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2-21-02-F-124

August 29, 2002

Memorandum

To: Director, Resource Management Office, Bureau of Reclamation, Yuma Area Office,
Yuma, Arizona

From: Acting Field Supervisor

Subject: Conference Opinion for the Transfer of 347 Acres of Bureau of Reclamation Land to
the Greater Yuma Port Authority and U.S. General Services Administration

This conference opinion responds to your February 22, 2002, memorandum requesting initiation of formal section 7 conferencing under the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (Act). The conference concerns possible effects of a 347-acre Bureau of Reclamation (Reclamation) land transfer to the Greater Yuma Port Authority (GYPA) and U.S. General Services Administration on the proposed threatened flat-tailed horned lizard (*Phrynosoma mcallii*) (FTHL). Reclamation's Yuma Area Office has determined that the 347-acre land transfer will not jeopardize the continued existence of the FTHL. However, Reclamation has also requested that conferencing be conducted in accordance with the procedures for formal consultation, as provided in 50 CFR §402.10 (d), and has determined that the above action is likely to adversely affect the proposed threatened FTHL.

This conference opinion was prepared using information from the following sources:

- Your February 22, 2002, memorandum requesting conferencing
- Final Environmental Assessment for the San Luis, Arizona, Commercial Port of Entry Project
- Maps and other documents associated with the proposed action
- A site visit and informal FTHL survey on June 19, 2002
- Informal discussions among our staffs and the project proponent

Literature cited in this conference opinion is not a complete bibliography of all literature available on the species of concern, the effects of construction and operation of Port of Entry (POE) facilities, or

on other subjects considered in this opinion. A complete administrative record of this conference is on file at our Arizona Ecological Services Field Office.

Conference History

- February 23, 2002: The Fish and Wildlife Service (Service) received Reclamation's February 22, 2002 memorandum requesting formal conference.
- March 20, 2002: The Service sent a memorandum to Reclamation confirming initiation of formal conferencing.
- June 19, 2002: The Service met with Reclamation personnel at the project site to discuss the proposed action, conduct additional informal FTHL surveys, and remove and relocate any lizards from harm's way. For further discussion, please see the Environmental Baseline below.
- May 14, 2002: An electronic copy of the EA was transmitted via electronic mail to the Service and two survey maps of the proposed project site were transmitted via facsimile to the Service.
- June 15, 2002: The Service sent a memorandum requesting a 60-day extension of the conferencing period.
- July 9, 2002: The Service received Reclamation's July 5, 2002 memorandum concurring with our request for extension, with the exception that the period of extension be limited to 45 days to allow Reclamation to complete the land transfer on or before August 30, 2002.
- August 22, 2002: The Service issued the conference opinion.
- August 23, 2002: Reclamation and GYPA requested that the term and condition in the conference opinion be omitted, and included as a proposed conservation measure.

DESCRIPTION OF THE PROPOSED ACTION

The land disposal is anticipated to occur at the conclusion of formal conferencing and issuance of our conference opinion. The 347-acre parcel of land is located at the United States/Mexico border approximately five miles east of the existing POE in San Luis, Arizona. The project site is bordered on the north by an irrigation canal and adjacent agricultural lands, on the west by Yuma County Avenue E and adjacent Reclamation lands, on the south by the United States/Mexico border, and on the east by the Yuma Desert FTHL Management Area (MA). The MA is managed by the US Marine Corps, Reclamation, and the Bureau of Land Management (BLM). The project site is undeveloped, with the exception of an international animal crossing facility currently under lease with Reclamation, which occupies approximately 25 acres along the border. The legal description for the land to be transferred is as follows:

- (A) T. 11 S., R. 24 W., sec. 23, Lots 1-4, NE 1/4, N 1/2, NW 1/4, excluding lands located within the 60-foot border strip.
- (B) T. 11 S., R. 24 W., sec. 22, East 300 feet of Lot 1, excluding lands located within the 60-foot border strip.
- (C) T. 11 S., R. 24 W., sec. 24, West 300 feet, excluding lands located within the 60-foot border strip.
- (D) T. 11 S., R. 24 W., sec. 15, SE 1/4, East 300 feet.
- (E) The right to use lands in the 60-foot border strip excluded under (A), (B), and (C), for ingress to and egress from the international boundary between the United States and Mexico.

The GYPA is the project proponent and applicant and will own the land and pay for the construction and operation of the facilities. The facility will also be used by the Arizona Department of Motor Vehicles, the U.S. Federal Inspection Agency (U.S. Customs Service), the Department of Justice Immigration and Naturalization Service, U.S. General Services Administration, and the U.S. Department of Agriculture Animal and Plant Health Inspection Service. Each of these agencies will use the facility for governmental purposes including the inspection of people and vehicles entering and leaving the United States. The United States Border Patrol (USBP) will have access to the site at all times and will maintain a 150-foot strip of patrol area north of the border. This strip of patrol area was recently extended from 60 feet to 150 feet, and will be made permanent through an easement with Reclamation.

