

north of Mahaulepu Road, along Kaluahono Road, and below Waita Reservoir. These areas are unlikely to contain the primary constituent elements and have been removed from the designation.

Site visits by Service biologists and Dr. Frank Howarth were made in the remaining areas of proposed Unit 1a. Units 11 and 12 represent Puu Wanawana and Puu Hunihuni, areas that are most likely to contain suitable cave habitat where animals are likely to be present. Both are spatter cones which are volcanic formations that are comprised of exposed barren rock that contain mesocaverns, limited soil deposits, and limited prior disturbance, and are likely to contain larger voids or caves. Information was provided by consultants hired by Grove Farm who were able to further investigate the area and have indicated it is the place most likely to be occupied by either species. Since we do not know of an exact cave location, the entire area of barren rock has been included in the designation. Areas surrounding the barren rock are less likely to contain the primary constituent elements and were deemed not essential to the conservation of either species. Puu Hi Reservoir is less likely to contain suitable habitat since these areas have a greater build up of soil and water does not seem to percolate through the rock, suggesting a lack of unfilled mesocaverns and caves (Dr. F. Howarth, pers. comm., 2002).

Unit 13 incorporates the limestone cave with verified occurrences of the Kauai cave amphipod. A recent visit to the cave by Service biologist Gordon Smith, Dr. Frank Howarth, and Grove Farm consultants Dr. Steven Carothers and Kemble White verified the presence of the Kauai cave wolf spider in the cave (G. Smith *in litt.*, 2002). This record is the first of the Kauai cave wolf spider occurring in limestone caves. Although the cave has been extensively surveyed, the remaining limestone bearing rock has not been surveyed. Dr. Howarth did look at the area near Makawehi and indicated that the area north of the limestone bench, outside of the conservation zoned area, was not likely to contain the primary constituent elements as little barren rock was seen and the soil layer appeared to be significant. Unit 13 incorporates the limestone cave with verified occurrences of both the Kauai cave wolf spider and the Kauai cave amphipod as well as adjoining limestone bench area that is most likely to contain suitable habitat. All other surrounding areas were deemed not essential to the conservation of either species.

#### *Former Unit 1 Waikomo—subunit 1b*

No new information specific to proposed Unit 1b was provided during the comment period. However, when this was evaluated in light of the information provided on the proposed rule, this unit was found to be of lower quality habitat due to its small size and greater isolation from occupied areas, and because of the identification of suitable caves and likely higher quality habitat in other areas, this unit was deemed not essential to the conservation of either species.

#### *Former Unit 2—Haula*

Additional information was provided in and adjacent to Unit 2 in the form of survey information indicating a lack of primary constituent elements in parts of the unit. Areas less likely to contain the appropriate habitat were excluded and the remaining area is included in the designation. This unit lies only a short distance (approximately 350 m (1,100 ft)) from Unit 13 which is occupied, and it was likely once connected to that unit in the geologic past (Pleistocene Era) by deposits that have since eroded away or have been covered by unconsolidated sediments. The large size of appropriate habitat in this area is most likely to be able to sustain a population of either the Kauai cave amphipod or the Kauai cave spider. Information provided by Grove Farm confirms a large drainage system that empties into the limestone formation expected to provide the best type of habitat for the cave animals. Inclusion of this area with Units 1 through 13 provides a diverse geographic distribution that will increase the likelihood the species will survive stochastic or catastrophic impacts. This unit has been renamed Unit 14 of the designation and includes all the limestone bench area most likely to contain the primary constituent elements and therefore the animals themselves.

#### *Former Unit 3—Puu Keke*

Drilling logs were provided around and in the proposed Unit 3 which showed a mixture of limestone, rock, dirt, and mud. Based on the number of areas elsewhere verified to be occupied or found to be highly likely to contain the animals, this area was deemed not essential to the conservation of either species.

#### **Critical Habitat**

Critical habitat is defined in section 3 of the Act as: (i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological

features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and, (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation," as defined by the Act, means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as "the direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." The relationship between a species' survival and its recovery has been a source of confusion to some in the past. We believe that a species' ability to recover depends on its ability to survive into the future when its recovery can be achieved; thus, the concepts of long-term survival and recovery are intricately linked. However, in the March 15, 2001, decision of the United States Court of Appeals for the Fifth Circuit (*Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434) regarding a not prudent finding, the Court found our definition of destruction or adverse modification as currently contained in 50 CFR 402.02 to be invalid. In response to this decision, we are reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

In order to be included in a critical habitat designation, the habitat or its physical or biological features must first be "essential to the conservation of the species." Critical habitat designations identify, to the extent known, using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).