

to reevaluate the status of the flat-tailed horned lizard and threats at a population level.

East Side of Imperial Valley (California)

This geographic area is fragmented north to south by the New Coachella Canal, which separates the East Mesa populations from peripheral Algodones Dunes populations. Additional fragmentation is caused by SR78, I-8, and the All American Canal running mostly in an east to west direction. On the east side of the Algodones Dunes, Ogilby Road further fragments the area, although to a far lesser degree, running from I-8 to SR78.

East Mesa MA

The East Mesa MA is 46,661 ha (115,300 ac) in size, and consists of 43,869 ha (108,400 ac) managed by signatories to the Management Strategy/CA, and 2,792 ha (6,900 ac) of private land. In 2001, BLM estimated that about 4.8 percent of the surface area in the southern portion of the East Mesa MA was covered with OHV tracks (Wright 2002). Our disturbance analysis showed that, between 1997 and 2002, the percentage area disturbed increased from 7.3 to 7.8, acreage of disturbance increased from 3,278 ha (8,099 ac) to 3,311 ha (8,181 ac), and length of roads increased from 224 km (140 mi) to 944 km (590 mi).

In 2001, BLM disturbance surveys detected about 5 percent of the surface area in the southern East Mesa MA to be affected by agriculture, mining, and geothermal activity (Wright 2002). A live bombing area controlled by the U.S. Navy, El Centro Naval Air Facility is located in the northernmost portion of the MA. Based on our review of currently available information, we believe the limited nature of the activities discussed above, do not individually or collectively pose a significant threat to the species and/or its habitat such that the species warrants listing under the Act.

Outside MA

The Imperial Sand Dunes Recreation Area is over 60,704 ha (150,000 ac) of habitat directly to the east of the East Mesa MA. Unrestricted OHV activity is permitted on more than 47,754 ha (118,000 ac) of the area, while about 12,950 ha (32,000 ac) are designated as a wilderness area, with no vehicle use allowed. Habitat has been degraded in the open area of the Imperial Sand Dunes Recreation Area by OHV activity and associated camping. The main impacts to the population in this area are most likely along the western periphery of the Dunes, where people

camp and ride OHVs to and from the Dunes and around camp, and to a lesser extent on the eastern periphery. The Dunes have heavy OHV use; however, surveys have shown that the Dunes have a low abundance of flat-tailed horned lizards (Turner *et al.* 1980, Luckenbach and Bury 1983, Wright 2002), even in the wilderness area of the Dunes (Luckenbach and Bury 1983, Wright, pers. comm. 2002).

There has been loss of flat-tailed horned lizard habitat on the west side of East Mesa due to geothermal development on both BLM and private land in an area termed the Known Geothermal Resource Area (KGRA). Historically, approximately 28,240 ha (69,760 ac) of potential flat-tailed horned lizard habitat were subject to geothermal development in the form of construction, maintenance and operation of geothermal powerplants within the KGRA. Ormesa LLC currently operates six geothermal power plants and 80 geothermal wells on nearly 5,463 ha (13,500 ac) of BLM land in the KGRA (D. Campbell, Ormesa LLC Plant Manager, *in litt.* 2002).

Based on our review of currently available information, we believe the limited nature of the geothermal activities discussed above and their location on the periphery of East Mesa, do not constitute a significant threat to the species and/or its habitat such that the species warrants listing under the Act.

Yuma Desert (Arizona)

The historic range of the species in Arizona was estimated at approximately 82,360 ha (203,520 ac) by Hodges (1997), and 89,455 ha (221,043 ac) by the AGFD (Duane Shroufe, AGFD Director, *in litt.* 2002). By 1997, Hodges (1997) estimated about 69 percent (56,780 ha [140,301 ac]) of the species' historic range remained. Habitat losses resulted from conversion to agriculture, urbanization, and military use. AGFD similarly estimates about 72 percent (64,283 ha [158,844 ac]) of the historic range currently remains in Arizona. AGFD reported that approximately 3.7 percent of historic habitat has been lost since 1996. Conversion of habitat to agriculture has been the primary land use responsible for the loss of habitat in Arizona, eliminating about 17.5 percent of historic habitat by 1997. Conversion of habitat for urban and military use accounted for the loss of approximately 11.1 percent and 2.5 percent of historic habitat, respectively (Hodges 1997). The 1993 proposed rule noted that urban and agricultural expansion into flat-tailed horned lizard habitat on the part of the communities of San Luis, Yuma,

and the Foothills was a threat. While the expansion of these communities will convert some flat-tailed horned lizard habitat, 77 percent of the remaining habitat is within the MA and 87 percent is managed by signatories to the CA. The remaining private land subject to development is adjacent to existing urban and agricultural areas and is fragmented. In addition, the potential development of this land will not fragment or degrade the contiguous habitat remaining in the Yuma Desert MA, which comprises the majority of the flat-tailed horned lizard habitat in Arizona. For these reasons, the remaining private land does not constitute a significant portion of the range of the flat-tailed horned lizard in this geographic area.

Yuma Desert MA

Of the current habitat, 50,384 ha (124,500 ac) are within the MA. Recently, 6,273 ha (15,500 ac) of suitable habitat owned by the State of Arizona within the Yuma Desert MA was acquired by the Department of Defense, a signatory to the Conservation Agreement. Consequently, the Management Area is completely owned by signatories to the Management Strategy.

A proposal for an Area Service Highway on the west side of the MA would reduce the MA by about 405 ha (1,000 ac), because it would revise the MA boundary. The Area Service Highway would further fragment habitat on the west side of the MA by dividing it from the adjoining habitat outside the MA. Because the Area Service Highway will only contract the MA boundary on one side by less than 1 percent, leaving the habitat in the MA contiguous, this impact does not constitute a significant threat to the species or its habitat such that the species warrants listing under the Act.

The Yuma Desert MA is relatively undisturbed compared to the Management Areas in California. Rorabaugh *et al.* (2002) randomly surveyed the Management Area to assess human disturbance and found the most common form was off-road-vehicle tracks, which covered 2.9 to 3.4 percent of the surface area. The Marine Corps Air Station-Yuma has a 66 ha (162 ac) target area called the "Moving Sands Target" within the MA. Based on our review of currently available information, we believe the limited nature of the activities discussed above, do not individually or collectively pose a significant threat to the species and/or its habitat such that the species warrants listing under the Act.