

projects being proposed in the area of proposed unit D, the Service believes there is low potential for negative impacts to unoccupied habitat as a consequence of Federal activities, and thus a low regulatory benefit of a critical habitat designation in this area. We believe there is a low likelihood of negative impacts because of reasons stated above (*i.e.*, land use and zoning, land use history).

Another reason that the benefits of including Lanai D in the critical habitat designation is small is that, even if the area is not included in the designation, the conservation agreement (MOA, 2002) will provide conservation benefits to the target species. The management actions as outlined will remove threats (*e.g.* axis deer, mouflon sheep, rats, invasive nonnative plants) from the Lanaihale and East Lanai Regions, engage in fire control measures, engage in nursery propagation of native flora (including the target species) and planting of such flora. These actions will significantly improve the habitat for all currently occurring species (*Abutilon eremitopetalum*, *Bonamia menziesii*, *Centaurium sebaeoides*, *Clermontia oblongifolia* ssp. *mauiensis*, *Ctenitis squamigera*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea macrostegia* ssp. *gibsonii*, *Cyrtandra munroi*, *Gahnia lanaiensis*, *Hedyotis mannii*, *Hedyotis schlechtendahlana* var. *remyi*, *Hibiscus brackenridgei*, *Labordia tinifolia* var. *lanaiensis*, *Melicope munroi*, *Spermolepis hawaiiense*, *Tetramolopium remyi*, and *Viola lanaiensis*) and will provide suitable habitat for reintroduction of extirpated species (*Adenophorus periens*, *Brighamia rockii*, *Cenchrus agrimonoides*, *Cyanea lobata*, *Diellia erecta*, *Diplazium molokaiensis*, *Hesperomannia arborescens*, *Isodendron pyrifolium*, *Neraudia sericea*, *Solanum incompletum*, and *Vigna o-wahuensis*).

Another possible benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area, and this may focus and contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. This outcome would be important for these 28 species. Any information about the species and their habitats that reaches a wide audience, including other parties engaged in conservation activities, would be considered valuable. However, only one landowner would be affected directly by including Lanai D in the designation, and that landowner is already working with the Service to address the habitat needs of

the species. Further, this area was included in the proposed designation, which itself has reached a wide audience, and has thus provided information to the broader public about the conservation value of the area. For these reasons, we would expect that including Lanai D in the designation would provide at most moderate educational benefits to the species.

To be inclusive, we have considered some of these unlikely assumptions in this benefits of inclusion section. The economic analysis also identifies indirect impacts to landowners and other affected parties, and some of these impacts could result in benefits to the species. For example, the critical habitat designation could encourage the State to take measures to manage the populations of feral ungulates by fencing off portions of the State hunting areas (Economic Analysis section 4.b.). Such measures could result in preserving significant populations of the plants within the enclosed areas, and further the recovery of the species. The economic analysis concluded, however, that this result would be unlikely, because closing off portions of the State hunting areas would be vigorously protested by hunters. The economic analysis also stated that there is a possibility, of undetermined likelihood, that private landowners could be required by courts to take specific management actions if failing to take the action is a "taking" of the species (Economic Analysis section 4.c.). Management actions could include such activities as control of feral ungulates, non-native plants, rodents, and invertebrate pests; fire management; maintenance of plant genetic material; propagation; or management of the habitat or the plant populations. Each of these actions would provide commensurate benefits to the species, and designation of a particular area as critical habitat could further define and expand the scope of the management actions and resulting benefits. Many of these actions will be species-specific and benefit species as well as the island's watershed. Also, these types of management actions would ensure these areas continue to provide habitat for the seven island endemics as well as for reintroduction of several species including *Solanum incompletum* and *Isodendron pyrifolium* which are no longer found on the island. We believe, however, that many of these same benefits would result from the agreement the Service has recently entered into with the landowner (MOA, 2002). Finally, the Economic Analysis discusses the possibility that

designation could make development more difficult and/or costly (Economic Analysis sections 4.d. and 4.f.). The State or Counties could require developers to prepare a State EIS instead of a less burdensome EA in order to obtain development approvals, and may ultimately require additional project modifications; in addition, landowners could perceive that development in rural and agricultural areas is limited. Preparation of an EIS would presumably result in decisionmaking that is more informed and that is better able to provide for the protection of the species. Similarly, to the extent that designation of critical habitat would result in additional or more finely tuned project modifications, it would further the conservation of the species. The final designation together with the excluded Unit D contain less than 6 ha (15 ac) of land designated as Rural lands. Of these, over half 3.4 ha (8.3 ac) are mountainous and the rest are coastal 2.4 ha (6 ac). In the unlikely event that land values are decreased or economic activities are slowed, these plant species would benefit from the resulting decreased level of invasive activities. For example, the Rural lands in Unit D provide habitat for two multi-island species, *Centaurium sebaeoides* and *Brighamia rockii*. For both species, the Lanai populations are the only non-coastal populations of the species that are known to exist. This makes protecting the Lanai populations and their habitat from harmful activities particularly important. The only anticipated development project identified in the Economic Analysis is the planned construction of a new quarry, and this does not fall within Unit D and has been dropped from the analysis.

In sum, the Service believes that a critical habitat designation for listed plants on Lanai would provide a relatively low level of additional regulatory conservation benefits to each of the plant species. Any regulatory conservation benefits would accrue through the benefit associated with section 7 consultation. Based on a review of past consultations and consideration of the likely future activities in the area, there is little Federal activity expected to occur on this privately-owned island that would trigger section 7 consultation. The Service believes that critical habitat proposal and final designation provides some conservation benefits by educating the public on the site-specific areas on Lanai essential to the recovery of the extant and extirpated species.