Currently, both commercial trade vehicles and private vehicular traffic use the existing POE in San Luis, Arizona. The proposed project would create a new commercial POE on the 347-acre parcel located approximately five miles east of the existing facility. As part of the proposed action, the commercial facilities at the San Luis POE would be deactivated, and the San Luis POE would be used exclusively as a non-commercial POE. Thus, this conference opinion considers Reclamation's legal transfer of the 347-acre parcel, as well as the indirect effects of the GYPA's proposed use of the parcel after its transfer. The latter will be further discussed in the following "Effects Analysis" section of this conference opinion. Reclamation will maintain discretion and compliance responsibility for the parcel until transfer occurs. After transfer, the GYPA will maintain responsibility for the construction, operation, and management of the CPOEF and the property itself.

Proposed Conservation Measures

The GYPA has agreed to implement the following conservation measures with respect to the parcel acquisition, the construction and subsequent operation of the proposed CPOEF, and the paving and subsequent use of the Yuma County Avenue E access road.

- 1) The GYPA will compensate the FTHL Strategy Fund the sum of \$235,000, coincidental with the completion of the land transfer, to compensate for the loss of FTHL habitat.
- 2) Prior to project initiation, an individual from the GYPA shall be designated as a Field Contact Representative. The Field Contact Representative shall have the authority to ensure compliance with protective measures for the FTHL and will be the primary agency contact dealing with these measures. The Field Contact Representative shall have the authority and responsibility to halt activities that are in violation of these conservation measures.
- 3) Prior to project initiation, a worker education program shall be developed and implemented, and will be available in both English and Spanish. Wallet-sized cards summarizing this information shall be provided to all construction, operation, and maintenance personnel. The education program shall include the following aspects at a minimum:
 - biology and status of the FTHL,
 - protection measures designed to reduce potential impacts to the species,
 - reporting procedures to be used if a FTHL is encountered in the field, and
 - importance of exercising care when commuting to and from the project area to reduce mortality of FTHL on roads.
- 4) Before the construction of the CPOEF commences, a FTHL-proof barrier (fenceline) will be constructed. Fenceline specifications will include using 0.25 inch mesh hardware cloth; 1) 36 inches high (net height, after installation, will actually be 30 inches); 2) buried to a depth of approximately 6 inches; 3) permanently attached to t-posts and two barbed wires with metal clips or ties (the 3rd and uppermost barbed wire will not be attached to the mesh); and, 4) 12-foot fence projections at 45° relative to the main fence at openings. Where a junction (end of one hardware cloth roll and the beginning of another) occurs, the hardware cloth will be supported and fastened together with wire clips or ties to an additional t-post to prevent the formation of gaps. The FTHL fenceline will be constructed around all portions of the parcel that will be developed, including portions utilized for construction, operation, and maintenance of all three construction phases of the CPOEF. Should it become necessary to alter the fenceline specifications or design, the Service and the GYPA must agree on these alterations prior to construction of the barrier fence. The GYPA may also choose to attach the barrier directly to a chainlink fence following the specifications as stated in Item 6 below.

A FTHL-proof barrier fenceline shall also be constructed along the portions of Avenue E which adjoin FTHL habitat. The FTHL fenceline shall be constructed along the southern 3/4 mile of the west side of Avenue E, and along the southern 1/2 mile of the east side of

Avenue E. Fenceline specifications will be the same as those used for construction of the fenceline around the CPOEF. The FTHL fenceline may be attached directly to a right-of-way fence where applicable. Connectivity will be maintained between FTHL populations on the east and west sides of Avenue E through the unfenced portions of Avenue E, Reclamation lands to the north of County 23rd Street, and lands south of the border in Sonora, Mexico.

- 5) After completion of Item 4 above, an experienced biologist(s), approved by Reclamation, will conduct a thorough search within the fenced area in an attempt to capture and relocate as many FTHLs as possible prior to construction activities. Searchers will spend a minimum of one person-hour per acre of enclosure as required for reasonable success in locating FTHL specimens. The Service will provide expertise and person-hours for this purpose. Search efforts will only occur after the lizard-proof fenceline discussed above has been installed and only when conditions are suitable for surface activity of FTHLs. These conditions are as follows:

- a. April through September.
- b. Surface temperatures, exposed to sunlight, must be below 122°F.
- c. For tracking purposes, field work must not occur immediately after precipitation events or when wind speed has equaled or surpassed 20 mph in the area.

Reclamation has agreed to allow the relocation of FTHLs out of harm's way to nearby suitable habitat in the Yuma Desert FTHL MA east of the project site. Relocated FTHLs shall be placed in the shade of a large shrub in undisturbed habitat. If surface temperatures in the sun are less than 86° F or exceed 122° F, the biologist or Field Contact Representative, if authorized, shall hold the FTHL for later release. Initially, captured FTHLs shall be held in a cloth bag, cooler, or other appropriate clean, dry container from which the lizard cannot escape. Lizards shall be held at temperatures between 77° F and 95° F and shall not be exposed to direct sunlight. Release shall occur as soon as possible after capture and during daylight hours when surface temperatures range from 89.6° F to 104° F. If such conditions do not occur within 48 hours of capture, the lizard(s) shall be transferred to a terrarium containing at least 2 inches of sand from the project area. The terrarium shall be maintained between 77° F and 95° F until conditions at the site are appropriate for release. Lizards shall be allowed to acclimate to higher surface temperatures prior to release. The biologist shall be allowed some judgement and discretion to ensure that survival of FTHLs found in the project area is likely.

- d. Persons that handle FTHLs shall first obtain all necessary permits and authorization from the Arizona Game and Fish Department (AGFD). If the species is listed, only persons authorized by both AGFD and the Fish and Wildlife

Service under the auspices of this opinion shall be permitted to handle FTHLs.

