



United States Department of the Interior



Fish and Wildlife Service

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In Reply Refer to:
AESO/SE
22410-F-2010-0495

December 23, 2010

Mr. James Upchurch
Forest Supervisor, Coronado National Forest
300 West Congress, 6th Floor
Tucson, Arizona 85701

RE: Cloverdale Ciénega Restoration Project

Dear Mr. Upchurch:

Thank you for your request for 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 was dated November 30, 2009, and received by us on December 9, 2009. At issue are impacts that may result from the proposed Cloverdale Ciénega restoration project located in the Douglas Ranger District, Hidalgo County, New Mexico. The proposed action may adversely affect the Chiricahua leopard frog (*Lithobates chiricahuensis*) (CLF).

In your letter, you requested our concurrence that the proposed action may affect, but is not likely to adversely affect the lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) (LLNB), Mexican long-nosed bat (*Leptonycteris nivalis*) (MLNB), and New Mexico ridge-nosed rattlesnake (*Crotalus willardi obscures*) (NMRR). We agree with your determinations, and our concurrences for these species are contained in Appendix A.

This biological opinion is based on information provided in your November 30, 2009 biological assessment (BA), the project proposal, telephone conversations, electronic correspondence, field investigations, 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, restoration and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at our Phoenix Field Office.

Consultation History

November 30, 2009: Formal consultation initiated.

November 16-23, 2010: We exchanged e-mails refining the area of the proposed action.

December 17, 2010: We sent you the draft BO for your review.

December 22, 2010: We received your comments on the draft BO.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The purpose of the proposed action is to restore the Cloverdale Ciénega to historical wetland conditions. The Douglas Ranger District of the U.S. Forest Service, Coronado National Forest (FS), in conjunction with the Sky Island Alliance, is proposing the following actions within and around a portion of Cloverdale Creek and Cloverdale Ciénega to accomplish this goal:

Middle Creek Reach

The FS will begin restoration work in the middle creek reach of Cloverdale Creek at a man-made levee between the road and creek corridor just upstream of the bedrock pour-over. The FS will remove the levee to fully reconnect the floodplain between the levee and the road and then increase the elevation of the sandy bottomed, ephemeral creek channel with material from the removed levee. Deep rolling dips in the adjacent road will help move more water out onto the ciénega. The FS will address the head cuts just above the bedrock falls through placement of four erosion control structures that will increase the length of the riffle-run sequences and protect the pools from connecting.

Lower Creek Reach and Ciénega Levees

The FS will remove three to four 20-foot sections of the valley-wide transverse levee in the lower reach of Cloverdale Creek and the ciénega to allow flows into the natural ciénega drains. Removed soil will be redistributed into the original borrow areas adjacent to the levee.

Project Cleanup and Revegetation

All areas that have been disturbed within the project area shall be re-contoured as needed, reseeded and all tracks raked out with a chain harrow. Levee removal will leave some bare areas, which will need optimal surface protection in advance of the next large runoff event. To accomplish this, the FS will harvest wetland sod and willow and cottonwood plantings from an area approximately one half-mile downstream of the Lower Creek Reach and install

them on the banks. In addition, native grass seed and native longstem hay will be mulched onto disturbed areas and an existing water line will be tapped to provide irrigation for plantings until they are established.

Conservation Measures

The FS will employ practices that have been effective at reducing environmental impacts of similar projects. These practices are consistent with applicable Forest Plan standards and guidelines, Best Management Practices (BMPs) and the terms and conditions and conservation measures of applicable FWS Biological Opinions. Implementation of the following conservation measures and design criteria is intended to preclude potentially significant environmental impacts:

- Soil and water conservation BMPs will be followed in all treatment areas (Forest Service Handbook FSH 2509.22 entitled Soil and Water Conservation Practices Handbook 12/3/90 ver.).
- To the extent practicable, work on this project will occur outside the breeding/nesting season for birds and amphibians.
- No permanent or temporary road construction will occur. All skid trails and off-road vehicle trails resulting from the proposed action will be obliterated and restored.
- Off-road vehicle activities will be kept to a minimum. Off-road vehicles will be parked as close to roads as possible, and drivers will use wide spots in roads or disturbed areas to turn around.
- Mechanical manipulation of soils will be minimized to reduce impacts to small mammals, reptiles, and amphibians and their corresponding habitats.
- Trees rooted in stream banks, regardless of size, and any overhanging branches will be left in place where possible.
- A 50-foot radius buffer of undisturbed vegetation will be maintained around all trees with large stick nests (raptor nests).
- Large, downed woody material (12" diameter or greater) and snags shall be maintained and increased to the extent possible to provide cover for wildlife.
- Trees, wholly or partially dead or alive, with one or more nest cavities shall not be cut.
- All pines, madrones, agaves and riparian species (ash, cherry, sycamore, maple, etc.) regardless of size will be retained where possible. Equipment staging areas will be in previously disturbed locations.
- In agave stands (food resource for lesser long-nosed bats), personnel will avoid driving off-road and will not drive over agave plants.
- Recovery of riparian vegetation species will be monitored.
- CLF will be monitored in the action area during all phases of the project. Whenever possible, personnel permitted to handle CLF will move CLF out of harm's way if needed during project activities.

