

However, the Addendum does revise the number of affected landowners to 65 because of the intended modifications to the critical habitat indicated by us. As described in section 4.e. of the Addendum, an estimate of the costs involved with investigation for the intended designation ranges from roughly \$173,000 to \$618,000.

While some landowners may expend time and money to investigate the implications of critical habitat on their land during the designation process, many landowners may not do so until after final designation is complete. Thus, the DEA and the Addendum conservatively treat these costs as costs attributable to the final designation.

(41) *Comment:* DOTA stated that project modification costs, such as those to roads, are underestimated, particularly the cascading effect of project realignment with the purpose of avoiding critical habitat.

*Our Response:* The project modification cost estimates were developed considering a wide array of projects, locations, and contingencies, as well as by examining the limited historical record of project modifications regarding the Blackburn's sphinx moth. The planned road project (proposed Ane Keohokalole Highway) within proposed Unit 5A is not in this designation.

(42) *Comment:* HCDCH stated the following: The DEA only partially considers the "indirect impacts" of critical habitat designation, and instead focuses on "direct impacts" resulting primarily from consultations under section 7 of the Act because of precedent set by *New Mexico Cattle Growers*, the Service must fully consider both types of impacts, and the DEA must present a thorough analysis of these economic effects. Several other commenters stated the DEA overemphasizes the direct costs attributable to critical habitat designation and ignores or omits other indirect impacts, such as: Impacts to housing supply, including affordable housing; decreases in public revenues as a result of lost construction and reduced economic activity; impacts to subsistence activities and their role in the local economy; and impacts to public infrastructure such as roads and water systems.

*Our Response:* An analysis of both direct and indirect impacts was presented in chapter VI of the DEA and sections 3 and 4 of the Addendum. With respect to indirect effects, there is considerable uncertainty regarding whether any or all of the indirect impacts may actually occur, because they depend upon actions and decisions

by entities other than the Service under circumstances for which there is limited or no history that can be used to determine the likelihood of different outcomes. Thus, based on the available information, indirect impacts were discussed qualitatively in the DEA and Addendum. In addition, where possible, estimates were given of worst-case scenarios for illustrative purposes and a sense of the likelihood of occurrence was provided.

The impact to the supply of affordable housing was discussed in the DEA in chapter VI, section 4.e. The DEA recognized that some landowners feared the possibility of redistricting land within the critical habitat designation to the Conservation District, and discussed the impact to the affordable housing supply should redistricting occur and prevent planned development. Specifically, in regards to the planned Villages at Laiopua (VOLA), affordable housing development planned by the State in proposed Unit 5b (island of Hawaii), the DEA noted that the County of Hawaii requires developers to provide a certain number of affordable housing units, or pay \$4,720 to the County for each unit not built. Using this value as a proxy for the social value of affordable housing, the DEA estimated that the loss of 570 affordable units in the VOLA development equates to a loss of almost \$2.7 million to the community. We did not include this area in this designation (*see Exclusions Under Section 4(b)(2)*).

Further, the DEA also addressed the potential impact on public revenues as a result of lost construction. In chapter VI, section 4.e., the DEA recognized that a loss in development can lead to economic losses due to the "ripple-effect." For example, if a home cannot be built, both the developer and construction company who would have built the home would have reduced revenues. In addition, the lumber company and other companies supplying the construction company would have reduced revenues, an impact that would "ripple" through the regional economy and could result in reduced public revenues. However, due to the availability of suitable land outside the critical habitat designation, the DEA concluded that any economic activity displaced within critical habitat for the moth due to redistricting of land to the Conservation District would still be expected to occur, just in other locations. Thus, the DEA implicitly concluded that there would be no appreciable impact on public revenues.

The DEA addressed the impacts to subsistence and their role in the local economy in chapter VI, section 4.d. The

DEA recognized that subsistence not only plays an important role in community life, but also provides important sustenance to many residents in communities on Maui, the island of Hawaii, and Molokai. The DEA estimated that restriction of access and prohibition of subsistence activities in all areas proposed for critical habitat designation was extremely unlikely, and that more likely to occur were restrictions in small, localized areas of significant biological importance. Because of the strong stewardship and conservation values associated with those practicing subsistence activities within the proposed critical habitat, as well as the traditional recognition of the value of protecting certain areas through the kapu system, the DEA concluded that the impact of critical habitat designation on subsistence activities would be minimal.

Finally, the economic analysis addressed impacts to public infrastructure such as roads and water systems in chapter VI, sections 3.i and 3.j. of the DEA, and section 3.j. of the Addendum. These sections addressed projects planned within the critical habitat designation. Final estimated potential section 7 costs for planned road projects are \$32,600 for consultations and \$985,000 to \$1,230,000 for project modifications. Final estimated potential section 7 costs for planned water projects are \$20,600 to \$61,200 for consultations and up to \$6,200 for project modifications.

(43) *Comment:* A commenter stated that the DEA acknowledges some or all lands designated as critical habitat may be redistricted/rezoned at the State or county level to preclude further development, and that the actual economic costs of redistricting could be very high. The commenter noted that while these estimates are mentioned in the text, they are not included in the summaries of the economic impacts.

*Our Response:* Tables ES-1 and VI-3 ("Summary Tables") of the DEA and Table Add-2 of the Addendum summarize the economic impacts associated with the Blackburn's sphinx moth critical habitat designation are also discussed in detail in the response to Comment 29a. Although chapter VI, section 4 of the DEA, and section 4 of the Addendum provided general estimates of some of the potential indirect costs, including costs associated with State redistricting of land (chapter VI, section 4.e. of the DEA, section 4.b. of the Addendum), these estimates were not totaled in the Summary Tables because the probability that many of the indirect costs will occur is unknown. As noted on each of