Petition Evaluation for Mount Burdell Jewelflower (*Streptanthus anomalus*)

Report to the Fish and Game Commission
June 2026

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LIST OF ABBREVIATIONS, ACRONYMS, AND TERMS

CESA – California Endangered Species Act

CNDDB – California Natural Diversity Database

CNPS – California Native Plant Society

Commission – California Fish and Game Commission

CRPR – California Rare Plant Rank

Department – California Department of Fish and Wildlife

EXECUTIVE SUMMARY

This petition evaluation for Mount Burdell jewelflower (*Streptanthus anomalus*) has been prepared by the California Department of Fish and Wildlife (Department) in response to the petition to list Mount Burdell jewelflower as endangered under the California Endangered Species Act (CESA). The purpose of this petition evaluation is to provide a recommendation to the Fish and Game Commission (Commission) on whether the petition provides sufficient information to indicate the petitioned action may be warranted.

Mount Burdell jewelflower is an annual plant in the mustard family (Brassicaceae). The petition describes Mount Burdell jewelflower as being known from three occurrences in the northern San Francisco Bay area and occurring in openings in woodlands and grasslands on serpentine soils. The petition provides an abundance estimate of about 3,500 plants and provides information to suggest a declining population trend. The petition lists several threats to Mount Burdell jewelflower including development, invasive species, incompatible grazing practices, and climate change. The petition mentions that extirpation from much of its range or extinction of the species may occur because: ongoing threats have eliminated and are likely degrading habitat with some threats increasing in severity, the species has been documented at only a small number of sites that are also small in area, and two of the three occurrences occupied by the species are unprotected and not managed for conservation of the species. Existing management efforts were reviewed and suggestions for future management actions were discussed in the petition. Information sources and a distribution map were also provided in the petition.

The Department has determined that the petition does not sufficiently address each of the required petition components listed in Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1):

- Life history
- Range
- Distribution
- Detailed distribution map
- Kind of habitat necessary for survival
- Abundance
- Population trend
- Factors affecting the ability to survive and reproduce
- Degree and immediacy of threat
- Impact of existing management efforts
- Suggestions for future management

- Availability and sources of information

In completing its petition evaluation, the Department considered the information in the petition and other relevant information the Department possesses. The Department has determined that there is not sufficient scientific information to indicate that the petitioned action to list Mount Burdell jewelflower as endangered under CESA may be warranted. Therefore, the Department recommends that the Commission reject the petition for further consideration pursuant to CESA.

1 INTRODUCTION

1.1 Petition Evaluation Overview

This petition evaluation serves as the basis for the California Department of Fish and Wildlife's (Department) recommendation to the California Fish and Game Commission (Commission) on whether the petition to list Mount Burdell jewelflower (*Streptanthus anomalus*) as endangered under the California Endangered Species Act (CESA) should be accepted and considered. The recommendation is based on the sufficiency of scientific information in the petition, as well as other relevant information that was reviewed by the Department during the evaluation period.

A petition to list a species under CESA must include "information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce, the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, and the availability and sources of information. The petition shall also include information regarding the kind of habitat necessary for species survival, a detailed distribution map, and any other factors that the petitioner deems relevant" (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)).

Once a petition is submitted to the Commission, the Department has 90 days (120 days with extension) to prepare a petition evaluation that assesses each of the petition components and makes a recommendation to the Commission as to whether there is sufficient scientific information to indicate that the petitioned action to list the species under CESA may be warranted (Fish & G. Code, § 2073.5, subds. (a)-(b)). Once completed by the Department, the petition evaluation is delivered to the Commission and placed on the agenda for receipt at the next available meeting of the Commission. At that time, the petition evaluation will be made available to the public for a 30-day public comment period prior to the Commission taking any action on the petition. The Commission then considers the petition, the Department's petition evaluation and recommendation, written comments received, and oral testimony, and will then make a finding at the next available meeting of the Commission as to whether the petition provides "sufficient information to indicate that the petitioned action may be warranted" (Fish & G. Code, § 2074.2, subd. (e)(2)). The standard for accepting a petition for consideration and assessing sufficiency of information is addressed in *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597.