Adaptive Management

The proposed action incorporates the concept of adaptive management for this project. This approach relies upon resource monitoring to identify changes in management that must be implemented if objectives are not being met. If monitoring indicates that desired conditions are not being achieved, management will be modified following coordination with FWS to determine if any additional effects to CLF would occur.

STATUS OF THE SPECIES

The CLF was listed as a threatened species without critical habitat in 2002 (67 FR 40790). Included was a special rule to exempt operation and maintenance of livestock tanks on non-Federal lands from the section 9 take prohibitions of the Act. The Ramsey Canyon leopard frog (*L. subaquavocalis*) is similar in appearance to the CLF, but may grow larger and has a call that is typically given under water (Platz 1993). Goldberg *et al.* (2004) examined the relationships between the Ramsey Canyon leopard frog and the Chiricahua leopard frog. They found *subaquavocalis* to be on a short branch within the southern Arizona clade of *chiricahuensis* and suggested the two were conspecific. The Society for the Study of Amphibians and Reptiles adopted this recommendation so that the Ramsey Canyon leopard frog was subsumed into *L. chiricahuensis* and then noted by the Service as part of the listed entity (Crother 2008, 74 FR 66867).

Threats to this species include predation by nonindigenous organisms, especially bullfrogs, fish, and crayfish; disease; drought and climate change; floods; degradation and loss of habitat as a result of water diversions and groundwater pumping, poor livestock management, altered fire regimes due to fire suppression and livestock grazing, mining, development, and other human activities; disruption of metapopulation dynamics; increased chance of extirpation or extinction resulting from small numbers of populations and individuals; and environmental contamination.

The status of CLF has changed little since our October 27, 2010, Reinitiated Biological Opinion on Stocking of Trout at Peña Blanca Lake, Santa Cruz County, Arizona (file number 22410-2010-F-0279R1). We incorporate by reference the Status of the Species section of that biological opinion (U.S. Fish and Wildlife Service 2010). Additional information about the CLF can be found in Platz and Mecham (1979, 1984), Sredl and Howland (1994), Rosen *et al.* (1995), Jennings (1995), Degenhardt *et al.* (1996), Sredl *et al.* (1997), Painter (2000), Sredl and Jennings (2005), and U.S. Fish and Wildlife Service (2010).

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

The Action Area includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area includes the Middle and Lower reaches of Cloverdale Creek, Cloverdale Ciénega, and stock ponds and other manmade structures within a) one mile overland of these reaches and b) within five miles upstream and downstream along Cloverdale Creek from the ciénega. Most of the near-term potential effects will occur in the area where levees and soil will be moved; however, as the ciénega returns to historical hydrological conditions due to the proposed action, long-term potential effects include creating perennial stream and wetland conditions from which frogs can disperse up and downstream. Therefore, beneficial effects are expected to occur within three, and possibly up to five miles upstream and downstream of the ciénega.

The action area is within the Peloncillo Mountains/Animas and San Bernardino Valleys Management Area of Recovery Unit 3 (Chiricahua Mountains-Malpai Borderlands-Sierra Madre) (RU 3) of the Chiricahua Leopard Frog Recovery Plan (U.S. Fish and Wildlife Service 2007). RU 3 is the largest of the eight CLF RUs, measuring approximately 160 miles east to west and 250 miles north to south.

