, Roosevelt Lake - Arizona, San Pedro River/Gila River confluence – Arizona, Middle Rio Grande, New Mexico).

Arizona distribution and abundance

While numbers have significantly increased in Arizona (145 to 459 territories from 1996 to 2007) (English *et al.* 2006, Durst *et al.* 2008), overall distribution of flycatchers throughout the state has not changed much. Currently, population stability in Arizona is believed to be largely dependent on the presence of two large populations (Roosevelt Lake and San Pedro/Gila River confluence). Therefore, the result of catastrophic events or losses of significant populations either in size or location could greatly change the status and survival of the bird. Conversely, expansion into new habitats or discovery of other populations would improve the known stability and status of the flycatcher.

Past Consultations

Since listing in 1995, at least 226 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range. We concluded in our biological opinion for the Southwestern Regional Land and Resource Management Plan (LRMP) (USFWS 2005a, #2-22-03-F-366) that ongoing upland grazing associated with Management Area 6J (Code 1423) of Tonto Creek on the TNF would cause a sub-lethal response (-2) to the flycatcher. The conclusion in the LRMP BO was that continued grazing can facilitate decreased bank stabilization, increased run-off, increased sedimentation, increased erosion, and reduced capacity of soils to hold water. These factors would reduce the occurrence, longevity, and quality of the habitat-based Primary Constituent Elements of flycatcher critical habitat. The LRMP was completed prior to the Forest Service adopting a policy of rangeland adaptive management in Chapter 90 of FSH 2209.13.

Activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.). Introduced tamarisk eating leaf beetles were not anticipated to persist within the range of the southwestern willow flycatcher. However, they have since spread and are defoliating breeding habitat (and designated critical habitat) of the flycatcher in much of the Virgin, Middle Colorado, Little Colorado, and San Juan management units. Stochastic events also continue to change the distribution, quality, and extent of flycatcher habitat.

Conservation measures associated with some consultations and Habitat Conservation Plans have helped to acquire lands specifically for flycatchers on the San Pedro, Verde, and Gila rivers in Arizona and the Kern River in California. Additionally, along the lower Colorado River, the U.S. Bureau of Reclamation is currently attempting to establish riparian vegetation to expand and improve the distribution and abundance of nesting flycatchers. A variety of Tribal Management Plans in California, Arizona, and New Mexico have been established to guide conservation of the flycatchers. Additionally, during the development of the critical habitat rule, management plans were developed for some private lands along the Owens River in California and Gila River in New Mexico. These are a portion of the conservation actions that have been established across the subspecies' range.

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.

Description of the Action Area

Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR section 402.02). In delineating the action area, we evaluated the farthest reaching physical, chemical, and biotic effects of the action on the environment. The action area only consists of Federal lands and includes the three allotments and the watersheds of Gunn Creek, Spring Creek, and Rock Creek to Roosevelt Dam.

Status of the southwestern willow flycatcher within the action area

Lake fluctuations due to drought, reservoir drawdowns or climatic events make available flycatcher nesting habitat in and around the Roosevelt Lake spatially dynamic. At the Salt River inflow, dense riparian vegetation and occupied flycatcher habitat occurs from the edge of the lake upstream to Meddler point. Upstream along the Salt River from Meddler point, suitable habitat occurs in patches within the floodplain of the river. At the Tonto Creek inflow, dense riparian vegetation and occupied habitat occurs from the edge of the lake upstream to the A-cross road. Upstream on Tonto Creek from the A-Cross road, occupied habitat occurs in patches within the floodplain of the creek up to north of Punkin Center, approximately two miles south of the Tonto Basin allotment in Tonto Creek.

Within the action area, flycatcher breeding habitat occurs within the Tonto Basin Allotment found in the TCRU and the conservation space surrounding Roosevelt Lake (at both the Tonto Creek and Salt River inflows). The TCRU stretches from the exposed ground within the high water mark of the conservation pool (< 2151 foot elevation) of Roosevelt Lake up to the Gun Creek Gauging Station. There are very small patches of riparian habitat within the conservation pool that have grown since the lake has receded. These patches are no more than one tenth of an acre and contain a mixture of native and nonnative vegetation. These areas are also excluded from grazing. The TNF has identified four sites occupied by nesting and territorial flycatchers, including: Quartz Ledge, Bar X Crossing, A-Cross, and Orange Peel/Tonto Inflow. All but Orange Peel/Tonto Inflow are located within the TCRU, and all are located adjacent to allotments analyzed herein. The Quartz Ledge site is adjacent to the Long Mesa and Kayler pastures of the Tonto Basin Allotment. The Bar X Crossing site is adjacent to the Bouquet/Cline Mesa pasture of the Tonto Basin Allotment and the Haystack and Lann pastures of the Walnut Allotment. The A-Cross site is adjacent to the Bouquet/Cline Mesa pasture of the Tonto Basin Allotment and the Red Hill and Ash Creek pastures of the 7/K Allotment. The Orange Peel/Tonto Inflow site is located adjacent to the Lake pasture of Tonto Basin allotment and Ash Creek pasture of the 7/K Allotment. All sites were occupied by flycatchers from 2007 through 2011.