- 6) After the completion of both the aforementioned FTHL relocation efforts and the subsequent construction of the CPOEF, a chainlink fence will be constructed around the development boundary. At this time, the previously constructed FTHL-proof barrier (fenceline) shall be removed from its previous location and retrofitted and affixed to the constructed chainlink fenceline to limit accessibility and subsequent injury or mortality of lizards occupying adjacent habitats which may stray onto the project site. At the access points to the CPOEF, the FTHL barrier fenceline shall be modified to help prevent migration of FTHLs onto the project grounds. These modifications shall consist of four-foot sections radiating outwards at a 45° angle away from the facility at each junction point with the fenceline and the access points/gates. The remainder of the FTHL barrier fenceline specifications shall remain the same as those used during initial construction of the FTHL barrier fenceline. However, should it become necessary to alter the fenceline specifications or design, the Service and GYPA must agree on these alterations prior to construction of the barrier fence.
- 7) The FTHL barrier fenceline shall be periodically inspected, with routine maintenance performed to sustain effectiveness as a lizard-proof barrier.
- 8) If a FTHL is discovered on-site after the lizard-proof fence is constructed, the following measures will be implemented:
 - a) A facility site plan map, of appropriate scale, shall be maintained and posted in the office trailer (during construction) or the CPOEF's central office (post construction) or in an otherwise central location on-site, for the sole purpose of recording FTHL observations. The location of each FTHL observation shall be noted on the map for sighting trend analysis and for troubleshooting the effectiveness of the FTHL fence. Each observation shall be given a reference number (to be included on the map) and logged into a database or other information storage system (record book, etc.). FTHL observation information to be recorded will include the date, time of day, temperature, name of observer, physical condition of the specimen, any behavioral observations made (was it basking, resting in shade, etc.), and the ultimate disposition of the specimen.
 - b) Immediately after a FTHL is observed on-site, GYPA will perform an inspection of the entire FTHL fenceline to assess whether there are any visible breaches or noteworthy structural problems.
 - c) Temporary captivity standards and subsequent relocation protocols shall be followed as specified in Item 5 above.

- 9) Within 90 days after completing the intensive survey and removal of FTHLs, the GYPA shall supply to us a report summarizing the number and locations of FTHLs found, relocated, killed, injured, or otherwise taken as a result of activities authorized by this opinion. The summary report shall also be provided to us yearly, due the January following completion of construction, and due every January thereafter. The report shall also make recommendations, as needed, to refine or modify the conservation measures and this term and condition to enhance protection of the FTHL.

STATUS OF THE SPECIES

The FTHL is a small, cryptically colored, phrynosomatid lizard restricted to flats and valleys in the western Sonoran Desert, including the Coachella, Borrego, and Imperial valleys in California; the Yuma Desert in extreme southwestern Yuma County, Arizona; and adjacent portions of Baja California Norte and Sonora, Mexico (Funk 1981, Johnson and Spicer 1985, Rodriguez 2001). The diet of the FTHL consists primarily of ants, particularly from May to July (Parker and Pianka 1975; Turner and Medica 1982; Mark Fisher, Deep Canyon Desert Research Center, Palm Desert, California, pers. comm. 1992; Young and Young 2000). The species is active primarily from mid-February to mid-November (Muth and Fisher 1992, Mayhew 1965) and juveniles may be active throughout the winter on warm days (Muth and Fisher 1992). Mean home ranges of telemetered FTHLs in Imperial County, California was 4.7 acres (Muth and Fisher 1992). In the Yuma Desert, mean annual home ranges for FTHLs ranged from 1.7-25.5 acres for males and 2.4-12.6 acres for females (Young and Young 2000).

In Arizona, the range of the FTHL is approximately bounded by the Gila River on the north, urban and agricultural development along the Colorado River on the west, and to the east by bajadas and relatively coarse, alluvial, granitic soils immediately west of the Gila and Butler mountains (Rorabaugh *et al.* 1987, Hodges 1995). In this area, most records for the species are from areas of fine, often windblown, silica sand dominated by sparse stands of white bursage, creosote, and galleta grass (Rorabaugh *et al.* 1987, Hodges 1995). The species shows a preference for and may be more abundant on sandy substrates as compared to desert pavement or hardpan surfaces (Muth and Fisher 1992, Rorabaugh *et al.* 1987), and in Arizona is most often found in areas of silica sand, rather than granitic sands and gravels (Hodges 1995).

Limited information exists to quantify densities of FTHLs; however, estimates have ranged from 0.06 to 2.0 per acre (Turner *et al.* 1978, Muth and Fisher 1992, Rorabaugh 1994, Wone and Beauchamp 1995, Young and Young 2000). Daily movements decline as density of lizards increase and as forage resources decline (Young and Young 2000).

Females produce one or two clutches of eggs that hatch in July through September (Turner and Medica 1982, Muth and Fisher 1992, Howard 1974). FTHLs construct burrows in which they hibernate in winter and escape high temperatures in summer (Muth and Fisher 1992, Rorabaugh

1994, Young and Young 2000). Mean cloacal temperature of active FTHLs in California was 100° F (Mayhew 1965). Maximum and minimum voluntary body temperatures are 106° F and 85° F, respectively (Brattstrom 1965). Individuals become stressed when cloacal temperatures reach 113° F or more (Mayhew 1965).