If the Commission determines that the petitioned action may be warranted, the species becomes a candidate for CESA listing and proceeds to the status review stage of the CESA listing process. The Department then prepares a peer-reviewed report that advises

the Commission on whether the petitioned action is warranted, based upon the best scientific information available (Fish & G. Code, § 2074.6). Finally, the Commission determines whether the petitioned action to list the species as threatened or endangered is warranted, based on the Department's status review and other information in the administrative record (Fish & G. Code, § 2075.5).

1.2 CESA Petition History

On August 29, 2025, Dr. John C. Hunter submitted a petition to the Commission to list Mount Burdell jewelflower as endangered under CESA. On September 8, 2025, the Commission referred the petition to the Department for evaluation. At its meeting on October 8, 2025, the Commission officially acknowledged receipt of the petition. At its meeting on December 10, 2025, the Commission granted the Department's request for a 30-day extension of the period to review the petition and prepare this petition evaluation.

1.3 Federal Status

Mount Burdell jewelflower has no status under the Federal Endangered Species Act (16 U.S.C. § 1531 et seq.).

1.4 Additional Species Status Designations

1.4.1 NatureServe Conservation Status Ranks

NatureServe's conservation status ranks consist of a global conservation status rank (global rank, G rank) describing the status of a given species over its entire distribution, and a subnational conservation status rank (subnational rank, S rank) describing the status of a given subspecies or variety over its state distribution (Master et al. 2012). NatureServe has assigned Mount Burdell jewelflower a global rank of G1 and a subnational rank of S1, indicating that the species is critically imperiled both globally and within California with a very high risk of extinction due to one or more of the following: very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors (CNDDB 2020, 2025).

1.4.2 California Rare Plant Rank

The California Native Plant Society (CNPS) works in collaboration with botanical experts throughout the state, including Department biologists, to assign rare plants a California Rare Plant Rank (CRPR) reflective of their rarity status (CNDDB and CNPS 2020). CNPS has assigned Mount Burdell jewelflower a CRPR of 1B.1 (CNPS 2025). Plants with a CRPR of 1B are considered rare, threatened, or endangered throughout

their range with the majority endemic to California (CNDDB and CNPS 2020). The threat code extension of ".1" indicates that the species is seriously threatened in California with over 80% of occurrences threatened and a high degree and immediacy of threat (CNDDB and CNPS 2020).

2 SPECIES DESCRIPTION AND TAXONOMY

Mount Burdell jewelflower is a member of the mustard family (Brassicaceae). It is an erect, annual plant that is 15 to 40 cm (6 to 16 in) in height, sometimes up to 60 cm (24 in) in height (Preston et al. 2019). The plant has leaves around the base of the plant and along the stem. Leaves at the base of the plant are 3 to 5 cm (1.2 to 2 in) long, oblanceolate (widest portion above the middle and tapering toward base) in shape, with leaf margins that are dentate (sharp teeth pointing outward) and with straight hairs (Preston et al. 2019; Jepson Flora Project 2026). Leaves along the middle of the stem are 3 to 4 cm (1.2 to 1.6 in) long, oblong (longer than wide with parallel sides and rounded ends) in shape, clasping the stem, with leaf margins that are dentate and with straight hairs (Preston et al. 2019; Jepson Flora Project 2026). Leaves at the distal (upper) end of the stem are 1 to 2.5 cm (0.4 to 0.5 in) long, deeply clasping the stem, ovate in shape, and leaf margins are entire to distally dentate (Preston et al. 2019). Some of these deeply clasping distal leaves can occur below or above the proximal flower (the flower closest to the base of the plant) (Preston et al. 2019). Leaves at the base of the plant and on the lower portion of the stem are generally deciduous by flowering whereas the leaves on the upper portion of the stem generally are turning yellow by flowering (Preston et al. 2019).