Factors affecting species environment within the action area

Grazing on Tonto Basin, 7/K and Walnut allotments has a long and complicated history. Settlement of the area began in the mid-1800s. By the 1890s, a variety of livestock including sheep, cattle, horses and hogs were fully stocked in the area and significant impacts to resources were occurring (Croxen 1926). Tonto Basin and Walnut Allotments were part of a large community allotment that included the present-day Del Shay Allotment Del Shay was fenced out of this large community of allotments in the mid-1930s and is now a separate allotment that is grazed. This community allotment was stocked by multiple ranching operations yearlong with little active management. Today, there are five distinct permits on the former community

Mr. Neil Bosworth, Forest Supervisor
allotment: Del Shay, Tonto Basin Cline Wells (two permits), Tonto Basin Ewing, and Walnut. The Del Shay Allotment permit is not included in the proposed action. The other four permits, along with the 7/K Allotment permit, are still held by family members of the original permittees. A 1933 inspection report documented 3,000 cattle on the Tonto Basin Allotment.

Riparian and Watershed Condition

Information in soils and riparian specialists' reports and district allotment files indicates the action area has been heavily affected by historical livestock grazing. Riparian areas are generally lacking variable age structure components that would improve wildlife usage of the area. Flatter topography is generally lacking sufficient perennial grasses that would provide forage and cover for wildlife.

On Tonto Basin Allotment, most stream channels evaluated in the field are in unstable or impaired condition. On 7/K Allotment, all stream channels evaluated in the field are in impaired condition. On Walnut Allotment, most stream channels evaluated in the field are in impaired or unstable condition.

Vegetation Condition

Livestock rely primarily on annual forbs and palatable shrubs such as jojoba (*Simmondsia chinensis*) in Sonoran Desert communities, although pastures which abut Roosevelt Lake often have dense Bermuda grass (*Cynodon dactylon*) available when lake levels drop below the high water mark. Portions of Sonoran Desert pastures east of Tonto Creek on Tonto Basin and Walnut allotments contain dense stands of cholla (*Cylindropuntia* spp.) Within semi-desert grasslands and pinyon-juniper woodlands on Tonto Basin and 7/K allotments, perennial grass is more heavily used in flatter areas and more abundant and diverse on steeper slopes or in areas greater than one-half mile from water developments. Perennial grasses on Walnut Allotment are generally abundant and diverse across semi-desert grasslands and juniper grasslands. 7/K Allotment has an abundance of chaparral dominated by manzanita (*Arctostaphylos* spp.) and turbinella oak (*Quercus turbinella*) with lesser amounts of palatable shrubs and perennial grasses occurring occasionally in small openings. Areas immediately adjacent to water developments on all allotments tend to have fewer palatable perennial grasses and forbs. These factors influence watershed conditions in these allotments and contribute to the impaired/unstable conditions of streams and the potential for development of riparian woodland habitat.

Pasture inspections, conducted since livestock were returned to the allotments following removal in 2002, have not detected a trend of overuse of palatable vegetation. Use on perennial grasses remains light to moderate across the allotments. Trailing is generally light across the allotments and moderate to heavy near active water developments. Monitoring data from 2009 compared to data collected in the 1960s and 1970s across the allotments indicates a stable vegetative trend.

The Clover/Bearhead Pasture of the Tonto Basin Allotment has been in nonuse since 2002. Vegetation is an excellent condition. The Northwest section of the Buck Basin Pasture on the 7/K Allotment has been in nonuse since 2002 and shows vegetation is an excellent condition.

Brown-Headed Cowbirds

Brown-headed cowbirds (*Molothrus ater*) can be found throughout the allotments with the greatest concentrations near the town of Tonto Basin and within the developed recreation sites around Roosevelt Lake. Flocks of 50 or more cowbirds can be seen around agricultural fields where hay is grown, within one-half mile of a refuse transfer, and within the town of Tonto Basin in the floodplains adjacent to the TCRU where there are a number of private homes, especially during morning hours and afternoon. The TNF has noted low numbers of cowbirds around Quartz Ledge, Kayler Spring, A-Cross, and Bar X. The uplands adjacent to the habitat are primarily desert scrub, which is not the ideal habitat for cowbirds. TNF staff have not observed cowbirds around cattle in the desert scrub vegetative community. When cattle are in the Lake pasture, cowbirds have not been observed. They are seen directly across the lake at Bermuda Flat, a three-mile long shoreline camping area. Cowbirds are also found at Indian Point Campground, mainly where dumpsters are located.

The parasitism rate of flycatchers in flycatcher nests on the Tonto Creek arm of Roosevelt Lake was monitored from 1996 to 2005 (see Table 1 in BA). Overall, the rate under normal precipitation patterns (excluding the 2002 drought) was 4.1 percent parasitism (Ellis et al. 2008). Cowbird trapping captured an average of 50 cowbirds per year, with about half female, from 1997-2000. With the exception of 2002, when a parasitism rate of 42.9 percent was observed, the variation between years appears relatively low, with the parasitism rate ranging from 0 - 6.3 percent. To our knowledge, no analysis has been conducted to evaluate the correlation with livestock numbers, though Table 1 in the BA seems to indicate an inverse relationship between livestock numbers and parasitism rate. More importantly the data seem to illustrate higher incidence of parasitism during years when cowbird trapping was not performed. However, we don't know if these differences are statistically or biologically significant. Regardless, flycatcher numbers have been holding steady at around 70–80 territories along Roosevelt Lake, except for 2012 when numbers dropped because of extended drought and lack of nearby water in Tonto Creek.

EFFECTS OF THE 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 that 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.

Southwestern willow flycatcher

Livestock grazing can adversely affect watersheds that support riparian habitats in which flycatchers occur. Excessive herbivory and soil and plant trampling can alter vegetation composition, increase erosion and sedimentation into streams, and exacerbate the impact of flood events. Livestock can also promote establishment of non-native plant species by foraging on and reducing native plants, while leaving non-native plants to flourish. Often these non-native plants are more flammable and can therefore alter fire regimes. Livestock can trample and destroy

cryptobiotic crusts, which help stabilize soils and provide soil nutrients. Impacts in the upland watersheds can translate downstream into alterations of riparian and stream structure and function, thus reducing the quantity and quality of habitat for listed aquatic and riparian species.