Predators of the FTHL include a number of birds, the sidewinder (*Crotalus cerastes*), leopard lizard (*Gambelia wislizenii*), round-tailed ground squirrel (*Spermophilus tereticaudis*), coyote (*Canis latrans*), and fox (*Vulpes macrotis* or *Urocyon cinereoargenteus*) (Young 1999, Duncan *et al.* 1994, Muth and Fisher 1992, Funk 1981). Eighty-two percent of FTHLs approached by researchers at Ocotillo Wells State Recreational Vehicle Area crouched low and remained motionless (Wone and Beauchamp 1995). FTHLs were more likely to run when approached by a vehicle than by someone on foot (Wone and Beauchamp 1995).

On November 29, 1993, we published a rule in the *Federal Register* proposing the FTHL as a threatened species [U.S. Fish and Wildlife Service (USFWS) 1993]. The proposed rule was withdrawn in a *Federal Register* notice dated July 15, 1997. However, on July 31, 2001, the 9th Circuit Court of Appeals remanded the withdrawal for further consideration. In a *Federal Register* notice dated December 26, 2001, we reinstated the proposed rule. A final listing decision is due one year after the reinstatement notice, December 2002 (USFWS 2001).

We proposed the FTHL as a threatened species because of documented and anticipated population declines and loss of habitat associated with widespread habitat loss, fragmentation, and degradation due to human activities such as agricultural and urban development, off-highway vehicle use, energy developments, sand and gravel mining, construction of roads and canals, and military activities (USFWS 1993). Based on a 1997 analysis, roughly 48.6 percent of the historical habitat of the FTHL in the United States had been converted to other uses, particularly urban development and agriculture, and by filling of the Salton Sea (Hodges 1997). Remaining habitats are threatened by continued habitat conversion, off-road vehicles, pesticide applications, and invasion of nonnative plants. Insecticide applications in FTHL habitat to control an agricultural pest may have reduced ant populations, the primary prey of the FTHL (USFWS 1993, Bolster and Nicol 1989); although that practice has been discontinued on BLM lands (Foreman 1997). Invasion of nonnative plants, such as split grass (*Schismus barbatus*) and Sahara mustard (*Brassica tournefortii*) may alter the prey base of the FTHL. High stem densities of these species can perhaps impede the movement of FTHLs. Furthermore, nonnative plants can carry fire that eliminates native shrubs (Foreman 1997).

From 1994 to 1997, representatives from 10 State and Federal agencies worked with herpetologists to develop a comprehensive conservation strategy for the FTHL. The agency representatives comprised the FTHL Rangewide Strategy Working Group. The Working Group was responsible for preparing the *FTHL Rangewide Management Strategy* (Strategy) with the help of the FTHL Conservation Team. The Conservation Team was composed of conservation biologists and herpetologists familiar with the FTHL. A draft Strategy was completed and made available for public comment in January

1997. The Strategy was finalized (Foreman 1997) and a conservation agreement was signed in June 1997, committing signatory agencies to implementation of the Strategy. Agencies signing the agreement included the USFWS (Regions 1 and 2), BLM (Arizona and California), Reclamation (Lower Colorado Region), Marine Corps Air Station - Yuma, El Centro Naval Air Facility, AGFD, California Department of Fish and Game, and California Department of Parks and Recreation (Rorabaugh *et al.* 2000).

The purpose of the agreement and Strategy was to maintain viable populations of FTHLs in five MAs, including the Yuma Desert MA in Yuma County, Arizona; and the East Mesa, West Mesa, Yuha Desert, and Borrego Badlands MAs in Imperial and eastern San Diego counties, California. These MAs range in size from 42,400 to 136,100 acres and total 485,200 acres. Also established was a research area at the Ocotillo Wells State Recreational Vehicle Area in California where the effects of human activities and other studies of the lizard would be supported. The Strategy's format was that of a USFWS recovery plan, summarizing the biology, status, threats, and current management of the species; a management goal and objectives; planning actions; an implementation schedule that identified each task needed to meet the management goal; parties responsible for implementing tasks; schedules; and cost estimates. The Strategy also included standard mitigation and compensation formulas and an interim survey protocol that all signatory agencies would use, and suggested techniques for restoration of degraded FTHL habitat (Foreman 1997).

Key planning actions included establishing the MAs and, within MAs, limiting cumulative new disturbance to one percent of each MA, limiting vehicle use to designated routes only, reducing route densities, acquiring inholdings, law enforcement and public education, rehabilitating degraded habitats, and prohibition of competitive recreational events, long term camping, and use of pesticides. The planning actions also included research needed to promote conservation of the lizard and its habitat, inventory and monitoring of FTHL populations and habitats, and maintenance of habitat corridors between MAs. A technical team (the Interagency Coordinating Committee [ICC]) and a management team (the Management Oversight Group [MOG]), modeled after similar groups for the desert tortoise, coordinate and track implementation of the Strategy.

The ICC compiles an annual report that tracks implementation of the Strategy. Compliance with the Strategy has been very good thus far, particularly in regard to establishing MAs, regulating recreation and pesticide use, mitigation and compensation of project impacts, conducting research, monitoring of habitat conditions, and acquiring inholdings in Arizona. Plans are in place or in preparation to fully implement the Strategy, and the ICC and MOG meet regularly. Off-road vehicle activity by the USBP in some MAs is an increasing problem; we have begun discussions with the USBP about limiting this activity. To date, no method of monitoring populations of FTHLs has been devised; thus this task is incomplete. However, testing of trapping webs to monitor regional population densities began in May, 2000.