The Cloverdale Ciénega is a historic wetland situated in the middle of a valley bottom adjacent to Cloverdale Creek. Modifications to Cloverdale Creek simplified and degraded the natural channel resulting in drying of over half of this ciénega. A concrete dam at the head of the valley was built more than 50 years ago for flood control and agricultural use, and a bedrock spillway on valley left conveys flood flow to a manmade channel. In addition, sometime after World War II, a system of levees extending downstream from the spillway was built to control floods by directing the flow through the base of a hill slope on valley left into the spillway channel. When high volume storm flows directed by the upper levee system reach the spillway, the faster water velocity caused by the confinement increased the streams capacity and the stream began to down cut spillway. Over time, and with some excavation of a bedrock shelf, a deep gully formed at the spillway.

Below the dam and above the upper ford is a 60-acre pasture, below which the ciénega has become desiccated by the diversion of water created by the dam, levees, and spillway gully. In addition, another levee adjacent to the ciénega keeps flood flows in the creek. The ciénega now receives only a fraction of its historical runoff from one hillside and several tributary valleys on valley right.

The lower valley end of the ciénega is marked by an increase in valley slope and the beginning of broad drainage swales that historically conveyed floodwaters down to Cloverdale Creek. At present, any overland flow generated in this ciénega system has been cut off by a valley-wide transverse levee that concentrates all return flows to one spot, where an active head cut sends water and sediment down to the incised creek. Only one of the original drainage swales still supports a relict wetland community (*Carex* and *Juncus* spp.) via subsurface irrigation. There was probably a perennial reach of Cloverdale Creek below each drainage swale at one time, but currently the creek is ephemeral and predominantly fed by stormwater runoff.

A. Status of the species and critical habitat within the action area

According to the BA, CLFs exist in Cloverdale Creek and the adjacent ciénega (including a recently installed drinker), as well as a pond on private land and overflow at the headwaters. They have also been documented using metal stock tanks on roads adjacent to Cloverdale Creek. Suitable stock ponds and other man-made structures are present within the action area, including Sumac Tank. According to information in our files, habitat within the action area includes portions of Cloverdale Creek, including Javelina, State Line, and Canoncito Ranch Tanks, as well as Maverick Spring, which are all located upstream of the ciénega. Breeding has occurred in State Line and Canoncito Ranch Tanks, and possibly other aquatic sites. Javelina, State Line, and Canoncito Ranch Tanks, and Maverick Spring have had recent records of frogs (2007 to the present). Frogs disperse from Canoncito Ranch Tank into Cloverdale Ciénega and Cloverdale Creek when water is present. Periodic drought dries most of the aquatic sites completely or to small pools, which limits population growth potential. Occurrence of chytridomycosis in this area has not been investigated, but may be a limiting factor.

Critical habitat has not been designated for the CLF. However, we are under court order to designate critical habitat for the CLF and our proposed designation is anticipated early in 2011. Should critical habitat for the CFL be designated prior to implementation of this project, reinitiation may be required to address any potential effects to critical habitat.

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.

The proposed action may directly affect a small but unknown number of frogs by crushing them through direct encounters with equipment during construction of the project. To the maximum extent practicable, activities will occur outside the CLF breeding season to minimize the chance that individuals could be injured or killed, as CLF likely spend the winter months underwater or burrowed into muddy cracks and holes near water (Southwest Endangered Species Act Team 2008). Any CLF encountered will be moved out of harm's way as needed. Additionally, mechanical disturbance of soils will be minimized to reduce the effects of habitat manipulation, and equipment staging areas will be in locations that have been previously disturbed; both of these conservation measures reduce the risk of direct encounters between frogs and equipment, although the chance remains that some individuals may be affected.

Indirect effects may include a short-term increase in sedimentation due to earth-moving activities (i.e., removing levees, using fill material to increase the elevation of the creek channel). The actual volume of erosion and resultant potential silt discharge into drainages is highly variable, depending almost entirely on the intensity and duration of precipitation events. Accelerated runoff from upland areas can contribute to bank erosion in stream channels and siltation of riparian and aquatic plants. Accelerated soil erosion also leads to increased sediment-loading in streams. Erosional processes that deliver sediment to streams over long periods of time due to the lack of re-vegetation can have long-term negative effects on aquatic ecosystems (Lotspeich *et al.* 1970; DeByle and Packer 1972).

The potential increase in sediment could result in mortality and injury from covering of respiratory surfaces of gills of tadpoles and burying of individuals. These effects could occur to all life history stages of CLFs dispersing in drainages. Many adult CLFs would likely avoid these effects by leaving the water and waiting until the debris and ash flows pass, although the forage base of these species, mainly aquatic invertebrates, may be reduced temporarily affecting the adults of these species.