Impacts to upland watersheds can influence and impact river flow and riparian habitat (USFWS 2002, 2005). Proposed conservative use of upland ranges, per pasture monitoring, and adaptive management on the 7/K, Tonto Basin, and Walnut grazing allotments provide clear guidance and strategies anticipated to maintain current satisfactory range conditions while promoting modest improvement of upland desert scrub habitat, herbaceous productivity, and soil formation over the life of the proposed action. Additionally, the TNF has restricted grazing from lower Tonto Creek as part of the TCRU, which can reduce potential impacts to the creek and its riparian habitats from upland ranges. We anticipate the combination of these factors minimizes potential upland watershed effects to flycatchers and flycatcher habitat on Tonto Creek from the proposed action on the 7/K, Tonto Basin, and Walnut grazing allotments.

Under the proposed action, permitted numbers on the Cline permit would approximately double through a gradual increase in numbers, and permitted numbers on the Wells permit would be unchanged. Livestock movements among the four pastures on this allotment would remain essentially the same as currently managed, and additional waters and fences may be constructed in the future to improve livestock distribution. No livestock grazing occurs directly within habitats occupied by flycatchers. Cattle will continue to graze in all pastures that border the TCRU, particularly in the winter and spring months, but the TCRU itself is fenced from cattle grazing year-round. Along Roosevelt Lake, cattle graze during the breeding season in Lake and Methodist/Bathtub Pastures because forage is available when the lake is below full pool. These pastures are within two miles of occupied flycatcher habitat. Cattle are prevented from going beyond pasture boundaries by fencing. Cattle generally concentrate near the lake where forage and water are located. There is one other source of water on the Lake Pasture in the northeast quadrant. Another grazing activity that occurs during the breeding season adjacent to habitat includes the gathering of cattle in the Red Hill holding pasture on the 7/K Allotment. Cattle can be in this pasture for up to two weeks during the breeding season.

With respect to cattle adjacent to flycatcher habitat along Tonto Creek during the breeding season, total permitted numbers would include 774 cows or bulls yearlong with up to 582 yearlings from January 1st to May 31st. However, it is very unlikely the full permitted numbers will be reached as the infrastructure would need to be improved to support this many cattle on the allotment. A more realistic number is 250 cattle, with an increase of 25 each year through natural recruitment, building up to numbers sustainable under current climatic conditions.

Of particular concern is the potential effect of cowbird parasitism on the flycatcher. As discussed in the Environmental Baseline, the rate of parasitism under normal precipitation patterns was 4.1 percent from 1996-2005 (Ellis et al. 2008). There is general consensus in the scientific community that the presence of cattle can increase the rate of cowbird parasitism. However, there are many other factors that can affect nest survivorship including the character of habitat, distance from active grazing, influence of cattle on cowbird density, and cowbird foraging behavior (see Brodhead et al. 2007, Tisdale-Hein and Knight 2003, Curson et al. 2000). Although no analysis has been conducted to evaluate the correlation with livestock numbers, Table 1 in the BA seems to indicate an inverse relationship between livestock numbers and the

rate of parasitism by flycatchers along the Tonto Creek arm of Roosevelt Lake. Importantly the data indicate higher incidence of parasitism during years when cowbird trapping was not performed. This may indicate that parasitism in the action area is unrelated to number of livestock.

During the flycatcher breeding season, cattle on the 7/K, Tonto Basin, and Walnut allotments will be at least two miles away from known flycatcher nesting sites. The water to troughs within one mile can be shut off in an attempt to control the distribution of cattle so they may not be present in closer proximity to Tonto Creek. Cattle themselves are not a significant cowbird attractant. However, cowbirds can be attracted to livestock concentration areas such as corrals and waters, including those on adjacent private lands. While cowbirds are a native and natural part of the landscape, their location and abundance can also be influenced by land-use changes such as development of housing, agricultural fields, feedlots, etc., which serve as cowbird attractants and also occur in this area. The Southwestern Willow Flycatcher Recovery Plan (USFWS 2002) recommends that increasing the distance between cowbird foraging and flycatcher nesting areas during the breeding season through livestock management could minimize cowbird nest parasitism. Additionally, the use of waters (or lack of water), fencing, and pasture movements that reduce livestock concentrations in areas near flycatcher territories during the breeding season could serve to reduce the rate of parasitism. We expect that parasitism of flycatcher nests will continue to occur, and will likely be consistent with observed rates. However, we anticipate that continued presence of cattle approximately two miles from flycatcher nesting habitat during the breeding season will not substantially contribute to an increase in the parasitism rate of known flycatcher nests along Tonto Creek and Roosevelt Lake. Furthermore, we believe it is difficult to determine how much of the observed parasitism rate, if any, may be attributable to livestock presence within two miles of flycatcher habitat.

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.

The BA indicates that new agricultural fields for alfalfa are being created within the action area adjacent to flycatcher sites in Quartz ledge. Also, there are numerous homes that serve as attractants to cowbirds between corrals and flycatcher habitat in the Long Mesa Pasture of the Tonto Basin Allotment. These developments may result in an increase in cowbird abundance in the action area and could contribute to the rate of brood parasitism.

