Abstract

In early 2015, a surge of vineyard applications alerted Los Angeles County to a potentially large-scale habitat change in the Santa Monica Mountains North Area. The County took action by placing a ban on all applications until an ordinance could be written to protect the natural environment of the mountains. Then in December 2015, the Los Angeles County Board of Supervisors adopted a vineyard ordinance regulating the presence of vineyards in the Santa Monica Mountains North Area. The ordinance limits the size of vineyards and creates a set of regulations for landowners to follow. Several of these regulations have spatial manifestations that can be analyzed through the use of GIS. This project sought to visualize these regulations spatially and to evaluate their effectiveness in protecting the habitats of the Santa Monica Mountains North Area. This project evaluated the ordinance's effectiveness in three ways: (1) by determining the amount of land protected by the ordinance as a whole; (2) by quantifying the impact of each regulation spatially and understanding how they compare to each other; and (3) through a statistical evaluation of the amount of vegetation saved due to the ordinance. The ordinance was effective in achieving its goal of preserving the natural habitat of the North Area by protecting 16,223 acres, which is an 88% drop in potential habitat change. The ordinance also protects nearly all vegetation classes by 50% or more, with 13 of them being fully protected. The natural habitat of the Santa Monica Mountains North Area is a rare and fragile Mediterranean ecosystem that should be closely monitored by its residents and local government. This project gives the community a quantifiable representation of the ordinance and its effects.