

1.21 Mexican Flannelbush (*Fremontodendron mexicanum*) – Category SL

Management Units with Known Occurrences

Mexican flannelbush is endemic to southern San Diego County and northern Baja California, occurring in Tecate cypress forest and chaparral habitats (Reiser 1994). This species grows on alluvial benches associated with ephemeral drainages and associated canyon slopes, with an elevation range from sea level to 1,000 meters (USFWS 2009). The genus is considered a relic from millions of years ago when the climate was more tropical in this region (Kelman 1991).

All Mexican flannelbush occurrences in the United States are in MU3 and are conserved or will be conserved based upon Otay Ranch Agreements. Three natural occurrences in adjacent canyons are on Otay Mountain and 1 small transplanted occurrence is near San Miguel Mountain (see Table of Occurrences). The entire natural distribution of Mexican flannelbush totals approximately 6,000 individuals with a single occurrence of <20 individuals in Baja California (USFWS 2009). Historical presumed native occurrences have been extirpated from Jamul Valley, Point Loma, and the Border Monument (USFWS 2009; CDFW 2012). Historical reports of Mexican flannelbush in MUs 2, 4, and 8 are thought to be planted cultivars rather than natural occurrences.

Management Categorization Rationale

Mexican flannelbush should be managed as a Species Management Focus Category SL Species due to a high risk of loss from Conserved Lands in the MSPA and because managing the general vegetation community alone will not ensure persistence of the species (see Vol. 1, Table 2-4). It is considered at high risk of loss because it has an extremely limited distribution, is vulnerable to catastrophic disturbance, and has a high degree of threat (see Vol. 3, App. 1, Species Profiles). This species was listed as endangered in 1998 by USFWS (USFWS 2009). It is ranked as a very high recovery priority by USFWS because of the degree of threat and the high potential for recovery.

The low number of individuals makes the species vulnerable to adverse genetic effects. The entire natural U.S. occurrence representing 99.9% of the individuals of this species is restricted to 3 drainages in proximity. This means that disease or insect infestations could spread and affect all individuals. Additionally, due to this proximity, this species is vulnerable to extinction from too frequent fire exposure.

Following the 2003 and 2007 wildfires, Mexican flannelbush resprouted and spread in occupied drainages, but so did invasive nonnative tamarisk (*Tamarix* spp.; USFWS 2009).

Border Patrol activities also have the potential to disturb occurrences through all-terrain vehicle use in canyon bottoms, construction of roads in canyon bottoms, and cut-and-fill work associated with road construction (USFWS 2009). However, the Department of Homeland Security typically works with USFWS and BLM to minimize their impacts in the Otay Mountain Wilderness Area.

Management and Monitoring Approach

The overarching goal for Mexican flannelbush is to maintain or enhance existing occurrences to ensure multiple conserved occurrences with self-sustaining populations to increase resilience to environmental and demographic stochasticity, maintain genetic diversity, and ensure persistence over the long term (>100 years) in chaparral vegetation communities.

For the planning cycle of 2017–2021, the management and monitoring approach is to:

- (1) Inspect Mexican flannelbush occurrences on Conserved Lands (see Table of Occurrences) using the regional IMG monitoring protocol to estimate abundance and collect covariate data on tamarisk and other types of threats, and determine management needs. After 2017, repeat monitoring will occur every 3 years, unless an occurrence is small (<100 individuals) or faces a high degree of threat, in which case it will be monitored annually.
- (2) Continue routine management actions identified through the IMG monitoring that began in 2014 at Mexican flannelbush occurrences on Conserved Lands (see Table of Occurrences). Depending on the type and level of threat, management should only be conducted as needed, not necessarily every year, and using BMPs with precautions to do no harm.

For details and the most up-to-date goals, objectives, and actions, go to the MSP Portal Mexican Flannelbush summary page: https://portal.sdmmp.com/view_species.php?taxaid=21581.

Mexican Flannelbush References

CDFW (California Department of Fish and Wildlife). 2012. California Natural Diversity Database. Species occurrences shapefile, accessed 2012 and 2013.

Kelman, W. M. 1991. A Revision of *Fremontodendron* (Sterculiaceae). *Systematic Biology* 16(1):3–20.

Reiser, C. H. 1994. *Rare Plants of San Diego County*. Imperial Beach, CA.

USFWS (U.S. Fish and Wildlife Services). 2009. *Fremontodendron Mexicanum (Mexican Flannelbush) 5-Year Review: Summary and Evaluation*. Carlsbad, California.