CONCLUSION

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of the proposed grazing action and the cumulative effects, it is the FWS's biological opinion that the action, as proposed, of livestock grazing on the 7 K, Tonto Basin, and Walnut allotments is not likely to jeopardize the continued existence of the species. We base our conclusion on the following:

- Livestock grazing is not permitted within occupied flycatcher habitat, and livestock use will be managed to avoid potential or suitable habitat as lake levels change. Therefore there would be no direct impacts to flycatcher nesting habitat.
- Upland range and riparian areas are grazed at conservative levels, which, along with regular monitoring and adaptive management to adjust grazing use as needed, are expected to minimize potential effects from erosion and sedimentation and should effectively avoid degrading riparian habitat.
- Livestock waters will be managed to avoid concentrations of cattle within two miles of occupied flycatcher habitat during the breeding season to minimize cowbirds near flycatcher habitat.
- While livestock grazing in proximity to flycatcher breeding sites during the breeding season may facilitate cowbird parasitism, the observed rate of parasitism on flycatchers (4.1 percent from 1996-2005) is relatively low, even in the presence of grazing in these allotments, and management under the proposed action is not likely to increase the parasitism rate.

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, including any Conservation Measures that were incorporated into the project design.

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 further 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

The FWS does not anticipate the proposed action will incidentally take southwestern willow flycatcher for the following reasons:

- The TCRU is fenced from cattle grazing year-round, preventing cattle from directly disturbing adult flycatchers, eggs, and nestlings at nesting sites.

- Non-Federal attractants including houses, agricultural fields, and private corrals occur in the area and are a source of cowbirds in the action area. We cannot reasonably

distinguish the natural variation and sources of cowbird parasitism to attribute any cause of parasitism to the proposed action.

- The beneficial effects associated with the conservation measures will sufficiently protect suitable habitat conditions and avoid any likelihood of incidental take.

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.

1. We recommend that your agency participate in the implementation of the recovery plan for the flycatcher.
2. We recommend that your agency initiate a monitoring and sampling study of parasitism rates of flycatcher nests, to better evaluate the impact of your projects on flycatchers.
3. We recommend that your agency develop and implement a plan to improve degraded riparian habitat within the allotments, and share that plan with our office.

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

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in your request. As provided in 50 CFR '402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of 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.

The FWS appreciates the TNF efforts to identify and minimize effects to listed species from this project. In keeping with our trust responsibility to American Indian Tribes, for proposed actions that may affect Indian lands, Tribal trust resources, or Tribal rights, we encourage you to invite the affected Tribes and Bureau of Indian Affairs to participate in project review and, by copy of this letter, are notifying the Fort McDowell Yavapai Nation, the Salt River Pima-Maricopa Indian Community, and the Bureau of Indian Affairs. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

Mr. Neil Bosworth, Forest Supervisor
For further information please contact Mike Martinez (ext 224) or Brenda Smith (928) 556-2157. Please refer to the consultation number, 02EAAZ00-2012-F-0423 in future correspondence concerning this project.

Sincerely,

/s/ Brenda Smith for

Steven L. Spangle
Field Supervisor

cc electronic:
Kelly Jardine, District Ranger, Tonto Basin RD, Roosevelt, AZ (kjardine@fs.fed.us)
Greg Dunn, Wildlife Biologist, Tonto Basin RD, Roosevelt, AZ (gddunn@fs.fed.us)
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ (pep@azgfd.gov)
Regional Supervisor, Arizona Game and Fish Department, Mesa, AZ (kwolffkrauter@azgfd.gov)
President, Fort McDowell Yavapai Nation, Fountain Hills, AZ (ABalderaz@ftmcdowell.org)
President, Salt River Pima-Maricopa Indian Community, Scottsdale, AZ (ZTerri.Gonzales@SRPMIC-nsn.gov)
Branch Chief, Environmental Quality Services, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ (charles.lewis@bia.gov)
Biologists, Fish and Wildlife Service, Phoenix, AZ (G. Beatty, S. Sferra, S. Hedwall, C. Crawford, M. Richardson, J. Servoss)

W:\Mike Martinez\Brendas signature\Tonto B Walnut 7K Final BO.docx:cgg

Literature Cited

Browning, M.R. 1993. Comments on the taxonomy of *Empidonax traillii* (willow flycatcher). *Western Birds* 24:241-257.

Brodhead, Katherine M., Scott H. Stoleson, and Deborah M. Finch. "Southwestern Willow Flycatchers (Empidonax traillii extimus) in a Grazed Landscape: Factors Influencing Brood Parasitism." The Auk, Vol. 124, No. 4, 2007: 1213-1228.

Cardinal S.N. and E. H. Paxton. 2005. Home range, movement, and habitat use of the southwestern willow flycatcher at Roosevelt Lake, AZ – 2004. U.S. Geological Survey Report to the U.S. Bureau of Reclamation, Phoenix, AZ.

Croxen, Fred W. "History of Grazing on Tonto." Tonto Grazing Conference. Phoenix: USDA Forest Service, 1926.

Curson, D . R., C. B. Goguen, and and N. E. Mathews. "Long-distance commuting cowbirds in New Mexico." Auk 117, 2000: 795-799.

Durst, S.L. 2004. Southwestern willow flycatcher potential prey base and diet in native and exotic habitat. Masters Thesis. Northern Arizona University, Flagstaff, AZ.

Durst, M.K. Sogge, H.C. English, H.A. Walker, B.E. Kus, and S.J. Sferra. 2008. Southwestern willow flycatcher breeding site and territory summary – 2007. U.S. Geological Survey, Colorado Plateau Research Station, Flagstaff, AZ.

Ellis, L. A., D. M. Weddle, S. D. Stump, H. C. English, and and A. E. Graber. 2008. Southwestern willow flycatcher final survey and monitoring report. Research Technical Guidance Bulletin #10, Phoenix: Arizona Game and Fish Department.

