

critical habitat units (Ginzburg *et al.* 1990; Menges 1990; Murphy *et al.* 1990; Karieva and Wennergren 1995; Taylor 1995; Bessinger and Westphal 1998). At this time, we are only able to conclude that the current size and distribution of the extant populations are not sufficient to expect a reasonable probability of the Blackburn's sphinx moth's long-term survival and conservation. Therefore, we used the best available information to identify as critical habitat a reasonable number of additional units.

The one unoccupied area designated in this final rule is located on the island of Molokai (Unit 9). Although currently unoccupied by the moth, the area contains both larval stage and adult moth native host plants. The area is close enough in proximity to the Maui moth population that the area may again be re-populated by the moth on its own, yet because it is a separate island, some additional protection from a potential natural catastrophe affecting, for example, the Maui population, may be afforded a future moth population on Molokai. Also, as Molokai is the closest island to Oahu, we believe that allowing for a future moth population on Molokai may facilitate the species' dispersal and provide a flight corridor for moths eventually migrating to the island of Oahu, which is also part of its historical range.

Molokai was designated as critical habitat rather than other suitable unoccupied areas because we determined, to the best of our abilities, that it is the highest quality unoccupied habitat essential to the conservation of the moth. The designated unoccupied area on Molokai may lack some of the serious potential threats to the moth (*see* Table 1). Conserving and restoring Blackburn's sphinx moth populations in multiple locations decreases the likelihood that the effect of any single alien parasite or predator, or the combined pressure of such species and other threats, could result in the diminished vigor or extinction of the species.

Exclusions Under Section 4(b)(2)

Subsection 4(b)(2) of the Act allows us to exclude areas from critical habitat designation where the benefits of such exclusions outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species.

Economic Impacts

Following the publication of the proposed critical habitat designation on June 13, 2002, a DEA was prepared to estimate the potential economic impact of the designation, in accordance with

recent decisions in the *New Mexico Cattlegrowers Association v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001). The DEA was made available for review on November 15, 2002 (67 FR 69179). We accepted comments on it until the comment period closed on December 30, 2002.

Our DEA evaluated the potential direct and indirect economic impacts associated with the proposed critical habitat designation for Blackburn's sphinx moth on Hawaii, Kahoolawe, Maui, and Molokai over the next 10 years. Direct impacts are those related to consultations under section 7 of the Act. They include the cost of completing the section 7 consultation process and potential project modifications resulting from the consultation. Indirect impacts are secondary costs and benefits not related to the specific provisions of the Act. Examples of indirect impacts include potential effects to property values, redistricting of land from agricultural or urban to conservation, and social welfare benefits of ecological improvements.

The categories of potential direct and indirect costs considered in the analysis included the costs associated with: (1) Conducting section 7 consultations associated with the listing or with the critical habitat, including incremental consultations and technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 consultations; (3) potential delays associated with reinitiating completed consultations after critical habitat is finalized; (4) uncertainty and public perceptions resulting in loss of land value from the designation of critical habitat; (5) potential effects on property values including potential indirect costs resulting from the loss of hunting opportunities and increased regulation related costs due to the interaction of State and local laws; and (6) potential offsetting benefits associated with critical habitat, including educational benefits. The most likely economic effects of critical habitat designation are on activities funded, authorized, or carried out by a Federal agency (*i.e.*, direct costs).

The DEA included an evaluation of the economic impacts associated with implementation of the section 7 provisions of the Act for the Blackburn's sphinx moth. To quantify the proportion of total potential economic impacts attributable to section 7 implementation, including both the section 7 listing provisions and the proposed critical habitat designation, the analysis evaluated a "without section 7" baseline and compared it to a "with section 7" scenario. The

"without section 7" baseline represented the current and expected economic activity under all modifications except those associated with section 7, including protections afforded the species under Federal and State laws. The difference between the two scenarios measured the net change in economic activity attributable to the implementation of section 7 for the Blackburn's sphinx moth. Because of the uncertainty of the costs resulting solely from critical habitat designation, we believe it is reasonable to estimate the total impacts of section 7 application. However, it is important to note that inclusion of impacts attributable co-extensively to listing does not convert this economic analysis into a tool to be used in making listing decisions.

Following the close of the comment period on the DEA, an addendum was completed that incorporated public comments on the draft analysis and made other changes in the draft as necessary. These changes were primarily the result of information received during the comment period indicating that certain areas do not contain the necessary primary constituent elements or are not essential to the conservation of the species. However, the Addendum did analyze the economic impacts of areas that have been excluded pursuant to section 4(b)(2) in this final rule. Therefore, the total area and the potential impacts evaluated in the Addendum are greater than the total area designated as critical habitat and the actual impacts.

Together, the DEA as modified by the addendum constitute our final economic analysis. The final economic analysis estimates that, over the next 10 years, the designation may result in potential direct economic costs ranging from approximately \$1,183,800 to \$1,739,000. This reduction of approximately \$27,399 to \$175,400 from the costs estimated in the DEA is primarily due to the reduction in acreage for biological reasons.

Our final economic analysis for this rule also includes an evaluation of potential indirect costs associated with the designation of critical habitat for the Blackburn's sphinx moth. For example, in the event that designation results in a rezoning of property from agricultural district to conservation district a landowner could be expected to spend \$50,000 to contest a potential re-zoning of their property, and a CDUA might cost as much as \$100,000. Also, as described in section 4.e. of the Addendum, an estimate of the costs involved with investigation for the