Further information on the range, biology, and ecology of the FTHL can be found in Young and Young (2000), Rorabaugh *et al.* (2000, 1987), Beauchamp *et al.* (1998), Hodges (1997, 1995), Wone and Beauchamp (1995), Rorabaugh (1994), Muth and Fisher (1992), Turner and Medica (1982), Turner *et al.* (1980), Norris (1949), and Mayhew and Wright (1971).

Past Conference Opinions

A number of formal conference opinions have been issued for projects proposed throughout the FTHL's distribution within California and Arizona. In all of the aforementioned conference opinions we found that the proposed actions were not likely to jeopardize the continued existence of the FTHL. The following summarizes formal conference opinions and associated take issued for projects involving the FTHL in Arizona:

Date	Log Number	Project Type	Take Authorized
2/17/94	2-21-92-F-414	Construction of a Natural Gas Pipeline	Harm: Unknown number of lizards from construction activities 2 lizards per year from operation and maintenance activities Harass: 30 lizards from relocation during construction
6/01/94	2-21-95-F-348	Construction of a 69 Kilovolt Powerline	Harm: 3 lizards from construction activities 2 lizards per year from maintenance activities Harass: 6 lizards from relocation during construction
4/17/95	2-21-95-F-114	Marine Corps Use of the Barry M. Goldwater Range	Harm: 23 lizards from training activities 10 lizards per year from habitat loss and degradation Harass: Unknown number from relocation during field exercises
6/28/95	2-21-94-F-359	Construction of a 34.5 Kilovolt Powerline	Harm: 2 lizards from construction activities 1 lizard every two years from maintenance activities Harass: 3 lizards from relocation during construction
2/08/96	2-21-96-F-144	Reclamation Land Transfer of 160 Acres to Yuma for County Office Construction	Harm or Harass: 65 lizards from construction and relocation activities
7/12/96	2-21-96-F-445	Construction of Roads, Landfill and State Prison	Harm: 6 lizards from road construction activities 15 lizards from moving onto the new road pavement 1000 lizards from construction of Landfill and State Prison Harass: Unknown number from road construction relocation efforts
4/30/97	2-21-95-F-216	Reclamation Lower Colorado River Operations and Maintenance Project	Harm: 8 lizards from moving onto travel routes or project sites and being crushed or injured by moving vehicles or equipment Harass: Unknown number from relocation efforts during project implementation
6/26/02	2-21-95-F-216R1	Reclamation Drilling of Two Observation Well Clusters	Harm and Harass: 6 lizards from construction and relocation activities Harm: 2 lizards per year from operation and maintenance 5 lizards per year from crushing by project-related vehicle traffic on access roads

7/12/02	2-21-02-F-070	BLM Land Disposal of 80 Acres to Yuma for Construction of a Water Pollution Control Facility	Harm and Haras: 13 lizards from construction, environmental site assessment, and relocation activities Harm: 1 lizard per year from moving onto the facility and being crushed or injured by moving vehicles or equipment 3 lizards per year from crushing by project-related vehicle traffic on access roads
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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.

Due to the indirect effects from the 347-acre land transfer [see discussion of Commercial Port of Entry Facility (CPOEF) below], the action area includes the parcel proposed for transfer, and Yuma County Avenue E from the border to the intersection of Yuma County 23rd Street. Avenue E is the main access road to the proposed CPOEF.

Geophysical Description and General Vegetation Communities

The proposed action area is situated in the lower Colorado River Valley subdivision of Sonoran desertscrub, the largest and most arid subdivision of Sonoran desertscrub (USFWS 1996). Dominant perennial plant species in the more xeric examples of this vegetation community, such as the project site, include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and big galleta grass (*Hilaria rigida*) (Turner and Brown 1982, USBOR 2000). The average elevation within the project area is approximately 125 feet above mean sea level. The site is essentially flat from compacted sand, with no known mineral deposits (USBOR 2000). The main geographic features near the site are the Colorado River to the west, the remainder of the Yuma Mesa to the east and south, and the Yuma Valley to the north (USBOR 2000). Soils in the action area are classified as Rositas sand, which consists of deep, excessively drained soils on terraces, alluvial fans, and sand dunes. These soils formed in mixed, sandy, windblown material, and have slopes of 0 to 20 percent. A seasonal aqueduct (242 Drainage Channel) is located along the existing dirt road that borders the parcel near the northern boundary of the project site and is the only source of surface water in the project vicinity.

Threats to FTHLs and Their Habitat Specific to the Action Area

Anthropogenic impacts in the action area include a small Wildcat dump, a USBP drag road along the International border, numerous vehicle tracks (likely due to USBP and illegal entry activities), and

past cattle presence (likely associated with the International Cattle Crossing). The project area and surrounding areas also experience a high level of illegal entry and USBP activity daily.

Approximately 100 persons attempt an illegal entry each day in addition to the many vehicles attempting illegal entry in this area. Therefore, the area is heavily patrolled 24 hours a day by at least two USBP vehicular units (USBOR 2000). Much of the habitat along the border in the Yuma area has been adversely affected by off-road-vehicle activity. Many new roads and routes have been created in recent years. In addition, much of the State and private land adjacent to the action area has been developed for agriculture.