English, H.C., A.E. Graber, S.D. Stump, H.E. Telle, and L.A. Ellis. 2006. Southwestern willow flycatcher 2005 survey and nest monitoring report. Nongame and Endangered Wildlife Program Technical Report 248. Arizona Game and Fish Department, Phoenix, AZ.

Finch, D.M. and S.H. Stoleson, eds. 2000. Status, ecology, and conservation of the southwestern willow flycatcher. Gen. Tech. Rep. RMRS-GTR-60. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 131 p.

Howell, S.N.G. and S. Webb. 1995. A guide to the birds of Mexico and northern Central America. Oxford University Press, New York, New York. 851 pp.

Hubbard, J.P. 1987. The Status of the Willow Flycatcher in New Mexico. Endangered Species Program, New Mexico Department of Game and Fish, Sante Fe, New Mexico. 29 pp.

Mr. Neil Bosworth, Forest Supervisor

McLeod, M.A., T.J. Koronkiewicz, B.T. Brown, and S.W. Carothers. 2005. Southwestern willow flycatcher surveys, demography, and ecology along the lower Colorado River and tributaries. Annual report submitted U.S. Bureau of Reclamation, Boulder City, NV, by SWCA Environmental Consultants, Flagstaff, AZ.

Owen, J.C. and M.K. Sogge. 2002. Physiological condition of southwestern willow flycatchers in native and saltcedar habitats. U.S. Geological Survey report to the Arizona Department of Transportation.

Paxton, E., K. Day, T Olson, P. Wheeler, M. MacLeod, T. Koronkiewicz, and S. O'Meara. 2010. Tamarisk biocontrol impacts occupied breeding habitat of the endangered southwestern willow flycatcher. Poster presentation at Tamarisk Coalition annual conference. Reno, NV.

Peterson, R.T. 1990. A field guide to western birds. Third edition. Houghton Mifflin Company, Boston, Massachusetts. 432 pp.

Phillips, A.R. 1948. Geographic variation in *Empidonax traillii*. *The Auk* 65:507-514.

Phillips, J. Marshall, and G. Monson. 1964. The Birds of Arizona. University of Arizona Press, Tucson, Arizona. 212 pp.

Ridgely, R.S. and G. Tudor. 1994. The Birds of South America: Suboscine Passerines. University of Texas Press, Austin, Texas.

Smith, A.B., C.E. Paradzick, A.A. Woodward, P.E.T. Dockens, and T.D. McCarthey. 2002. Southwestern willow flycatcher 2001 survey and nest monitoring report. Nongame and Endangered Wildlife Program Technical Report #191. Arizona Game and Fish Department, Phoenix, Arizona.

Sogge, M.K., R. M. Marshall, S. J. Sferra, and T. J. Tibbitts. 1997. A southwestern willow flycatcher survey protocol and breeding ecology summary. National Park Service/Colorado Plateau Res. Station/N. Arizona University, Tech. Rept. NRTR-97/12. 37 pp.

Sogge, E.H. Paxton, and A.A Tudor. 2005. Saltcedar and southwestern willow flycatchers: lessons from long-term studies in central Arizona. As published on CD ROM in: Aguirre-Bravo, Celedonio, and others. Eds. 2005. Monitoring science and technology symposium: unifying knowledge for sustainability in the Western Hemisphere. 2004 September 20-24; Denver, CO. Proceedings RMRS-P037CD. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Stiles, F. G., and A. F. Skutch. 1989. A guide to the birds of Costa Rica. Comstock, Ithaca, New York. 364 pp.

Mr. Neil Bosworth, Forest Supervisor

Tisdale-Hein, Rinda E, and Richard L. Knight. "Densities of Brown-headed Cowbirds in Riparian and Rangeland Areas, With and Without Cattle Present, Along the Middle Rio Grande, New Mexico." Studies in Avian Biology No.26, 2003: 152-156.

Unitt, P. 1987. *Empidonax traillii extimus*: An endangered subspecies. *Western Birds* 18:137-162.

USFWS. 2002. Southwestern Willow Flycatcher Recovery Plan, Region 2, Albuquerque, NM.

USFWS. 2005a. Biological opinion on the Forest Service's continued implementation of the land, resource, and management plans for the 11 southwestern region national forests and grasslands, R2/ES-TE, 02-21-03-F-0366. U.S. Fish and Wildlife Service, Region 2, Albuquerque, New Mexico.