Mount Burdell jewelflower has flowers borne along a central stem (generally just on one side of the stem) with each flower attached to the stem by short pedicels (stalk bearing an individual flower) of 2 to 3 mm (0.08 to 0.1 in) in length (Preston et al. 2019; Preston and Al-Shehbaz 2023). Petals are 7 to 9 mm (about 0.3 in) long and yellow at the base with blades that are brown to purple with white margins (Preston et al. 2019). Petals are surrounded by yellow or purple sepals (outermost flower parts) that are 6 mm (0.2 in) long, erect, and without hairs or with short bristles (Preston et al. 2019). Stamens are in three unequal pairs (sometimes 4 long stamens and 2 short stamens) with the anthers of the lateral stamens larger than the lower stamens (Preston et al. 2019; Preston and Al-Shehbaz 2023). Upper stamens contain sterile anthers born on stalks that are sometimes fused together (Preston et al. 2019; Preston and Al-Shehbaz 2023). Mount Burdell jewelflower produces long, narrow fruits called siliques that are 4 to 7 cm (1.6 to 2.8 in) long and contain 30 to 40 seeds that are 2 mm (0.08 in) long, oblong in shape, and narrowly winged (Preston et al. 2019).

Mount Burdell jewelflower was first collected by Aaron Author in 2011, followed by Doreen Smith and Robert Preston in 2015 (Preston et al. 2019). Prior to the species

being described as a unique species, it was thought to possibly be a subspecies of bristly jewelflower (*Streptanthus glandulosus*) or an unusual form of mountain jewelflower (*S. tortuosus*) (Preston et al. 2019). Mount Burdell jewelflower was formally described as a distinct species, *S. anomalus*, in 2019 (Preston et al. 2019). The currently accepted name for Mount Burdell jewelflower is *Streptanthus anomalus* (Preston and Al-Shehbaz 2023).

3 SUMMARY OF PETITION COMPONENTS

Pursuant to Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1), the Department evaluated whether the petition contained information on each of the following petition components:

- Life history
- Range
- Distribution
- Detailed distribution map
- Kind of habitat necessary for survival
- Abundance
- Population trend
- Factors affecting the ability to survive and reproduce
- Degree and immediacy of threat
- Impact of existing management efforts
- Suggestions for future management
- Availability and sources of information

The Department did not receive new information from the public during the petition evaluation period (Fish & G. Code, § 2073.4). Pursuant to Fish and Game Code section 2073.5, the Department evaluated the petition to determine whether there is, or is not, sufficient information to indicate that the petitioned action may be warranted. A summary of the relevant information from the petition for each of the petition components is presented below. For each petition component, the Department has also presented an assessment of the information provided in the petition and a summary of any relevant information in the Department's possession. Overall sufficiency of the petition is determined by looking at the information in the petition as a whole and is further discussed in the "Sufficiency of Scientific Information and Recommendation to the Commission" section of this petition evaluation. In this petition evaluation, the Department has grouped similar petition components together and renamed components to create a more cohesive and readable document.

3.1 Life History

This section summarizes the information in the petition regarding the species' life history (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section E on pages 5 and 6 of the petition provides information on the life history of Mount Burdell jewelflower.

The petition provides a physical description of Mount Burdell jewelflower, with descriptions of its habit, stems, leaves, flowers, fruits, and seeds. The petition contrasts Mount Burdell jewelflower with the physical properties of similar species. The petition describes Mount Burdell jewelflower as an annual plant that blooms in May and June and is predominately outcrossing, relying on insects for pollination, but likely has a high level of self-pollination. The petition also states that the dispersal mechanisms of the species have not been documented but based on fruit and seed morphology, it is likely that seed dispersal is primarily by gravity with seeds dispersed short distances.

3.1.1 Department Assessment

The Department considers the information provided in the petition on the life history of Mount Burdell jewelflower to be adequate for assessing this petition component.

