

\$41,200, with a project modification cost ranging \$0 to \$100,000.

Other indirect impacts that could result from the designation of critical habitat are discussed in Chapter VI, Section 4 of the DEA and Section 5 of the Addendum. First, the critical habitat designation may reduce property value of these Agricultural lands. In the worst case scenario, one which is not envisioned, reduction in land values due to redistricting all Agricultural land to the Conservation District could range from \$11 million to \$110 million. In addition, critical habitat could result in the cessation of existing agricultural activities. While the likelihood of this being mandated as a result of critical habitat designation is low, the estimated costs resulting from stopping all ranching activities within the designation ranges from \$110,000 to \$825,000 per year.

(53) *Comment:* Many commenters stated that the DEA fails to adequately assess the scope of indirect costs associated with critical habitat designation. Indirect impacts cannot be dismissed just because it is difficult to assign a dollar value to them. Without acknowledging the full scope of direct and indirect costs, the Service cannot complete an accurate final determination of critical habitat. Another commenter also stated that the DEA should be amended to properly reflect all economic impacts, including the various indirect impacts, which would clearly show that the economic costs of critical habitat designation are significantly higher than the benefits.

Our Response: Chapter VI, Section 4 of the DEA and Section 5 of the Addendum discuss various indirect impacts that can result from the designation. There is considerable uncertainty on whether any or all of these indirect impacts may occur, as 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 probability of different outcomes. Thus, based on the available information, these impacts were discussed qualitatively in the DEA and where possible, estimates were given of worst-case scenarios for illustrative purposes.

(54) *Comment:* Several commenters stated that critical habitat designation has the potential to decrease the amount of available hunting lands and game animals. Governmental officials seem to value plants and insects more than hunting, which is an important family and cultural tradition, a means of subsistence, and a way of life. Members of all ethnic groups hunt and depend on

subsistence activities as a real part of their income. Hunting also contributes to the economy via money spent on pet foods, inter-island trips, gasoline, supplies, etc. Additionally, DLNR will lose money as the demand for hunting licenses and tag fees dwindles. The DEA does not adequately reflect the costs associated with management of game mammals and loss of hunting lands. Another commenter questioned why a cost was associated with project modifications to the management of game hunting on State managed lands because Maui does not have any State hunting areas that are managed to maintain or enhance game mammal populations. The commenters also questioned the methodology used to estimate the project modification cost.

Our Response: Chapter VI, Section 3.a.(2) and Section 4.a. of the Addendum discuss the direct economic impact of critical habitat designation on federally funded game management activities by estimating the direct section 7 costs associated with consultation and project modifications. The DEA makes the assumption that the cost of past project modifications only incorporates the portions of the hunting units that overlap with the occupied proposed critical habitat. However, information received during public comment noted that the prior consultation already modified the State's proposed game mammal program to address potential impacts to habitat everywhere on the island, including occupied and unoccupied habitat and areas inside and outside of critical habitat designation, based on the understanding that increasing game mammal populations in one location where the plants are not present may cause those mammals to move to areas where the plants are present and cause destruction. Upon further review of past consultations and past project modifications, the project modification costs are now estimated at \$23,000 to \$37,000. As noted in the DEA, because Maui does not have any State hunting areas that are managed to maintain or enhance game mammal populations, project modifications are anticipated to be similar to those in the past. They are not anticipated to include closure of hunting areas. In addition, as noted in the DEA, DLNR is likely to avoid costly project modifications by using Federal funds for game management projects that do not adversely affect listed species or their critical habitat, and if needed use only State funds on projects that the Service believes could have adverse impacts.

Chapter VI, Section 4.b. of the DEA and Section 5.a. of the Addendum

discuss the potential indirect impact of critical habitat on the management of game mammals. The DEA notes that section 7 of the Act by itself does not require DLNR to manage State hunting lands to protect critical habitat; assure the survival and conservation of listed species, or participate in projects to recover species for which critical habitat has been established. Moreover, the DEA notes that critical habitat designation does not require: (1) Creating any reserve, refuge, or wilderness areas; (2) fencing for any reason; (3) removing ungulates; or (4) closing areas to hunters. However, the DEA recognizes that a change in game-management strategy is possible as a result of a lawsuit or as a voluntary decision by DLNR. For illustrative purposes, Chapter VI, Section 4.b. of the DEA and Section 5.a. of the Addendum present potential costs that could result if DLNR removed areas within the designation from the State-managed hunting units. Assuming that about half of those who hunt game mammals on the affected lands were to give up hunting, then hunting activity on Maui could drop by about 14.5 percent. This drop in hunting activity would translate into a decrease in annual economic activity related to hunting on Maui of about \$290,000 in direct sales (14.5 percent of \$2 million); \$510,000 in total direct and indirect sales (14.5 percent of \$3.5 million); nine jobs (14.5 percent of 60 jobs); and \$170,000 in income (14.5 percent of \$1.2 million). However, the decrease in expenditures by the displaced hunters would probably be spent on other recreational activities, goods, and services, so these figures are likely to overstate the economic costs. In addition to the change in economic activity discussed above, a reduction in hunting activity in critical habitat would also result in a loss in value or benefit to hunters (consumers' surplus). Section 5.a. of the Addendum estimates this loss in value at \$150,000 annually and recognizes that benefits derived from recreational activities that replace game mammal hunting would partially offset this loss.

(55) *Comment:* Three parcels (TMK (2) 1-8-001:003, TMK (2) 3-1-001:004, and TMK (2) 3-1-002:011) should be excluded from designation, because the DEA fails to establish that the benefits of including these parcels in the designation outweigh the costs of including these parcels in the designation.

Our Response: The Service removed two of the three parcels mentioned in the comment—i.e., TMK (2) 3-1-001:004 and TMK (2) 3-1-002:011 from the proposed designation. The