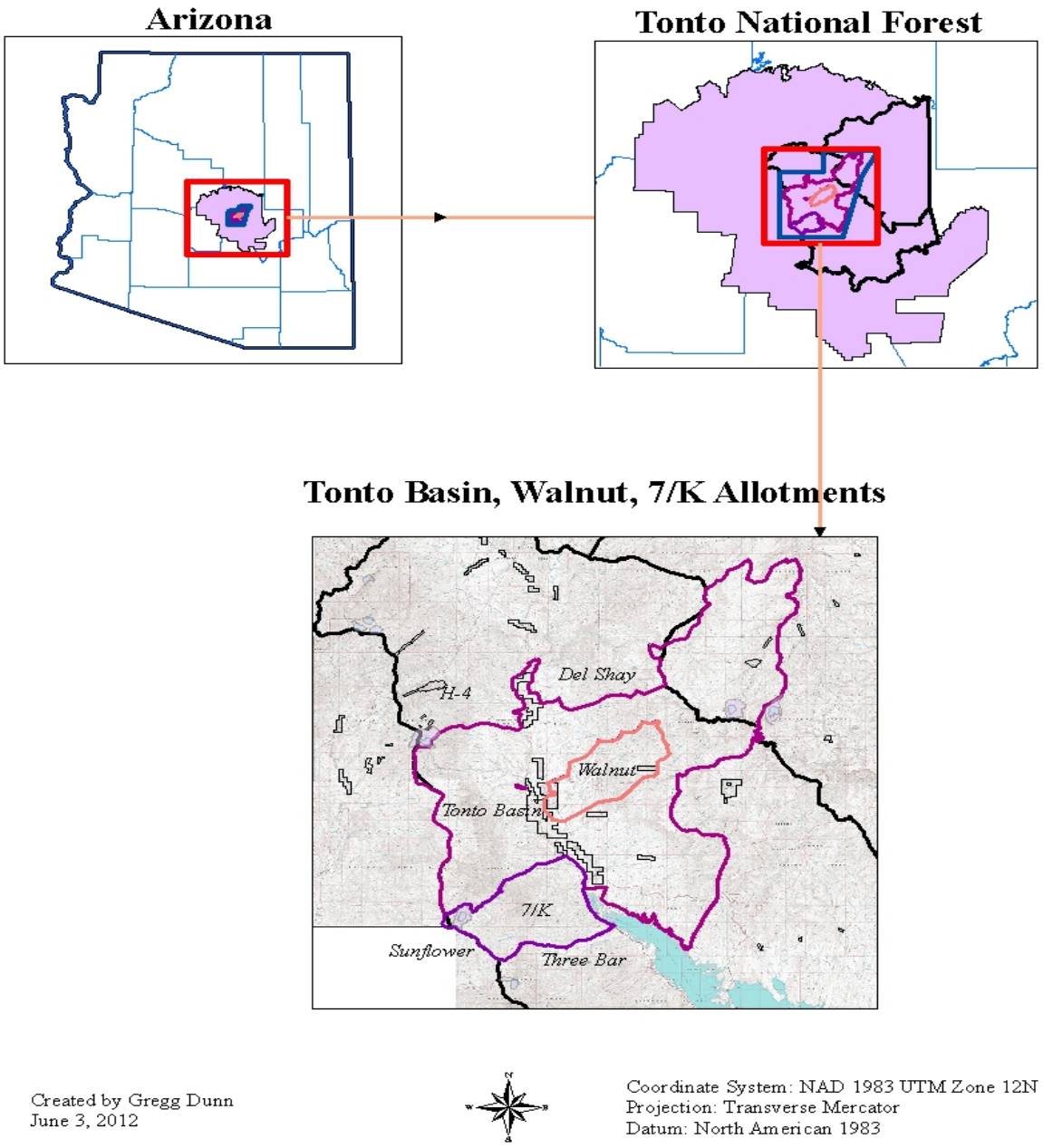

Figure 1. Location of Walnut, Tonto Basin, and 7/K Allotments on Tonto Basin Ranger District, Tonto National Forest, Arizona.

Southwestern willow flycatcher designated critical habitat

The TNF requested our concurrence that the proposed action "may affect, but is not likely to adversely affect" southwestern willow flycatcher critical habitat. There is no critical habitat designated for the southwestern willow flycatcher within the 7/K Allotment. There is critical habitat designated for the southwestern willow flycatcher within the Tonto Basin and Walnut grazing allotments on Tonto Creek; however, fencing associated with the TCRU will prevent cattle from grazing directly within designated critical habitat. Any effects within the conservation space of Roosevelt Lake (below 2151 feet in elevation) have been included in Salt River Project's Roosevelt HCP. We do not anticipate adverse effects to designated critical habitat from the proposed action.

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" designated critical habitat for southwestern willow flycatcher for the following reasons:

- There is no critical habitat designated for the southwestern willow flycatcher within the 7/K allotment, so none will be directly affected.
- The exclusion of cattle by fencing along the TCRU is expected to provide protection of PCEs within designated critical habitat within the Tonto Basin and Walnut grazing allotments on Tonto Creek.
- Conservative use of upland ranges, adaptive management, frequent monitoring, and the exclusion TCRU, are anticipated to protect the primary constituent elements of flycatcher critical habitat from indirect effects resulting from upland grazing within the watersheds on the 7/K, Tonto Basin, and Walnut grazing allotments.
- Proposed improvements (fencing, pipelines, etc.) are located outside of designated flycatcher critical habitat.

Mexican spotted owl and its designated critical habitat

There are four Mexican spotted owl PACs located within the allotments, including Bearhead Canyon, Copper Mountain, Mount Ord, and Buck Basin. According to information provided in the BA, surveys in 2007 detected at pair of Mexican spotted owl in Bearhead Canyon, a pair in Copper Mountain, and a pair in Mount Ord. Additionally, surveys in 2012 detected an audio response in Buck Basin. Based on information provided by TNF, these areas have been in a state of grazing nonuse for the past 15 years but have experienced several fires during that time.

The Bearhead Canyon PAC is located within the Bearhead/Clover Pasture on the Tonto Basin Allotment. This PAC has had several fires affect the habitat including the Mistake Peak Fire in 2012 which had a low severity burn of 10 percent of the PAC. Vegetation within this PAC consists of the Pine/Oak category with some riparian vegetation where the roost is located. The Picture Fire in 2000 burned 50 percent of the PAC with high severity, with 10 percent of the core at high severity burn. According to the BA, habitat within and adjacent to this PAC is still recovering from the fire with little pine recruitment. Most of the burn came back as scrub oak,

juniper, and locust. The Copper Mountain PAC is also adjacent to this pasture. The Copper Mountain PAC was burned with high severity, 75 percent, in 2012, though some of the core area remains. Where Mexican spotted owl PACs, critical habitat, and recovery areas are located, there is little forage and tree canopy cover is above 40 percent. Water is available at springs that can be found within potholes in the Bearhead Canyon drainage. This pasture has not been grazed since 2002.