To offset these indirect effects and reduce the risk of sedimentation, BMPs for soil and water conservation will be used in treated areas; no permanent or temporary roads will be constructed; all skid and ORV trails will be obliterated and restored; trees will be left rooted in stream banks where possible; and equipment staging areas will be in locations that have been previously disturbed. Additionally, project cleanup and revegetation activities include re-contouring all areas that have been disturbed within the project area as needed, reseeding these areas, and raking out all tracks with a chain harrow. Bare areas along banks will be covered with harvested wetland sod and willow and cottonwood plantings. Additionally, native grass seed and native longstem hay will be mulched onto disturbed areas, and an existing water line will be tapped to provide irrigation for plantings. These conservation measures and restoration activities should significantly reduce adverse indirect effects to CLF.

Over the long term we expect this project will beneficially affect CLF in the Cloverdale area. Currently, Cloverdale Ciénega is desiccating and portions of Cloverdale Creek are eroding, resulting in less water from flood events being stored in the ciénega and creek system. By removing levees and controlling the creek grade with fill material, the incised creek should slowly aggrade, reconnecting the creek's floodplain and subsurface water with the drying ciénega. As a result, it is expected that approximately 140 acres of the 200-acre Cloverdale Ciénega will be restored, providing reliable future habitat for CLF, as well as other wetland and riparian species. From this area, CLF may disperse upstream, downstream, and overland when conditions are suitable, improving the overall conservation status of the CLF within RU 3 of the recovery plan.

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.

Unregulated activities on Federal and non-Federal lands, such as trespass livestock, inappropriate use of off-highway vehicles, and illegal introduction of nonindigenous aquatic species are cumulative effects and can adversely affect the species through a variety of avenues.

Most introductions of nonindigenous fishes and bullfrogs have been done illegally for many reasons (Aquatic Nuisance Species Task Force 1994, Rosen *et al.* 1995). Illegal introductions of nonindigenous fishes and other aquatic invasive species are routinely made by the public (e.g., topminnow, red shiner, and guppies). The release of nonindigenous fish, and likely bullfrogs, by the public has been a major factor in the spread of these species (Moyle 1976, Welcomme 1988). Nonindigenous fish are transported for bait and sporting purposes (Moyle 1976), for mosquito control (Meffe *et al.* 1983), and release of aquarium fishes (Deacon *et al.* 1964, Moore *et al.* 1976, Shelton and Smitherman 1984). Refer to our May 15, 2008, BO on the Reinitiated Biological Opinion on Transportation and Delivery of Central Arizona Project Water to the Gila River Basin in Arizona and New Mexico and its Potential to Introduce and Spread Nonindigenous Aquatic Species for a discussion on the pathways and impacts of nonindigenous aquatic species to native frogs and their habitats (file number 22410-2007-F-0081). We incorporate by reference that discussion (U.S. Fish and Wildlife Service 2008a).

Cumulative effects to native aquatic animals include ongoing activities in the watersheds in which the species occurs such as livestock grazing and associated activities outside of Federal allotments, irrigated agriculture, groundwater pumping, stream diversion, bank stabilization, channelization, and recreation without a Federal nexus. Some of these activities, such as irrigated agriculture, are declining and are not expected to contribute substantially to cumulative long-term adverse effects to native aquatic animals. Other activities, such as recreation, are increasing. Increasing recreational, residential, or commercial use of the non-Federal lands near the riparian area and ciénega would likely result in increased cumulative adverse effects to occupied, as well as potentially occupied native aquatic animal habitat through increased water use, increased pollution, and increased alteration of the stream banks through riparian vegetation suppression, bank trampling, changing flow regimes, and erosion.

That southeastern Arizona and much of the American southwest have experienced serious drought recently is well known. What is known with far less certainty is the frequency and duration of future droughts. State-of-the-art climate science does not yet support multi-year or decade-scale drought predictions. Refer to our December 31, 2008, BO on Aquatic Species Conservation at the San Pedro Riparian and Las Ciénegas National Conservation

Areas for a discussion on the potential impact of climate change and drought to native frogs and their habitats (file number 22410-2008-F-0103). We incorporate by reference that discussion (U.S. Fish and Wildlife Service 2008b).

CONCLUSION

After reviewing the current status of the CLF, the environmental baseline for the action area, the effects of the proposed restoration of Cloverdale Ciénega and the cumulative effects, it is the FWS's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the CLF. No critical habitat has been designated for this species; therefore, none will be affected. However, if critical habitat for the CLF is designated prior to the implementation of this project, reinitiation may be required to assess effects, if any, to critical habitat.

