



COUNTY OF LOS ANGELES FIRE DEPARTMENT



ANTHONY C. MARRONE
FIRE CHIEF
FORESTER & FIRE WARDEN

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 881-2401
www.fire.lacounty.gov

BOARD OF SUPERVISORS

HILDA L. SOLIS, CHAIR
FIRST DISTRICT
HOLLY J. MITCHELL
SECOND DISTRICT
LINDSEY P. HORVATH
THIRD DISTRICT
JANICE HAHN
FOURTH DISTRICT
KATHRYN BARGER
FIFTH DISTRICT

*"Proud Protectors of Life,
the Environment, and Property"*

January 7, 2026

TO: THE HONORABLE JANICE HAHN
SUPERVISOR, FOURTH DISTRICT

FROM: ANTHONY C. MARRONE, FIRE CHIEF 

MULE DEER MANAGEMENT ON CATALINA ISLAND

This memorandum outlines the key facts, operational considerations, and recommended course of action regarding mule deer management on Catalina Island, with a focus on ecosystem impacts, wildfire behavior, and fuels management.

Background

Mule deer are a non-native species on Catalina Island. Scientific research indicates that mule deer browsing can influence vegetation dynamics, particularly following disturbance events such as wildfire. Fire return intervals of less than seven years significantly increase the likelihood of vegetation type conversion from chaparral to grassland.

The most recent large wildfire on the island was the Island Fire in 2007. While grass fuels are considered more receptive to ignition and rapid spread, they generate a significantly lower Energy Release Component (ERC) than chaparral fuels and are generally more manageable during suppression operations.

Ecological Considerations

Catalina Island supports a unique ecosystem with native and endemic plant and animal species. In the island's natural condition, the island fox serves as the apex predator, preying on smaller native mammals. Removal of mule deer would reduce invasive plant seed dispersal and allow vegetation communities to trend toward native conditions. If mule deer are removed, the introduced bison would remain the only non-native large herbivore on the island.

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

- | | | | | | | |
|--------------|-------------|------------------|----------------------|----------------------|-----------------------|------------------|
| AGOURA HILLS | CARSON | EL MONTE | INGLEWOOD | LAWNDALE | PICO RIVERA | SIGNAL HILL |
| ARTESIA | CERRITOS | GARDENA | IRWINDALE | LOMITA | POMONA | SOUTH EL MONTE |
| AZUSA | CLAREMONT | GLENDORA | LA CANADA-FLINTRIDGE | LYNWOOD | RANCHO PALOS VERDES | SOUTH GATE |
| BALDWIN PARK | COMMERCE | HAWAIIAN GARDENS | LA HABRA | MALIBU | ROLLING HILLS | TEMPLE CITY |
| BELL | COVINA | HAWTHORNE | LA MIRADA | MAYWOOD | ROLLING HILLS ESTATES | VERNON |
| BELL GARDENS | CUDAHY | HERMOSA BEACH | LA PUENTE | NORWALK | ROSEMEAD | WALNUT |
| BELLFLOWER | DIAMOND BAR | HIDDEN HILLS | LAKEWOOD | PALMDALE | SAN DIMAS | WEST HOLLYWOOD |
| BRADBURY | DUARTE | HUNTINGTON PARK | LANCASTER | PALOS VERDES ESTATES | SANTA CLARITA | WESTLAKE VILLAGE |
| CALABASAS | | INDUSTRY | | PARAMOUNT | | WHITTIER |

However, mule deer browsing also impacts native vegetation. Highly palatable native species are preferentially consumed, potentially inhibiting regeneration and facilitating the spread of invasive plants. Without population control, deer numbers may increase, exacerbating vegetation type conversion following disturbance events.

Fire and Fuels Management Considerations

From a wildfire risk perspective, complete removal of mule deer presents operational concerns. In the absence of herbivory, chaparral fuel loads would increase, resulting in higher tons per acre and elevated ERC values. Fuel age classes exceeding 25 years are extremely difficult to manage during wildfire incidents and significantly increase suppression complexity.

Increased fuel loading would elevate wildfire risk to developed areas, particularly in Avalon and other locations where heavy fuels are present within 200 feet of structures. Conversely, maintaining a reduced mule deer population can provide a measurable reduction in understory vegetation and seedling establishment, moderating fuel continuity and, under certain conditions, improving firefighting effectiveness depending on weather, fuels, and topography.

Conclusion

Both ecological integrity and wildfire risk must be considered in mule deer management decisions. An actively managed population provides the most balanced approach, limiting long-term vegetation type conversion while helping moderate fuel loading in proximity to communities.

If mule deer are fully removed, additional long-term costs would be incurred to implement and maintain a comprehensive fuels management program, particularly adjacent to developed areas. Active population management represents a lower-cost alternative with measurable fire risk reduction benefits.

Recommendations

Based on these considerations, it is recommended that land managers determine an appropriate ecological balance through an actively managed mule deer population. Population regulation should focus on minimizing type conversion and long-term habitat

The Honorable Janice Hahn
January 7, 2026
Page 3

change, with particular emphasis on removing female does as the most effective population management strategy. If a decision is made to remove all mule deer from the island, a comprehensive fuels management program should be implemented, especially in areas adjacent to development and human occupancy.

If you have any questions, please contact me at (323) 881-6180.

ACM:es

c: Kyla Coates
Chloe Cheney-Rice