3.2 Range and Distribution

This section summarizes the information in the petition regarding the species' range and distribution and provides a detailed distribution map (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). A species' range for the purposes of CESA and this petition evaluation is the species' range within California (Cal. Forestry Assn. v. Cal. Fish and Game Com. (2007) 156 Cal.App.4th 1535, 1551). Range describes the general geographical area in which a species occurs. Distribution describes the actual sites where individuals and populations of the species occur within the species' range. Section B on page 3 of the petition provides information on the range of Mount Burdell jewelflower. Section C on page 4 of the petition provides information on its distribution. Section L, Figure 2 on page 18 of the petition provides a distribution map, which has been provided as Figure 1 of this petition evaluation.

The petition describes Mount Burdell jewelflower as a California endemic of the northern San Francisco Bay area. The petition states that Mount Burdell jewelflower's range comprises approximately 3 square kilometers (1 square mile), and that it occurs in Marin County at elevations of 50 to 150 meters (165 to 490 feet). The petition states that Mount Burdell jewelflower is known from three occurrences. One occurrence is from Mount Burdell Open Space Preserve, one is on a ranch in the San Antonio Creek

watershed, and a third occurrence is in the Bowman Creek watershed. The petition notes that Mount Burdell jewelflower may occupy a few additional, undocumented sites.