Status of the Species within the Action Area

The entire site contains suitable habitat and the Yuma Desert FTHL MA is located immediately adjacent to the eastern border of the site (USBOR 2000). Four FTHLs were sighted during a September 3, 1999, survey at the project site by Reclamation biologists. The survey was conducted by walking four transects of the project site. Although no sightings occurred in transects 1 and 4, scat was observed. One male was observed in transect 2 and one female was observed in transect 3. Two FTHLs were observed during a driving survey along the USBP Drag Road.

Three live FTHLs and one deceased individual were sighted during a project clearance survey of the Yuma County right-of-way corridor centered on the Avenue E alignment from County 23rd Street to two miles south of County 23rd Street (at the US/Mexico Border). The surveys were conducted by Logan Simpson Design Inc. from October 10-13, 2000, under a contract from the Arizona Department of Transportation. Walking surveys were conducted, and covered a 200-foot wide swath on either side of Avenue E. Scat was also found (Logan Simpson Design 2001).

On June 19, 2002, additional FTHL survey efforts were conducted by our biologists with the assistance of Reclamation personnel. Several sets of probable FTHL tracks were observed on-site. FTHLs can be found more readily by following the tracks, however the frequent presence of hardpan made tracking difficult. Additional evidence of FTHL presence on the project site included nine probable FTHL scat and two FTHL body impressions; however, no FTHLs were observed during the informal surveys.

EFFECTS OF THE PROPOSED ACTION

"Effects of the action" refers 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 or interdependent with that action (50 CFR 402.02). "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 (50 CFR 402.02).

Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur. Indirect effects are expected to result from the proposed construction, operation, and maintenance of the CPOEF. In accordance with 50 CFR §402.02, the indirect effects of such actions must be considered herein as effects of the action and are the focus of the following discussion.

Effects of CPOEF Construction, Operation, and Maintenance on Habitat and FTHLs

The proposed CPOEF project includes three phases of construction, spread out over a period of at least 10 years, to allow for expansion to meet demands as they alter with time. The first phase includes the initial construction of the CPOEF, and improvements to the main access road County Avenue E. The latter is discussed in the “Effects of Access Road Improvements on FTHL and their Habitat” section below. The first phase of the CPOEF will occupy approximately 80 acres of the 347-acre parcel. The remaining land will be available for lease or sale by the GYPA for port-related facilities, or will be used to expand the new CPOEF during the third phase of construction. The GYPA anticipates utilization of the entire parcel in the future by the CPOEF and related facilities.

The second phase would transform the existing San Luis POE, so that non-commercial vehicles and pedestrians could better access the facility. The commercial facilities would be decommissioned and any transferable equipment, fixtures, or furnishings would be re-established in the new CPOEF. No FTHLs or their habitat exist in the vicinity of the existing San Luis POE due to the urbanized nature of the site. Implementation of the proposed conservation measures and reasonable and prudent measure at the San Luis POE is not necessary due to the absence of FTHLs and their habitat at this urbanized site.

The third phase is expected to occur at least 10 years after the initial phase is completed. Expansion facilities would be built and roads would be widened, based on need and tailored to traffic, inspection, and programming needs. Expansion would also take place at the non-commercial San Luis POE during this phase. If expansion is needed, Yuma County 23rd and Avenue E would each be expanded to four lanes to accommodate the increase in shipping activity. The widening of Yuma County Avenue E and 23rd Street will be a future Federal action considered in a formal consultation for the Area Service Highway, and is therefore not considered in this consultation.

Habitat within the project area will be lost in its entirety. FTHLs are known to occur in the action area, and any individuals which have not been captured and relocated or otherwise migrated out of the action area at the time construction commences will suffer direct mortality or injury as a result of operation of heavy earth-moving machinery and destruction of foraging and sheltering habitat within the action area. Specifically, animals could be crushed by vehicles or equipment while in their underground, shallow burrows, or while on the surface. Additionally, although the lizard-proof barrier is believed to be 99% effective in deterring lizards from gaining access to enclosed areas, there remains the risk of an occasional lizard gaining access from an undiscovered breach in the

fenceline or from one or more of the vehicular access points to the CPOEF. Employing their cryptic color and pattern, FTHLs often freeze, rather than flee, when approached. This defensive behavior may enhance the odds of FTHLs being crushed by vehicles or equipment. In addition to increased vehicular activity on the CPOEF site during construction, day-to-day operation of the CPOEF will sustain increased vehicular use. The increased, continuous use of the CPOEF may result in higher mortality levels for FTHLs due to crushing.

Effects of Access Road Improvements on FTHLs and their habitat

FTHLs are known to occur in habitat adjacent to the Avenue E portion of the action area and may migrate onto Avenue E during paving of the roadway due to the occasional penetration of the lizard barrier discussed immediately above, and due to FTHLs bypassing the fenced portions of the roadway. Avenue E will experience increased vehicular activity during this construction, however the lizard fenceline should reduce road kills to near zero, with only a few animals going around the fence. Reduced mortality levels for FTHLs are expected due to crushing by vehicles and heavy equipment.

