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Mr. Yuen:

I have reviewed the Sea Mountain V draft EIS for development at Punalu`u and there are critical flaws that need to be addressed. First, there is hardly any mention of the impact the development both in terms of construction and in its continued presence will have on sea turtle populations. The Ka`u region (to include Punalu`u), being one of the last areas of relatively pristine Hawai`i remaining, needs to be meticulously surveyed for possible designation as a critical habitat by the US Fish and Wildlife Service. This area is home to multiple species that are protected by law under the Endangered Species Act of 1973, including the threatened green sea turtle (*Chelonia mydas*), the orangeblack Hawaiian damselfly (*Megalagrion xanthomelas*) listed as concerned, and the following species designated as endangered: the hawksbill sea turtle (*Eretmochelys imbricata*), the Hawaiian monk seal (*Monachus schauinslandi*), the Hawaiian hoary bat (*Lasiurus cinereus semotus*), the Hawaiian hawk (*Buteo solitarius*), and the loulou palm (*Pritchardia affinis*). The region also needs to be meticulously inventoried by the Hawaii Biological Survey for populations of endangered, threatened, or candidate species of plants and animals to include possible populations of the endangered Hawaiian picture-winged pomace flies *Drosophila silvestris* and *Drosophila heteroneura*. Without fulfilling the above, the EIS is incomplete. Furthermore, the EIS considers the threat of eutrophication to be insignificant based on nothing more than conjecture. The area needs to be evaluated by the US Geological Survey and the University of Hawaii as to the risk of eutrophication by runoff that could potentially result in the destruction of coral species and thus the collapse of the reef ecosystems that support the myriad of unique marine organisms, including the sea turtles and the Hawaiian monk seal. The USGS and UH also need to assess the potential hazard, especially during construction but also in the existence of the proposed development, of siltation that would suffocate the reef ecosystems, and the hazard of destroying the increasingly rare Hawaiian anchialine ponds and their subterranean infrastructure.

Additionally, the DEIS does not adequately consider the ramifications of disturbing traditional sacred Hawaiian places and the effect this will have on the first amendment rights (freedom of religion) of native Hawaiians. The proximity to which the DEIS proposes to build luxury homes of ancient temples is appallingly insulting. The plans also do not adequately

consider that the Punalu`u region is a traditional site for education of Hawaiian children of their heritage in the way of religion and natural environment, and they also do not fully consider the ramifications of developing this area that supports subsistence living. Therefore, the very proposal of the development violates the rights of the native Hawaiians, the Endangered Species Act, and completely ignores the possible designation of critical habitat for the region of Ka`u.

The proposal also is ignorant to the effect that the enhanced amount of human traffic in the area will have on the stability of the remaining ecosystems, particularly in terms of invasive species. Invasive species have certainly made it to Ka`u, but Ka`u remains one of the last relatively pristine areas left in Hawaii and invasive species eradications are underway. However, increased traffic will increase the arrival of invasive species, as has been shown by Alan Ziegler in his book *Hawaiian Natural History, Ecology, and Evolution*; species introductions have risen from an average of one every 3.24 million years in pre-colonization times to the present human-aided rate of 30 per year, and these invasive species are pushing native Hawaiian species to lower densities as they outcompete native species for resources.

The Hawaiian archipelago is considered to be the world's endangered species capital based on endangered species per unit land area, having 279 plants, one genus of land snail, five sea turtles, 30 birds, and two mammals currently protected by the Endangered Species Act, many of which are found in Ka`u (including Punalu`u) as mentioned above. Biologists Peter Vitousek and Harold Mooney, along with their colleagues at Stanford University, report that approximately 39 to 50 % of Earth's land has been transformed due to human activity, severely reducing or even eliminating ecosystems and thus driving species toward extinction. Now researchers estimate that 18 % of mammals, 11 % of birds, and 8 % of plants are critically endangered. Based on the rate of status change on the IUCN Red Lists, University of Oxford zoologists Fraser Smith, Robert May, and their colleagues predict that half of Earth's birds and mammals will extinguish in two hundred years and that palms could vanish in as little as one hundred years. Robert May reminds us that many groups, such as marine invertebrates, insects, and most plants, are drastically underrepresented in the Red Lists and their actual rate of decline remains in question. Ecologists estimate half of Earth's life could go extinct within the next hundred years. We are at a critical junction with nature that is unprecedented in human history and Earth's history as a whole—never before has a single species triggered a mass extinction event. Preserving remaining wilderness, such as that seen in Ka`u, and restoring habitat is paramount to human survival because these functioning ecosystems provide the resources necessary to sustain life. The World Wildlife Fund estimates that in the last three decades alone, 30 % of Earth's natural resources have been spent, a rate which leaves no time for regeneration of resources such as freshwater. Hawaii, being the world's invasive species capital and endangered species capital, needs to set an example for the world. Do not allow Punalu`u to be developed. This is the stage upon which the future of humanity and all life on Earth will be decided.

Earnestly,

Jared Bernard