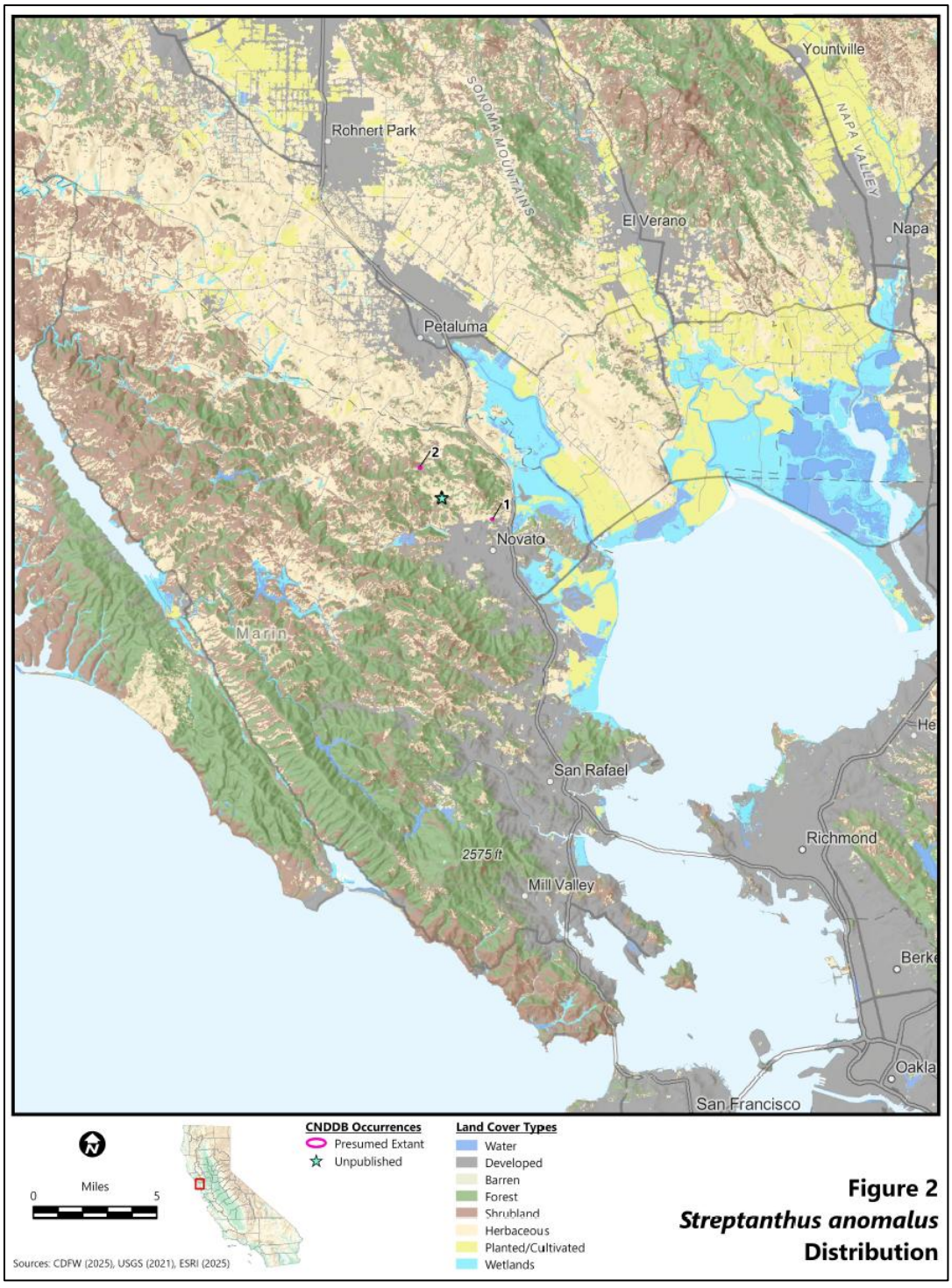

Figure 1. Map of the range and distribution of Mount Burdell jewelflower as provided in Figure 2 of the petition. Occurrences from the California Natural Diversity Database (CNDDB) are labeled with CNDDB occurrence numbers.

3.2.1 Department Assessment

Range and distribution of Mount Burdell jewelflower are presented in the petition based primarily on data from the California Natural Diversity Database (CNDDB) and correspondence with CNPS about an additional occurrence not yet recorded in the CNDDB; however, no discussion is provided on the completeness of the information presented including whether the data represents the complete range and distribution of the species or whether any survey efforts have been made to confirm or ascertain the full range and distribution of the species. Without further discussion explaining why the information provided in the petition is a scientifically defensible assessment of the range and distribution of the species, the Department is unable to properly determine whether the petition provides a reasonable explanation of the range and distribution of the species, or whether other petition components that rely on knowing the range and distribution of the species have been properly assessed.

The Department has some additional, readily available information from the CNDDB not presented in the petition. The CNDDB has five unprocessed online field survey forms for the species which appear to be referencing the new occurrence mentioned in the petition. While this additional, readily available information contributes to our current knowledge on the range and distribution of Mount Burdell jewelflower, this information does not compensate for deficiencies in data in the petition for these topics. The information presented in the petition, considered alongside readily available information from the Department, is not adequate for assessing the range and distribution of Mount Burdell jewelflower.

3.3 Habitat

This section summarizes the information in the petition regarding the kind of habitat necessary for species survival (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section F on page 7 of the petition provides information on the kind of habitat necessary for Mount Burdell jewelflower survival.

The petition states that Mount Burdell jewelflower occurs in openings in woodlands and grasslands on serpentine soils. The petition also includes a list of several plant species that grow with Mount Burdell jewelflower.

3.3.1 Department Assessment

The Department considers the information provided in the petition on the kind of habitat necessary for survival of Mount Burdell jewelflower to be adequate for assessing this petition component.

3.4 Abundance and Population Trend

This section summarizes the information in the petition regarding the species' abundance and population trend (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section D on pages 4 and 5 of the petition provides information on the abundance of Mount Burdell jewelflower. Section A on page 3 of the petition provides information on the population trend of Mount Burdell jewelflower.

The petition summarizes information on the abundance of Mount Burdell jewelflower at all three occurrences with a combined population size of approximately 3,500 plants. The petition estimates the area of occupied habitat at all three occurrences combined to be less than 4 hectares (10 acres).