We present this conclusion for the CLF for the following reasons:

- The action area has a small footprint within the Peloncillo Mountains/Animas and San Bernardino Valleys MA, and represents an even smaller footprint within in RU 3;
- The short-term effects of the project are temporary;
- CLF in this MA both inside and outside the action area should benefit in the long-term by the increased availability of perennial water;
- The project cleanup activities, revegetation, and conservation measures proposed by the FS will reduce impacts and minimize loss of individuals;
- The proposed conservation actions are designed to promote the conservation and recovery of the listed species, including the monitoring of CLFs that currently occupy the project area before and during implementation of the proposed action.

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. An 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.

The measures described below are non-discretionary, and must be undertaken by the FS so that they become binding conditions of any grant or permit issued to the Sky Island Alliance, as appropriate, for the exemption in section 7(o)(2) to apply. The FS has a continuing duty to regulate the activity covered by this incidental take statement. If the FS (1) fails to assume and implement the terms and conditions or (2) fails to require the Sky Island Alliance to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the FS or Sky Island Alliance must report the progress of the action and its impact on the species to the FWS as specified in the incidental take statement. [50 CFR ' 402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

We anticipate that the proposed action may result in incidental take of CLF adults, tadpoles, and eggs. Incidental take will be difficult to detect for the following reasons: the species has a small body size, it occurs in habitats that make detection difficult, cause of death may be difficult to determine, and losses may be masked by seasonal fluctuations in numbers or other causes. The incidental take is expected to be in the form of harm, harassment, and kill from encounters with equipment during construction and a short-term increase in sedimentation within Cloverdale Creek due to earth-moving activities.

We anticipate that the proposed action could result in up to 100 percent loss of CLF in the middle and lower reaches of Cloverdale Creek. Therefore, we consider incidental take to have been exceeded if CLF fail to occupy these portions of the creek within five years due to the causes of take listed above.

EFFECT OF THE TAKE

In this biological opinion, the FWS determines that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat for the reasons stated in the Conclusions section.

REASONABLE AND PRUDENT MEASURES

The following reasonable and prudent measure is necessary and appropriate to minimize take of CLF:

1. The FS shall monitor implementation of the proposed action and any resulting incidental take and report to the FWS and AGFD the findings of that monitoring.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the FS must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following terms and conditions implement reasonable and prudent measure #1 for CLF:

- 1.1 A brief written report shall be prepared by the FS and/or Sky Island Alliance summarizing project implementation, observed take, and monitoring results. This report shall be submitted annually to the FWS for five years after completion of the wetland restorations. The report shall also make recommendations, as needed, for modifying or refining these terms and conditions to enhance protection of the CLF or reduce needless hardship on the FS.
- 1.2 The FS shall provide FWS copies of any other reports regarding implementation of the proposed action.

Review requirement: The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The FS must immediately provide an explanation of the causes of the taking and review with the AESO the need for possible modification of the reasonable and prudent measures.

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 W. Broadway Rd, Suite 113, Mesa, Arizona, 85202, telephone: 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, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

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.

- Continue to assist us and the AGFD in conserving and recovering the CLF.

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

We appreciate your efforts to identify and minimize effects to listed species from this project. For further information please contact Marit Alanen (520) 670-6150 (x234) or Scott Richardson (x242). Please refer to the consultation number, 22410-F-2010-0495 in future correspondence concerning this project.

Sincerely,

/ s / Scott Richardson for
Steven L. Spangle
Field Supervisor

cc (hard copy):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ (2)
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Fish and Wildlife Service, Tucson, AZ (Attn: Marit Alanen)

cc (electronic copy):

District Biologist, Douglas Ranger District, Coronado National Forest, Douglas, AZ
(Attn: Glenn Klingler)

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APPENDIX – CONCURRENCES

The appendix contains our concurrences with your determinations that the proposed action may affect, but is not likely to adversely affect, the lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) (LLNB), Mexican long-nosed bat (*Leptonycteris nivalis*) (MLNB), and New Mexico ridge-nosed rattlesnake (*Crotalus willardi obscures*) (NMRR). This concurrence is based on the full implementation of the proposed action as described in the Description of the Proposed Action section of the Biological Opinion, including the conservation measures proposed by the applicant.