Some habitat disturbance and loss will occur as a result of road construction and equipment/materials storage and staging areas. Road construction is expected to occur directly over the existing unpaved roadway minimizing these effects. The paved roadway will be no wider than the existing unpaved road. We estimate that approximately 0.25 acre of habitat disturbance would occur as a result of equipment/materials storage and staging. Staging and storage areas would slowly recover. Recovery would be more rapid if the area is not cleared and shrubs are crushed rather than excavated. Crushed shrubs often resprout from the base.

Effects of Access Road Use and Maintenance on FTHLs

Increased vehicle traffic on the proposed paved portion of Avenue E, as a result of improved access and a need to access the new CPOEF, is expected to result in ongoing mortality and injury to lizards due to FTHLs penetrating the barrier fenceline, and due to FTHLs bypassing the fenced portions of the roadway. However, as stated above, the lizard fenceline should reduce road kills to near zero, with only a few animals going around the fence.

Periodic maintenance of the roadway could also result in occasional mortality or injury of FTHLs. During resurfacing of roadways, lizards and other small animals may become entrapped in drying asphalt or on oiled surfaces. Regrading of road shoulders could result in crushing of animals in burrows or on the surface.

It has been shown that roads can act as mortality sinks for small animals (Boarman *et al.* 1992, Rosen and Lowe 1994). For example, over a four-year period, mortality of snakes along a 27.4 mile section of Route 85 in southern Arizona equaled the estimated snake population in a 1.93 mi² area (Rosen

and Lowe 1994). They also found this to be equivalent to eliminating all snakes within 213 feet of the road. Furthermore, desert tortoise populations are depleted up to a mile or more on either side of roads for which average daily traffic is greater than 180 vehicles (Nicholson 1978a, 1978b). Evidence suggests that FTHL populations are depleted within 0.5 mile of Highway 98 in California (G. Wright, pers. comm. 2002). Young and Young (2000) suggested populations would be affected within 0.3 mile of a road, with severe impacts within 0.15 mile. Recent analysis suggests that FTHL population viability is particularly sensitive to the effects of mortality (Flat-Tailed Horned Lizard Conservation Team 1998). Thus, the lizard fence line along the proposed paved portion of Avenue E should significantly reduce mortality of FTHLs for significant distances from the roadway.

Hodges (1997) estimated that 219 mi² of FTHL habitat occurs in Arizona. The total habitat directly affected by the proposed action, including its indirect and cumulative effects, represents less than 0.1 percent of available habitat in Arizona. As discussed earlier, the project area is outside the Yuma Desert FTHL MA and is therefore not considered necessary to preserve viable populations of FTHLs in Arizona. Compensation funds proposed, as discussed in the Proposed Conservation Measures, will assist in the management of the Yuma Desert MA.

Limited information exists to quantify densities of FTHLs; however, estimates have ranged from 0.06 to 2.0 per acre (Turner *et al.* 1978, Muth and Fisher 1992, Rorabaugh 1994, Young and Young 2000). Assuming moderate densities of FTHLs (0.8 per acre), then approximately 278 FTHLs may currently occupy the action area that would be lost, disturbed, or displaced as a result of Reclamation's land transfer.

Cumulative Effects

Cumulative effects are those impacts of future non-Federal (State, local government, and private) actions that are reasonably certain to occur in the project area. Future Federal actions will be subject to the consultation and conferencing requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project.

Because much of the FTHL habitat in the vicinity of the project area is managed by Reclamation, BLM, and the Department of Defense, many of the activities likely to occur in this area will be Federal actions subject to section 7 of the Act. However, continued development of non-Federal lands that support the FTHL is anticipated to the west and north of the action area. Continued development of non-Federal lands for residential, industrial, and agricultural purposes is occurring at a rapid rate. If the FTHL is subsequently listed, the effects of non-Federal actions, including residential and other development, may be addressed through the section 10(a)(1)(B) permit process.

Of particular concern are increasing illegal entry activities. Numbers of illegal crossings and subsequent response by USBP have increased dramatically over the last 15 years. Increased presence of USBP in the area of Yuma, and other large Arizona border towns (Operation Gatekeeper), as well

as southeastern California, have pushed undocumented migrant traffic into remote desert areas, such as Cabeza Prieta National Wildlife Refuge, Organ Pipe Cactus National Monument, Barry M. Goldwater Range, and the Yuma Desert. Illegal activities result in habitat damage in the form of route proliferation, off-road vehicle tracks, and discarded trash. These activities are likely to continue into the future and may continue to increase.

CONCLUSION

After reviewing the current status of the FTHL, the environmental baseline for the action area, the anticipated effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the FTHL. Our conclusion is based on the following reasons:

- 1) The proposed action would affect less than one tenth of one percent of the available habitat in Arizona, and would not affect the Yuma Desert MA;
- 2) Reclamation and the GYPA have proposed conservation measures to help offset impacts of the proposed action by reducing direct take of FTHLs through relocation and other efforts, and monetary compensation that will be used to enhance the management of the Yuma Desert MA; and
- 3) The small footprint of the action area in relation to the large, contiguous FTHL habitat east of the action area (the Yuma Desert FTHL MA) lessens the effect of the project to the population in the surrounding area.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. "Harm" is defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR §17.3). "Harass" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). "Incidental take" is any take of a listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with this incidental take statement.

The prohibitions against taking in section 9 of the Act do not apply to proposed species, such as the FTHL. By incorporation of the conservation measures, impacts of the proposed action will be minimized.