The petition states that, based on information from the CNDDB and land cover mapping from the U.S. Geological Survey, Mount Burdell jewelflower has had a decreasing population trend because of loss and degradation of occupied habitat at one or more of the occurrences where the species has been observed. The petition states that the species may have had additional, undocumented degradation or loss of habitat, population declines, or both that occurred before the distribution of Mount Burdell jewelflower was well documented.

3.4.1 Department Assessment

Abundance of Mount Burdell jewelflower is provided in the petition based on population estimates reported in the CNDDB and provided to the petitioner by CNPS. Some abundance information is available for all three occurrences of Mount Burdell jewelflower presented in the petition, but the petition does not discuss the completeness of the information including whether the abundance estimates are based on complete or partial surveys of the occurrences. Area of occupied habitat is estimated in the petition as an indicator of abundance using CNDDB polygon data which is an inappropriate use of CNDDB data. CNDDB polygons are typically mapped to include a buffer that represents the locational accuracy of the data and therefore should not be used to determine area occupied by the species.

Population trend of Mount Burdell jewelflower is determined in the petition to be declining based partially on land cover mapping that shows a portion of the habitat at one occurrence has been converted to development; however, a discussion is not provided on whether the habitat that was converted to development was suitable for Mount Burdell jewelflower. The petition also provides a discussion of damage and direct mortality of Mount Burdell jewelflower plants at one occurrence but does not discuss how this has affected the overall population trend for the species. In addition, the statements in the petition about changes to woodland and grassland habitats likely

causing additional, undocumented habitat losses, population declines, or both to Mount Burdell jewelflower are too general and do not specifically identify impacts to habitat likely to have contained Mount Burdell jewelflower.

The Department has some additional, readily available information from the CNDDB not presented in the petition. The CNDDB has five unprocessed online field survey forms for the species which appear to be referencing the new occurrence mentioned in the petition; these forms include abundance data. While this additional, readily available information contributes to our current knowledge on the abundance of Mount Burdell jewelflower, this information does not compensate for deficiencies in data in the petition for these topics. The information presented in the petition, considered alongside readily available information from the Department, is not adequate for assessing the abundance and population trend of Mount Burdell jewelflower.

3.5 Threats

This section summarizes the information in the petition regarding the factors affecting the ability of the species to survive and reproduce, and the degree and immediacy of threats (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section G on pages 7 through 9 of the petition provides information on factors affecting the ability of Mount Burdell jewelflower to survive and reproduce (threats). Section H on pages 9 and 10 of the petition provides information on the degree and immediacy of threats to Mount Burdell jewelflower.

The petition lists four prominent range-wide threats to Mount Burdell jewelflower: development, invasive species, incompatible grazing practices, and climate change. The petition describes development as a threat to two of the three occurrences of Mount Burdell jewelflower with a solar power facility eliminating habitat at one occurrence and another occurrence adjacent to development. The petition states that invasive species are likely a significant threat to Mount Burdell jewelflower since numerous invasive species are abundant and spreading in Marin County and serpentine soils where Mount Burdell jewelflower grows. The petition states that infestations of invasive species can directly affect the conditions or resources Mount Burdell jewelflower relies on, thereby reducing abundance and making the species more vulnerable to extirpation from other causes. The petition mentions that all three occurrences of Mount Burdell jewelflower are grazed so the species may be damaged or killed if exposed to higher levels of cattle grazing and trampling.

The petition states that climate change directly and indirectly threatens Mount Burdell jewelflower by altering growing conditions, water availability, and frequency and intensity of disturbances. The petition also notes that climate change can alter interactions of the plant with pollinators, dispersers, fungal symbionts, seed predators,

herbivores, and competitors. The petition states that the magnitude of climate change impacts on Mount Burdell jewelflower is uncertain but may be substantial, particularly because of the species' limited range, rarity, habitat specificity, and distribution in relatively small and isolated areas that will be exposed to dramatic changes.

The petition states that without additional management actions, there is a moderate to high likelihood that Mount Burdell jewelflower will be extirpated from much of its range or become extinct. The petition mentions that this may occur because: ongoing threats have eliminated and are likely degrading habitat with some threats increasing in severity, the species has been documented at only a small number of sites that are also small in area, and two of the three occurrences occupied by the species are unprotected and not managed for conservation of the species.

