

potentially alter water quality or quantity to an extent that vegetation structure is affected, cave humidity levels are reduced, habitat is flooded, or toxic materials (e.g., pesticides, fuel, solvents, or other household or industrial chemicals) are transported into habitat, and activities that increase the risk of fire within or outside habitats above the cave;

(4) Application of pesticides, herbicides, insecticides, fungicides, or other such chemicals within, above, or adjacent to known habitat, that may directly or indirectly affect troglobitic organisms; and

(5) Release of certain biological control organisms within or outside of the critical habitat area. Biological organisms include, but are not limited to: Predaceous or parasitoid vertebrates or invertebrates, fungi, bacteria, or other natural or bioengineered biocontrol organisms.

Federal agencies already consult with us on activities in areas where the species may be affected by their projects to ensure that their actions do not jeopardize the continued existence of the species. These actions include, but are not limited to:

(1) Regulation of activities affecting waters of the United States by the ACOE under section 404 of the Clean Water Act;

(2) Regulation of water flows, damming, diversion, and channelization by Federal agencies;

(3) Development on private or State lands requiring permits from other Federal agencies, such as the Department of Housing and Urban Development;

(4) Construction of communication sites licensed by the Federal Communications Commission;

(5) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities by Federal agencies;

(6) Hazard mitigation and post-disaster repairs funded by the FEMA; and

(7) Activities not previously mentioned that are funded or authorized by the U.S. Department of Agriculture (Forest Service, NRCS), Department of Defense, Department of Transportation, Department of Energy, Department of the Interior (U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service), Department of Commerce (National Oceanic and Atmospheric Administration), ACOE, FEMA, Environmental Protection Agency, or any other Federal agency.

If you have questions regarding whether specific activities would constitute adverse modification of

critical habitat, contact the Field Supervisor, Pacific Islands Ecological Service's Field Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and plants, and inquiries about prohibitions and permits, should be directed to the Field Supervisor, Pacific Islands Ecological Service's Field Office.

Analysis of Impacts Under Section 4(b)(2)

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available, and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude an area from critical habitat when that exclusion will result in the extinction of the species concerned.

Economic Impacts

Following the publication of the proposed critical habitat designation on March 27, 2002, a draft economic analysis was prepared to estimate the potential economic impact of the designation, in accordance with recent decisions in the *N.M. Cattlegrowers Ass'n v. U.S. Fish and Wildlife Serv.*, 248 F.3d 1277 (10th Cir. 2001). The DEA was made available for review on November 15, 2002 (67 FR 69177). We accepted comments on the DEA until the comment period closed on December 16, 2002.

Following the close of the comment period on the draft economic analysis, a final addendum was completed, which incorporated public comments on the draft analysis and made other changes in the draft as necessary. In particular, the addendum focuses on the 272 acres and associated impacts that will be associated with the designation. The addendum to the draft economic analysis estimates that, over the next 18 years, the designation may result in potential direct economic effects ranging from approximately \$260,000 to \$429,000. The reduction ranging from approximately \$56.2 million to \$61.8 million from the costs estimated in the original draft economic analysis is primarily due to the significant reduction of acreage in proposed Units 1a and 2, and the removal of proposed Units 1b and 3 in the final critical habitat designation for the cave animals. These changes reduce the total critical habitat acreage from approximately 4,193 acres to 272 acres, a reduction of

3,921 acres or 94 percent. As described in the analysis, direct costs result from section 7 consultation, surveys, and project modifications associated with activities such as a county road (Koloa Bypass) widening project, and expansion of Kiahuna golf course.

Our final economic analysis includes an evaluation of potential indirect costs associated with designation of critical habitat for the Kauai cave wolf spider and Kauai cave amphipod. Based on the final economic analysis, the indirect costs are associated with actual or perceived loss of development potential and are expressed in terms of a loss in property value. These values reflect: Landowner's development plans (if any); existing entitlements; the probability of obtaining remaining development approvals (State redistricting, General Plan designation by the county, county zoning, etc.); and existing infrastructure improvements. In some cases, the loss in property value is estimated directly based on adjustments to the appraised or assessed value of comparable land. In other cases, the loss is based on the discounted present value of future profits based on specific development plans. Since the property value of undeveloped land reflects the discounted value of future profits, the two approaches are equivalent in concept. The analysis of lost property values focuses only on the land in or around the critical habitat units, and anticipates no islandwide impacts on economic and population growth. The analysis anticipates that while development will not occur within some areas designated as critical habitat, other developments in the Koloa/Poipu area will increase in density or area to largely offset this loss, thereby resulting in a negligible change in island wide development. For affected properties, however, the total potential loss in property values that could be indirectly associated with the designation ranges from \$4.5 million to \$6.1 million. This range represents the high estimate of the potential loss in property values indirectly associated with the critical habitat designation, and may be offset by adjusting the project (e.g., density) to offset the loss of development within the critical habitat, or it may not be realized if the development within the critical habitat proceeds as proposed. Additional potential indirect costs are associated with the following: Contesting redistricting, State and county environmental review, and investigating the implications of the final designation. Other indirect costs identified in the draft economic analysis are no longer anticipated for the