

1.17 Short-leaved Dudleya (*Dudleya brevifolia*) – Category SL

Management Units with Known Occurrences

Short-leaved dudleya is endemic to San Diego County occurring only along the coast between Del Mar and La Jolla (Reiser 1994). The species is found in southern maritime chaparral on sandstone bluffs with Carlsbad gravelly loams soils and small reddish ironstone concretions. It is often in areas with native annual forbs and, while not a wetland species, it occurs in areas where soils remain saturated for a relatively long period after rain (City of San Diego n.d.).

There are 5 occurrences of short-leaved dudleya on Conserved Lands in MUs 6 and 7 (see Table of Occurrences or online map: <http://arcg.is/2kFLQXn>). There is 1 large short-leaved dudleya occurrence (>5,000 individuals) at Carmel Mountain Preserve in MU6 and 1 small occurrence (<500 individuals) at Skeleton Canyon in MU7. MU7 has a large and a small occurrence at Torrey Pines State Reserve and there is a moderate sized occurrence at Crest Canyon. Historic occurrences were found at La Jolla Canyon, Mount Soledad, and on mesas near McGonigle Canyon, Del Mar, and La Jolla (Reiser 1994). As a tiny succulent, short-leaved dudleya can only be adequately censused during the spring following the "corm" sprouting of leaves, and during the short flowering period (Reiser 2001).

Management Categorization Rationale

Short-leaved dudleya should be managed as a Species Management Focus Category SL Species due to a moderate risk of loss from Conserved Lands in the MSPA and because managing southern maritime chaparral vegetation alone will not ensure persistence of the species (see Vol. 1, Table 2-4). This species is at moderate risk of loss from the MSPA since its entire range is a small area within 2 MUs along the coast between Del Mar and La Jolla and there are only 5 occurrences, 2 of which are small. It is also vulnerable as it is a perennial herb with moderate threat risks (see Vol. 3, App. 1, Species Profiles).

Threats to short-leaved dudleya include trampling by hikers, bikers, dogs, and equestrians; illegal trails; invasive plants; and erosion (City of San Diego 2001–2006, 2009–2012). The small number of occurrences in proximity makes short-leaved dudleya susceptible to environmental stochasticity and catastrophic disturbance.

Management and Monitoring Approach

The overarching goal for short-leaved dudleya 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 2017–2021 planning cycle, the management and monitoring approach is to:

- (1) Continue annual inspections of short-leaved dudleya on Conserved Lands (see Table of Occurrences) using the regional rare plant IMG monitoring protocol to record abundance and collect covariate habitat and threats data to determine management needs. Conduct routine management actions identified through the IMG monitoring, with management conducted as needed.
- (2) Begin preparing a section for short-leaved dudleya in the MSP Seed Collection, Banking, and Bulking Plan to preserve genetic diversity and rescue occurrences in case of catastrophic disturbance.
- (3) Begin preparing a section for short-leaved dudleya in the MSP Rare Plant Management Plan that prioritizes management actions to maintain or expand conserved occurrences based upon an assessment of data on occurrence status habitat and threats. The plan will include recommendations for short-leaved dudleya from the MSP Seed Collection, Banking, and Bulking Plan, relevant BMPs, and recommendations for monitoring effectiveness of management actions.

For details and the most up-to-date goals, objectives, and actions, go to the MSP Portal Short-leaved Dudleya summary page: https://portal.sdmmp.com/view_species.php?taxaid=502166

Short-leaved Dudleya References

City of San Diego. n.d. In Preparation, Dudleya Brevifolia Restoration Plan.

City of San Diego. 2009. City of San Diego Rare Plant Monitoring Data 1999–2009. <https://www.sandiego.gov/sites/default/files/legacy/planning/programs/mscp/pdf/monitor/monitoringsummary1999to2009.pdf>.

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

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