3.5.1 Department Assessment

Factors affecting the ability of Mount Burdell jewelflower to survive and reproduce were presented in the petition based primarily on information reported in the CNDDB and imagery from Google Earth. The petition mentions that cattle trampling has damaged and killed Mount Burdell jewelflower plants at one occurrence based on information reported in the CNDDB; however, further discussion is needed on this threat, such as whether the impacts to the population are current or past impacts, whether the entire population was affected or a small portion of the population, whether the impacts are ongoing, etc.

The petition notes that development of a solar power facility has occurred next to the newly documented occurrence of Mount Burdell jewelflower based on Google Earth imagery and the facility may expand in the future. The petition further discusses how cattle trampling and grazing may affect a second occurrence due to its location next to two stock ponds where cattle likely congregate based on Google Earth imagery. Further discussion is needed on these threats, such as the proximity of the plants to the solar power facility and the stock ponds, in order to understand the degree and immediacy of these threats.

In addition to these specific threats, the petition identifies general threats from invasive species and climate change, but these threats are not described in detail in relation to Mount Burdell jewelflower and the petition does not provide information on the degree and immediacy of these threats for the species. The petition also mentions small number and size of occupied sites, and lack of protection and management, as additional reasons why Mount Burdell jewelflower is likely to be extirpated from much of its range or become extinct. The petition has not shown that Mount Burdell jewelflower's distribution and number of sites have been fully assessed and has not accurately represented the size of the occupied sites. The petition also does not discuss

what the unprotected lands with Mount Burdell jewelflower are being used for and how that land use is threatening, or potentially threatening, the species.

The Department does not have additional, readily available information in its possession that compensates for deficiencies in data for these topics. The information presented in the petition is not adequate for evaluating the factors affecting the ability of Mount Burdell jewelflower to survive and reproduce, or the degree and immediacy of threats to Mount Burdell jewelflower.

3.6 Existing Management

This section summarizes the information in the petition regarding the impact of existing management efforts on the species (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section I on pages 10 through 12 of the petition provides information on the impact of existing management efforts on Mount Burdell jewelflower.

The petition states that management of Mount Burdell jewelflower has been very limited, has not sufficiently addressed threats to the species, and consequently has not resulted in significant conservation of the species. The petition describes the impact of several management categories including legal protection, preservation and seed banking, management and monitoring, restoration, and surveys and research.

The petition describes Mount Burdell jewelflower as having no legal protections but notes that the species has a CRPR of 1B.1 and should be treated as a special-status species during environmental review under the California Environmental Quality Act.

The petition states that one occurrence of Mount Burdell jewelflower has been preserved at Mount Burdell Open Space Preserve. The petition also states that seeds of Mount Burdell jewelflower have been collected and placed in long-term storage at California/Rancho Santa Ana Botanic Garden.

The petition states that two occurrences of Mount Burdell jewelflower are on land that is not managed for biodiversity and one occurrence is at Mount Burdell Open Space Preserve which has a management goal to protect sensitive habitats. The petition notes that the occurrence of Mount Burdell jewelflower at Mount Burdell Open Space Preserve is monitored by managers of the preserve, but the occurrence has experienced extensive damage and mortality from cattle trampling.

The petition states that no efforts have been made to restore or create habitat occupied by Mount Burdell jewelflower. The petition discusses how all three occurrences of Mount Burdell jewelflower have been recently visited but range-wide surveys have not been conducted. The petition states that some investigation into the reproductive

biology of Mount Burdell jewelflower has been conducted, but research has not been conducted on the species' dispersal, seed dormancy, establishment, growth, mortality, interactions with other species, population dynamics, or habitat requirements, and therefore understanding of the species' ecology is based primarily on observations by botanists and understanding of the ecology of related and similar species.

