

amounted to approximately 1,697 ha (4,193 ac) (67 FR 14671). The public comment period closed on May 28, 2002. On November 15, 2002, we announced the availability of the draft economic analysis and reopened the comment period until December 16, 2002 (67 FR 69177).

Summary of Comments and Recommendations

In the proposed rule published on March 27, 2002 (67 FR 14671), we requested that all interested parties submit written comments on the proposal. We also contacted all appropriate Federal, State, and local agencies, scientific organizations, and other interested parties and invited them to comment. We received no requests for a public hearing.

We received individually written letters from 43 parties, including five designated peer reviewers. Approximately 417 additional letters were submitted as part of a mailing campaign that supported designation. Of the 43 commenters who were not part of the mailing campaign, 16 supported the proposed designation, 26 were opposed, and 1 expressed neither support nor opposition. Of the 26 commenters who opposed the proposal, 17 commenters specifically opposed designation of critical habitat on lands they own or manage, and requested that these areas be excluded from critical habitat designation.

We reviewed all comments received for substantive issues and new information regarding critical habitat for both cave animals. Similar comments were grouped into general issues and are addressed in the following summary.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited, in writing, the review of the proposed critical habitat designation from nine independent experts affiliated with academic and research organizations or natural resource conservation agencies. We also put in a request to Sustainable Ecosystems Institute. All of the individuals contacted are recognized leaders in the field of cave ecology and conservation, as demonstrated by a record of published peer reviewed results of past and current research in this field. Four parties responded with written reviews of the proposal, one provided a letter citing his inability to participate due to the lack of applicability to his state agency position, and the remaining four parties either verbally declined to participate

due to workload or other constraints or simply did not respond.

The four scientific review responses were generally positive and in support of the proposed designation on the basis of its technical merits. Reviewers generally recognized the limitations on the extent of specific knowledge regarding the cave species in terms of population sizes, population dynamics, and distribution of occupied habitat. However, a lack of knowledge is not unusual for troglobitic organisms that only occur in areas where humans rarely go and that may primarily inhabit mesocavern areas where humans are unable to enter at all. The reviewers were in agreement that the primary constituent elements were identified adequately. Three of the reviewers commented that additional information, particularly detailed mapping, was needed regarding human activities that may have eliminated one or more primary constituent elements from the landscape, information which presumably would allow some areas to be eliminated from consideration as critical habitat. Comments received from the peer reviewers are summarized in the following section and were considered in developing the final rule.

Issue 1: Biological Justification and Methodology

(1) *Comment:* One scientific reviewer commented that it was difficult to justify inclusion of Units 2 and 3 on geological grounds alone, considering that evidence of historical or current occupation by the organisms was lacking. However, another reviewer stated that the proposed designation on the basis of geology alone was indeed adequate, and pointed out the "plastic" nature of the underlying calcareous substrates of Unit 2 and 3 over geologic time. Another scientific reviewer did not feel that enough information was available to evaluate the adequacy of the large size of Unit 1a without more detailed maps of geology, cave locations, and past, present and future land use. Another commenter noted that the proposed designation does not provide enough connectivity between units, and recommended that there should be continuity between Unit 1a and Unit 1b and to accomplish this, all of Makahuena Point should be designated.

Our Response: Unit 2 has not been included in the designation on geology alone. This unit lies only a short distance from a known occupied site and as mentioned by another reviewer was likely connected at an earlier time. Information provided during the comment period shows that the large

size of appropriate habitat is likely to sustain the cave animals and is expected to provide the best type of habitat. In determining adequacy of size of critical habitat, we have reviewed the best scientific and commercial data available in making our final designation. Units 1b and 3 have not been included in the designation. A considerable amount of new information was provided to the Service regarding site-specific conditions on lands that had previously never been surveyed or had been incompletely surveyed. This includes new information regarding occupied and unoccupied caves, and technical information (e.g., drilling logs that include cross-section/stratigraphy data of geologic core samples) regarding subsurface geology of surrounding areas. The total number of known occupied caves and caves with appropriate habitat has increased substantially, and some of the intervening areas between caves has been shown not to contain the primary constituent elements required to support adequate habitat for the species. The new information has resulted in a reformulation of the number of caves (and amount of above-ground area) considered to be essential to the conservation of the species. The new information has reduced, but not eliminated, the need for establishing critical habitat boundaries on the basis of the underlying geology of a given unit. Critical habitat boundaries have been modified to encompass surface areas above known caves and mesocave-bearing geologic features. These modifications and the rationale for the changes are described in detail in the section "Summary of Changes from the Proposed Rule."

(2) *Comment:* One scientific reviewer stressed the importance of environmental requirements of obligate cave-dwelling species, noting that appropriate conditions (100 percent relative humidity) only occurs in larger, longer caves, and may be most commonly found in mesocavern spaces. Mesocavern areas may be limited in Koloa because of the geologic age of the lava flow series; however, where they occur they are important.

Our Response: As the reviewer points out, a variety of data supports the existence and occupation of mesocavern habitats. This includes the typically low, but variable, numbers of organisms observed in cave surveys. Survey events that detect few individuals probably occur during conditions of reduced humidity whereby the organisms retreat into mesocaverns with suitable environmental conditions. Also, two known occupied caves that tend to exhibit drier conditions have been