

VOLUME 2D: GOALS & OBJECTIVES FOR SPECIES FOCUS MANAGEMENT SPECIES

1.0 PLANTS - SL, SO, SS

1.1 San Diego Thornmint (*Acanthomintha ilicifolia*) – Category SO

Management Units with Known Populations

San Diego thornmint occurs primarily in chaparral, scrub, and grassland habitats in the western portion of San Diego County and Baja California, Mexico (Beauchamp 1986; SANDAG 2012; CDFW 2013). This species is an edaphic endemic restricted to clay soils or clay lenses in gabbro soils (Oberbauer and Vanderwier 1991). A total of 46 occurrences of San Diego thornmint have been recorded on Conserved Lands in the MSPA in MU2 (El Dorado Hills); MU3 (Crestridge Ecological Reserve, Dennerly Ranch, Hollenbeck Canyon Wildlife Area, San Diego National Wildlife Refuge, Otay Lakes Cornerstone Lands, City of Chula Vista Central City Preserve, South Crest Properties, Bonita Meadows, Flying Dolphin Trust, Otay Mountain Ecological Reserve, Rancho Jamul Ecological Reserve, Wright's Field); MU4 (Canada de San Vicente, City of Poway Open Space, Cleveland National Forest, Mission Trails Regional Park, Simon Preserve, Sycamore Canyon and Goodan Ranch Preserves); MU5 (Ramona Grasslands Preserve); and MU6 (Black Mountain Open Space Park, Carlsbad Oaks North Habitat Conservation Area, Emerald Point Open Space, Los Penasquitos Canyon Preserve, Manchester Mitigation Bank, Rancho La Costa Habitat Conservation Area). There are 2 very large occurrences (>10,000), 9 medium-sized occurrences (>500), and 35 small occurrences.

Management Rationale

San Diego thornmint should be managed as a Species Management Focus Category SO Species due to a moderate risk of loss of significant occurrences from Conserved Lands in the MSPA and because managing vegetation alone will not ensure persistence of the species (see Vol. 1, Table 2-4). Factors contributing to status include susceptibility to disturbance from invasive species, small populations fragmented by urbanization, and endemism.

Conservation Biology Institute prepared an Adaptive Management Framework for San Diego thornmint in 2014 that includes a conceptual model, site-by-site evaluations of population status and threats, and management recommendations (CBI 2014). Primary threats to San Diego thornmint include invasive plants, altered fire regimes, habitat fragmentation, human use (trampling), and climate change. Invasive nonnative plants present a pervasive threat to San Diego thornmint. A large proportion of extant occurrences are in proximity to development, threatening the species with direct and indirect effects from urbanization, ORV use, invasive species, fire, and climate change. Small populations are particularly vulnerable to loss from these threats.

Management and Monitoring Approach

The overarching goal for San Diego thornmint is to maintain large populations, enhance small populations, and establish new populations or pollinator habitat to buffer against environmental stochasticity, maintain genetic diversity, and promote connectivity, thereby enhancing resilience within and among MUs over the long term (>100 years) in native habitats.

For the 2017–2021 planning cycle, the management and monitoring approach for San Diego thornmint is to:

- (1) Inspect conserved occurrences annually to document abundance, record threats, and identify needed management actions. Implement routine management as determined during monitoring.
- (2) Continue field research to develop habitat suitability and climate change models for San Diego thornmint and other edaphic endemic plants to better understand habitat requirements and to identify and prioritize geographic areas important for connectivity and restoration.
- (3) Refine best management practices based on the results of ongoing management experiments.
- (4) Use occurrence status and threat data and best management practices to develop a section for the species in the MSP Rare Plant Management Plan that prioritizes management actions. Implement the highest priority management actions,

- (5) Prepare a section for San Diego thornmint in the MSP Seed Collection, Banking, and Bulking Plan that directs seed collection in the MSPA to ensure representation of different occurrences in the seed bank, provide propagules to preserve genetic diversity, support habitat restoration, and rescue occurrences in case of catastrophic disturbance. Implement the San Diego thornmint seed banking and bulking plan.

For details and the most up-to-date goals, objectives, and actions, go to the MSP Portal San Diego Thornmint summary page: http://portal.sdmmp.com/view_species.php?taxaid=32426.

San Diego Thornmint References

Beauchamp, R. M. 1986. *A Flora of San Diego County, California*. Sweetwater River Press: National City, CA. 241 pp.

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CDFW (California Department of Fish and Wildlife). 2013. California Natural Diversity Database. Occurrence report, *Acanthomintha ilicifolia*. California Department of Fish and Wildlife, Sacramento, CA.

Oberbauer, T., and J. M. Vanderwier. 1991. The Vegetation and Geologic Substrate Association and Its effect on Development in Southern California. Pages 203–212 in Abbott, P. L., and W. J. Elliot (eds.), *Environmental Perils, San Diego Region*. San Diego Association of Geologists, San Diego, CA.

San Diego Association of Governments (SANDAG). 2012. 2012 vegetation map, San Diego County, CA. Prepared by AECOM.