3.6.1 Department Assessment

The Department considers the information provided in the petition on impact of existing management efforts on Mount Burdell jewelflower to be adequate for assessing this petition component.

3.7 Future Management

This section summarizes the information in the petition regarding suggestions for future management (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section J on pages 12 and 13 of the petition provides suggestions for future management of Mount Burdell jewelflower.

The petition provides a list of suggestions for future management including:

- list the species under CESA and prepare a recovery plan for it,
- include the species as a focal species in regional conservation investment strategies and as a covered species in natural community conservation plans,
- preserve occupied sites in perpetuity,
- develop and implement site-specific monitoring and management plans,
- manage extant populations to prevent the spread of invasive species,
- implement compatible grazing practices,
- coordinate and share information among organizations working to conserve the species,
- coordinate with and support private landowners implementing conservation practices in occupied habitat,
- restore degraded, occupied habitat,
- establish additional populations,
- conduct surveys to maintain up to date data on distribution and abundance, and
- investigate the species' population ecology and habitat requirements to inform conservation and management.

3.7.1 Department Assessment

The Department considers the information provided in the petition on suggestions for future management of Mount Burdell jewelflower to be adequate for assessing this petition component.

3.8 Availability and Sources of Information

This section summarizes the information in the petition regarding availability and sources of information (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). Section K on pages 13 through 16 of the petition provides the sources of information used in the Mount Burdell jewelflower petition. Digital copies of references cited were also provided to the Commission and Department.

3.8.1 Department Assessment

The Department received digital copies of references cited in the petition and considers this to be adequate to address the availability and source of information mentioned in the petition for Mount Burdell jewelflower.

4 OTHER RELEVANT INFORMATION AVAILABLE TO THE DEPARTMENT

Pursuant to Fish and Game Code section 2073.5, the Department also evaluates petitions in relation to other relevant information the Department possesses or receives. The Department evaluated readily available information relating to Mount Burdell jewelflower that is available from the Department's document library and the CNDDB, including data housed in the CNDDB's unprocessed data layer. Regional Department staff were contacted to determine if additional information on the species was readily available and in the possession of Department staff. In addition, the petitioner submitted supplemental information for the species via email on September 7, 2025. Any relevant information from these sources is mentioned within the "Department Assessment" section for each petition component.

To the extent the Department was able to review other relevant information in its possession as it relates to the petition, the Department concluded that none of the additional information compensates for data deficiencies in the petition. If the Commission accepts the petition for consideration, regardless of the Department's recommendation, all reasonable attempts will be made by the Department to notify affected and interested parties and to solicit data and comments on the petitioned action (Fish & G. Code, § 2074.4). At that time, the Department will commence a review of the status of the species and produce a written peer-reviewed report, based upon the best

scientific information available to the Department, which indicates whether the petitioned action is warranted (Fish & G. Code, § 2074.6).

5 SUFFICIENCY OF SCIENTIFIC INFORMATION AND RECOMMENDATION TO THE COMMISSION

The Department evaluated the petition components set forth in Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1) for sufficiency of information pursuant to Fish and Game Code section 2073.5. Based upon the information contained in the petition and other relevant information, the Department determined there is not sufficient information to indicate that the petitioned action may be warranted (Fish & G. Code § 2073.5).

In this petition evaluation, the Department has assessed the information in the petition for each petition component individually; however, sufficiency of the petition as a whole is ultimately determined by looking at all petition components taken together. The Department considers scientifically defensible information on range and distribution to be critical for determining sufficiency of the petition. For Mount Burdell jewelflower, the Department has determined that information is lacking for the following petition components: range, distribution, abundance, population trend, factors affecting the ability of the species to survive and reproduce (threats), and the degree and immediacy of threats. Due to the lack of adequate information on these petition components, the Department does not consider the information in the petition to be sufficient as a whole for assessing whether listing Mount Burdell jewelflower under CESA may be warranted and recommends the Commission reject the petition and not consider it further under CESA.

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