The Buck Basin PAC is located in the Buck Basin Pasture on the 7/K Allotment. This PAC has experienced several fires that have affected the entire PAC. There is good core habitat and surrounding riparian and ponderosa pine habitat left. TNF staff detected an audio response in 2012 where an old nest is located. The PAC has not been grazed since 1996 when the Lone Fire occurred. There are 1,900 acres suitable for grazing at the top of the pasture where the PAC is located. Water is limiting with Big Pine Spring as the only water source in the area. These 1,900 acres will be managed at 20-30 percent use with the lower elevations being utilized at 40 percent. Fence maintenance would need to occur before cattle could be placed in this management area, though not within the PAC.

The action area includes approximately 9,600 acres of critical habitat in the Basin and Range West Unit 5 (BRW-5) in the northeastern portion, and 24,800 acres in the Basin and Range West Unit 4 (BRW-4) on the western end of the analysis area. Of the 9,600 acres of critical habitat in BRW-5 there are approximately 3,000 acres that have at least one primary constituent element present. Of the 24,800 acres of critical habitat in BRW-4, approximately 1,000 acres have the PCEs. The rest of the acreage is recovering from a stand replacing fire. There is little recruitment of ponderosa pine and Gambel oak, and the main vegetation type is interior chaparral. These areas remain important for prey items in the winter when owls expand their range in search of food.

The following conservation measures will be implemented within the 7/K Allotment (Mt. Ord and Buck Basin) and Tonto Basin Allotment (Bearhead and Copper Mountain).

2. The TNF will not conduct activities that could result in disturbance to owls within 0.25 mile of protected activity centers (PACs) during the Mexican spotted owl breeding season (March 1 to August 31).
    1. Only non-motorized entry for livestock herding activities will be used during the owl breeding season.
3. Mexican spotted owl recovery plan guidelines will be applied in PACs and critical habitat.
    2. The TNF will maintain residual stubble height and limit utilization to conservative use of annual growth on key forage species (between 20 and 30 percent within Mexican spotted owl habitat).

We concur with your determination that the proposed action “may affect, but is not likely to adversely affect” the Mexican spotted owl and its designated critical habitat for the following reasons:

- Within the action area, no construction activities or significant human disturbance associated with livestock grazing will occur in Mexican spotted owl PACs during the breeding season (March 1 through August 30).
- Conservative grazing use and maintenance of stubble height will minimize effects to plant communities; support maintenance of historical fire regimes, healthy forest structure, and recovery after forest fires; and provide protection of cover supporting Mexican spotted owl prey species.
- Conservative use and maintenance of stubble height is anticipated to promote maintenance of the PCEs relating to forest structure and prey species, and no measurable effects to water, forest litter/debris, and clumps/stringers of mixed conifer, pine-oak, pinyon-juniper are expected. The key habitat components of Mexican spotted owl protected and restricted/recovery habitat and the PCEs of Mexican spotted owl critical habitat will not be adversely affected. Livestock grazing will be managed at levels that provide the woody and herbaceous vegetation necessary for prey species habitat, the residual biomass that will support prescribed natural and ignited fires, and the regeneration of riparian trees.

Spikedace designated critical habitat

Within the action area there are 8.2 miles of stream designated as critical habitat along Greenback Creek, Tonto Creek, and Rock Creek. Within the Tonto Basin Allotment there are 8.2 miles of critical habitat along Greenback Creek with 6.1 miles fenced from cattle grazing year-round. The remaining 2.1 unfenced miles are located on the lower section where perennial water flow is not present.

The following conservation measures will be implemented along Greenback Creek in the Tonto Basin Allotment and Tonto Creek within the Walnut, Tonto Basin, and 7/K allotments.

1. The TCRU, which runs through portions of the Walnut and Tonto Basin allotments, is fenced from cattle grazing year-round.
2. Upland ranges and riparian areas on Walnut, Tonto Basin, and 7/K allotments will continue to be grazed at conservative levels (defined as 30-40 percent use for sustainable use of rangelands).
3. Within the Tonto Basin Allotment there are 8.2 miles of critical habitat along Greenback Creek, of which 6.1 miles are fenced from cattle grazing year-round.

We concur with your determination that the proposed action “may affect, but is not likely to adversely affect” designated critical habitat for spikedace for the following reasons:

- The exclusion of cattle from Tonto Creek due to management related to the TCRU minimizes potential adverse effects to PCEs along Tonto Creek.
- Conservative grazing use (30-40 percent) in adjacent uplands is anticipated to minimize effects to PCEs associated with stream flow and sediment.
- The exclusion of cattle from the perennial sections of Greenback Creek and the implementation of conservative grazing are expected to minimize potential adverse effects to the PCEs on Greenback Creek.

- Substantial portions of Greenback, Tonto, and Rock creeks are located within canyons where livestock access is difficult and mostly inaccessible.

Yellow-billed cuckoo

Yellow-billed cuckoos have been documented during the breeding season on Tonto Creek from Quartz Ledge downstream to the confluence with Roosevelt Lake, including the A-Cross and Bar-x willow flycatcher sites. According to the BA, cuckoos have been detected near the Tonto inflow into Roosevelt Lake, and near the Cherry Creek confluence with the Salt River. In 2012, cuckoos were found in Tonto Creek between A-Cross, Store crossing, and Quartz Ledge. Other areas that have been surveyed for cuckoos include Greenback Creek, Reno Creek, Oak Creek, and Ash Creek, though the species has not been detected. These creeks do not contain habitat suitable for breeding cuckoos, though they could be valuable stopover spots for migrating cuckoos.

