

larger than Kauai but has a population of more than twelve times that of Kauai. Furthermore, neither the proposed nor the intended designation is in an area of high rainfall. Also, the UH benefit analysis of reducing soil runoff is unique to three valleys that drain through partially channelized streams in urban areas into the manmade Ala Wai Canal. Since this canal was designed with inadequate flushing from stream or ocean currents, it functions as an unintended settling basin so must be dredged periodically. The proposed critical habitat drains into a portion of the ocean that has strong currents and adequate flushing. And unlike the Koolaus, none of the proposed critical habitat contains streams and aquatic life, and none of the units are suitable for hunting wild pigs.

Finally, the commenter's summation of benefits to \$1.225 billion is flawed due to double-counting. For example, the \$1,690 per acre figure in the UH study includes the benefits of open space. So adding the estimated open space benefit of \$521 million to the ecosystem services estimate of \$182.5 million double-counts the benefits of open space. Similarly, the two per-acre figures taken from the UH study (\$1,690 per acre and \$76,146 per acre) are two different measures of the same ecosystem benefits. The first figure refers to the annual stream of benefits, while the second figure refers to the net present value. Multiplying both of these figures by 6,000 acres and adding them together clearly double-counts the ecosystem benefits.

(44) *Comment:* Assigning an economic value to preservation of ecosystem functions that may result from the designation of critical habitat (such as groundwater recharge, protection of coastal marine waters and fisheries, and other ecosystem services) is now an acceptable method of economic analysis. The dollar value of these services is high. However, this analysis was done in a qualitative, narrative manner in the draft economic analysis. Why was it not done quantitatively?

Our Response: Quantitative estimates of the economic benefits of the listed ecosystem services provided by critical habitat are not presented in the DEA or in the Addendum because studies estimating the change in the ecosystem associated with critical habitat designation and the value of that change are not available.

However, such benefits are likely to be small. For example, the proposed critical habitat is near the coast in an area of low rainfall, and thus contributes little to groundwater recharge.

The reduction of development and grazing in critical habitat could reduce soil runoff thereby protecting the coastal marine waters and fisheries off the south shore of Kauai. However, as mentioned in the DEA, this benefit is likely to be small because the affected marine ecosystem has already been altered by over 150 years of sugarcane cultivation in the area. Also, Koloa has an open coastline that is exposed to surf and strong ocean currents that continually flush the near-shore environment. Finally, any displaced development is likely to occur elsewhere in Koloa. Thus, the net environmental benefit to Kauai is likely to be small.

Additional environmental benefits, such as the preservation of open space, changes to traffic congestion, and the promotion of native plants, are discussed in the Benefits section of Chapter VI in the DEA and in the Addendum.

(45) *Comment:* There was no attempt to quantify the value of open space (parks, preserves, even golf courses) surrounding real estate. Such increased property values are acknowledged, but there was no attempt to estimate the corresponding increases in property values. Understanding of this principle is a large driver in the DMB Development Company's decision to halve the density of their joint project with A&B at Kukuiula.

Our Response: The Indirect Costs section of the Addendum discusses the possibility that the land planned for development in certain critical habitat units will remain open as a result of the intended designation. If this land is managed as a park or preserve, it could increase the selling values of the home lots that are directly adjacent to critical habitat. An estimate of the number of homes or lots adjacent to the critical habitat units, as well as the potential increase in selling values, is discussed for critical habitat Units 2, 6, and 8.

(46) *Comment:* Development in the Koloa/Poipu area is already progressing at unsustainable levels, and future traffic, emergency services, and possibly water supply are sources of uncertainty. It is good that the critical habitat designation places additional mechanisms to undertake reasonable slow-growth planning for the region. Also, some tourists prefer less developed areas. The potential loss of revenues due to people seeking less overbuilt resort area would be conjectural, but no more so than the assumption that critical habitat designation for cave species will reduce the number of visitors to Kauai.

Our Response: With the intended reduction in critical habitat, it is now assumed that any loss in development due to the intended designation will be replaced by development elsewhere in Koloa (see the Indirect Costs section of the Addendum). Thus, critical habitat designation for the cave animals, as intended by the Service, is expected to result in little or no change to future traffic, emergency services, water requirements, etc.

(47) *Comment:* Portions of Unit 2 and the eastern portion of Unit 1 are planned but not permitted for major resort development; the southern portion of Unit 1 is planned but not permitted for subdivision into over 50 "upscale" houseslots; a portion of Unit 3 is planned and permitted for a future limestone and basalt quarry; the area surrounding the old Koloa sugar mill will be expanded into an industrial area; several water wells are located in Unit 1 and additional water wells are expected. This development will create residential and employment opportunities for over a thousand island residents.

Our Response: Most of the development projects and associated water well projects mentioned by the commenter are no longer in the intended critical habitat designation.

Summary of Changes From the Proposed Rule

Based on a review of public comments received on critical habitat, we have reevaluated our proposed designations and included several changes to the final designations of critical habitat. No specific information on habitat conditions or species occurrence was provided. At the time of the publication of the proposed rule, we were aware of only six known cave locations where the animals occurred and did not know the precise locations of other caves with suitable habitat. In addition, in the proposed rule, we acknowledged two theories with regard to intercave dispersal corridors (67 FR 14673 and 67 FR 14674). One theory is that very limited, if any dispersal was occurring between the cave systems, and the other that dispersal corridors needed to be protected if these species are to be conserved. Because of the limited verified occupied areas and the absence of other known suitable cave locations, we believed it necessary to include areas in the proposal that would provide for intercave dispersal corridors. In the absence of more specific data, we proposed those areas that were most likely to contain the primary constituent elements based on the best available information at the