Lesser long-nosed bat and Mexican long-nosed bat

The LLNB is migratory and found throughout its historical range, from southern Arizona and extreme southwestern New Mexico, through western Mexico, and south to El Salvador. The bat is a seasonal resident in Arizona and New Mexico, usually arriving in early April and leaving in mid-September to early October. Lesser long-nosed bats consume nectar and pollen of paniculate agave flowers and the nectar, pollen, and fruit produced by a variety of columnar cacti, and have been documented foraging many miles from roost sites. No known roosts are within the action area, although the action area is located within foraging distance (up to 40 miles) from night and day roosts located in the Peloncillo, Animas, and Chiricahua Mountains. For a detailed Status of the Species, please see our September 4, 2008 Biological Opinion on the effects of the Secure Border Initiative (SBI^{net}) Tucson West Tower Project, Ajo, Tucson, Casa Grande, Nogales, and Sonoita Stations Area of Operation, U.S. Border Patrol, Tucson Sector, Arizona (22410-2008-F-0373) available on our website at <http://www.fws.gov/arizonaes>, under Document Library; Section 7 Biological Opinions.

Mexican long-nosed bats are known from northern and central Mexico, southwestern Texas, and southwestern New Mexico. Similar to the LLNB, the MLNB feeds on nectar and pollen of agave and cactus flowers and may travel up to 50 miles per night to forage. No roost sites are known to occur within the action area, but the action area is located within foraging distance of roost sites in the Animas Mountains (C. Weisse, Bat Conservation International, pers. comm. 2010). Two specimens have been recorded from the Coronado National Forest, both from Guadalupe Canyon, one near the Peloncillo Mountains. For a detailed Status of the Species, please see our June 10, 2005 Programmatic Biological and Conference Opinion on the continued implementation of the Land and Resource Management Plans for the Eleven National Forests and National Grasslands of the Southwestern Region (#2-22-03-F-366) available on our website at <http://www.fws.gov/arizonaes>, under Document Library; Section 7 Biological Opinions.

CONSERVATION MEASURES

The following conservation measures are proposed by the applicant specific to the LLNB and MLNB:

- Retain all pines, madrones and riparian species (ash, cherry, sycamore, maple, etc.) regardless of size where possible. Avoid agaves where possible.

- Equipment staging areas will be in locations that have been previously disturbed.
- In agave stands (food resource for bats), personnel would avoid driving off-road and over plants.

CONCURRENCE

We concur with your determination that this project may beneficially affect, and is not likely to adversely affect, the LLNB and MLNB for the following reasons:

- No known roost sites would be disturbed due to the proposed action, thus direct effects to LLNB or MLNB are discountable.
- No agave stands occur within areas that will be disturbed by the proposed action, thus indirect effects to foraging habitat for LLNB and MLNB are insignificant.
- Increased water distribution is expected to result from the proposed action, which should benefit foraging habitat for the LLNB and MLNB.
- No critical habitat has been designated for the LLNB or MLNB, thus none will be affected.

New Mexico ridge-nosed rattlesnake

The NMRR is known to occupy the Animas Mountains, Hidalgo County, New Mexico; the Peloncillo Mountains, Hidalgo County, New Mexico and Cochise County, Arizona; and the Sierra San Luis in Sonora and Chihuahua, Mexico. It is very rarely encountered in the Peloncillo Mountains, requiring 30 or more person-days to locate a single individual. For a detailed Status of the Species, please see our June 10, 2005 Programmatic Biological and Conference Opinion on the continued implementation of the Land and Resource Management Plans for the Eleven National Forests and National Grasslands of the Southwestern Region (#2-22-03-F-366) available on our website at <http://www.fws.gov/arizonaes>, under Document Library; Section 7 Biological Opinions.

CONSERVATION MEASURES

There are no conservation measures proposed by the applicant specific to NMRR.

We concur with your determination that this project may beneficially affect, and is not likely to adversely affect, the NMRR for the following reasons:

- No NMRR polygons (areas of potential habitat as determined by Holycross and Smith 2001¹) occur within the action area, and the flat, grassy valley bottom where the proposed action will occur does not provide habitat for the snake. Therefore, the

¹ Holycross, A. T. and L. J. Smith. 2001. A map of potential core habitat for *Crotalus willardi obscurus* on Coronado National Forest lands in the Peloncillo Mountains. Unpublished report and map, on file, Coronado National Forest, Tucson, Arizona.

proposed action will not occur within habitat for NMRR and the effects to the snake are insignificant and discountable.

- Critical habitat for the subspecies does not include Forest Service lands, thus none will be affected.