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the proposed yellow-billed cuckoo for the following reasons:

- Grazing is excluded from areas where cuckoos have been detected, including the TCRU, Reno Creek (no detections), and Kayler Spring (small offshoot from Tonto Creek), effectively minimizing potential adverse effects to the species.
- Conservative utilization of 30-40 percent annually is expected to minimize potential adverse effects of upland grazing on riparian vegetation.
- Riparian use guidelines are: obligate riparian tree species – limit use to < 50 percent of terminal leaders (top one third of plant) on palatable riparian tree species accessible to livestock (usually < 6 feet tall); deergrass – limit use to < 40 percent of plant species biomass; emergent species (rushes, sedges, cat-tails, horse-tails) – maintain six to eight inches of stubble height during the grazing period; stream banks - limit use to < 20 percent of alterable banks where stream banks are present or forming.
- Once riparian utilization guidelines are met, cattle would be moved from the area, or to the next scheduled pasture regardless of available forage in the uplands.

Northern Mexican gartersnake and proposed critical habitat

According to the BA, lower and middle Tonto Creek support northern Mexican gartersnakes. The species has been found in Tonto Creek just north of A-Cross, and there are confirmed reports from "The Box" of Tonto Creek. Suitable habitat is present in Greenback Creek, Gun Creek, Rock Creek, Bearhead Canyon, and Turkey Creek on the Tonto Basin Allotments though the species has not been observed in these systems.

FWS is proposing to designate 8,936 acres (3,616 ha) of critical habitat along 65.1 stream mi (104.7 km) of Tonto Creek, from its confluence with Roosevelt Lake upstream to its origin northeast of Tonto Spring, south of Rim Road, in Gila County, Arizona. Within the action area, proposed critical habitat is found from the confluence of Roosevelt Lake to the Gun Creek gauging station (16 miles). Grazing does not occur in Tonto Creek, though it does occur in adjacent uplands that flow into gartersnake habitat/proposed critical habitat.

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the northern Mexican gartersnake and its proposed critical habitat for the following reasons:

- Grazing is excluded from riparian corridors along Tonto Creek where individuals have been documented and critical habitat is proposed, eliminating the potential for direct effects from livestock grazing.
- Conservative use of adjacent uplands and following guidelines for grazing management in riparian areas are will minimize effects where gartersnakes have the potential to occur and where critical habitat is proposed.

Narrow-headed gartersnake and proposed critical habitat

According to the BA, the only observed narrow-headed gartersnake in the action area was at the Gun Creek gauging station on Tonto Creek in 2005. There is suitable habitat in Gun Creek at the confluence of Skunk Tank Canyon downstream to the gauging station.

FWS is proposing to designate 12,795 acres (5,178 ha) of critical habitat along 91 stream mi (146 km) of proposed critical habitat along Haigler Creek, Houston Creek, and Tonto Creek; and to designate 7,712 acres (3,121 ha) of critical habitat along 54.1 stream mi (87.0 km) of Tonto Creek, from its confluence with an unnamed tributary northeast of Punkin Center upstream to its origin northeast of Tonto Spring, south of Rim Road. Within the action area proposed critical habitat is found from the Quartz Ledge to Gun Creek gauging station (8.5 miles). Grazing does not occur in Tonto Creek, though it does occur in adjacent uplands that flow into gartersnake habitat/proposed critical habitat.

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the northern narrow-headed gartersnake and its proposed critical habitat for the following reasons:

- Grazing is excluded from riparian corridors along Tonto Creek where individuals have been documented and critical habitat is proposed, effectively minimizing the potential for adverse effects from direct grazing.
- Conservative use of adjacent uplands and riparian guidelines are anticipated to minimize potential adverse effects where gartersnakes have the potential to occur and where critical habitat is proposed.

APPPENDIX B: TECHNICAL ASSISTANCE

Bald and golden eagles

Both the bald eagle and golden eagle are federally protected species under the Bald and Golden Eagle Protection Act (Eagle Act). Due to their wide-ranging wintering and foraging behavior, both eagle species could occur within your project area. We encourage you to be aware of compliance with the Eagle Act and also, the Migratory Bird Treaty Act (MBTA) when planning and implementing your project. The proposed implementation of conservation measures for the flycatcher, such as implementation of TCRU management, pasture rotations adjacent to Roosevelt Lake, and conservative use of upland ranges, should help to reduce impacts to nesting bald eagle habitat and nesting attempts from cattle management activities. The Forest Service is a signatory to the *Conservation Assessment and Strategy for the Bald Eagle in Arizona*, available at: http://swbemc.org/pdf/NGTR173%20BaldEagleConservationAgreement.pdf
and we encourage you to review this strategy to ensure its continued implementation for all relevant TNF management activities. Annual Arizona statewide bald eagle management reports that include areas on the TNF can be retrieved at http://swbemc.org/yearlyReports.html.

For additional information on protections under the Eagle Act, please refer to the regulatory definition of the term "disturb" (72 FR 31132) published in the Federal Register on June 5, 2007, and Service's National Bald Eagle Management Guidelines (72 FR 31156) http://www.fws.gov/MississippiES/pdf/Eagle%20Guidelines.pdf. Additional information regarding eagles is also available at:
http://www.fws.gov/migratorybirds/BaldAndGoldenEagleManagement.htm.