AMOUNT OR EXTENT OF TAKE

This conference opinion anticipates the following forms of take would occur as a result of the proposed action:

- 1) All FTHLs inhabiting the action area, including the 347-acre proposed CPOEF site and the paved roadway of Avenue E. Take is anticipated to be in the form of direct mortality or injury, including crushing or injury as a result of construction activities, and in the form of harassment resulting from moving lizards out of harm's way. We anticipate that, after capture and relocation efforts have concluded, up to 278 FTHLs may be taken incidentally to the construction activities of the proposed action.
- 2) Three FTHLs per year as a result of animals moving onto the facility grounds from adjacent habitats and being crushed or injured by the operation of on-site machinery and/or vehicle movements.
- 3) Four FTHLs per year as a result of animals moving onto the new pavement of Avenue E from adjacent habitats and being crushed or injured by passing vehicles.

If this conference opinion is adopted as a biological opinion, we will only authorize forms of take (see above) that are incidental to the disposition of the 347 acres of Reclamation land transferred to the GYPA and subsequent activities as described in the Description of the Proposed Action. If adopted as a biological opinion, take will be authorized for the construction, operation, and maintenance of the proposed CPOEF and Avenue E by GYPA so long as the proposed action is carried out as described herein.

EFFECT OF THE TAKE

In this conference opinion, we find that this level of anticipated take is not likely to result in jeopardy to the FTHL.

REASONABLE AND PRUDENT MEASURES

We believe that the proposed action incorporates sufficient measures that reasonably and prudently minimize the effects of incidental take of FTHLs. All reasonable and prudent measures to minimize take have been incorporated into the project description. Thus, no reasonable and prudent measures are therefore included in this incidental take statement.

If the FTHL is listed and, during the course of the action, this level of incidental take is exceeded, such incidental take would represent new information requiring reinitiation of consultation. Reclamation would be required to immediately provide explanation of the causes of the taking and review with us the need for possible modification of the proposed conservation measures.

DISPOSITION OF DEAD, INJURED, OR SICK FLAT-TAILED HORNED LIZARDS

If the species is listed, and if a dead, injured, or sick FTHL is found at the project site, initial notification must be made to our Law Enforcement Division, Federal Building, Room 108, 26 North McDonald, Mesa, Arizona, 85201 (Telephone: (480) 835-8289) 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 finding, a photograph of the animal, and any other pertinent information. The notification shall be sent to the Division of Law Enforcement with a copy to the Arizona Ecological Services Office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. If possible, the remains of intact FTHLs shall be placed with educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above shall be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should any treated FTHLs survive, we should be contacted regarding the disposition of the animals.

Conservation Recommendations

Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of listed species. Conservation recommendations are suggestions regarding discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, or regarding the development of information. The recommendations provided here do not necessarily represent complete fulfillment of the agency's section 2(c) or 7(a)(1) responsibilities for the FTHL, should it be listed. In furtherance of the purposes of the Act, the Service recommends implementing the following actions:

1. Reclamation work with the Marine Corps Air Station in Yuma and AGFD to support research necessary to: a) improve our knowledge of the ecology and life history of the FTHL, particularly in regards to demographic parameters needed to better understand population dynamics and viability; b) determine the relationship between scat/lizard counts and lizard densities; and c) improve upon survey techniques, protocols, and recommendations to enhance statistical confidence of survey efforts.

2. Reclamation acquire Yuma County rights of way on section lines in the Yuma Desert FTHL MA and close these routes as appropriate in coordination with the Fish and Wildlife Service and the USBP.
3. Reclamation continue to pursue efforts to minimize impacts to the FTHL and its 16,000 acres that are within the Yuma Desert FTHL MA.
4. The GYPA preserve portions of the parcel for FTHL habitat, maintaining a minimal footprint for their facilities, and focusing development in the western half of the parcel away from the Yuma Desert FTHL MA.
5. Reclamation and the GYPA minimize impacts to the FTHL and its habitat in the vicinity of the CPOEF.

We request notification of the implementation of any conservation recommendations so we can be kept informed of actions that either minimize or avoid adverse effects, or that benefit proposed species or their habitats.

CLOSING STATEMENT

This concludes the conference for the transfer of 347 acres of Reclamation land to the GYPA. Reclamation may request that we confirm this conference opinion as a biological opinion through formal consultation if the FTHL is listed. This request must be made in writing. If we review the proposed action and find that there have been no significant changes in the action as planned, or in the information used during the conference, we will confirm the conference opinion as a biological opinion and no further section 7 consultation will be necessary.

After listing of the FTHL as threatened and any subsequent adoption of this conference opinion, Reclamation shall request reinitiation of consultation if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action (50 CFR 402.16).

The incidental take statement provided in this conference opinion does not become effective until the species is listed and the conference opinion is adopted as the biological opinion issued through formal consultation. At that time, the project will be reviewed to determine whether any take of FTHL has occurred. Modifications of the opinion and incidental take statement may be appropriate to reflect that take. No take of the FTHL may occur between the listing of the FTHL and the

adoption of the conference opinion through formal consultation, or the completion of a subsequent formal consultation.

Any questions or comments should be directed to Allen Taylor (928) 226-8002 or Sherry Barrett (520) 670-4617 of my staff.

/s/ Brian Hanson

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
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