

Peer Review Plan for Draft Recovery Criteria for the Lange’s metalmark butterfly (*Apodemia mormo langei*), *Oenothera deltoides* subsp. *howellii* (Antioch Dunes evening-primrose), and *Erysimum capitatum* var. *angustatum* (Contra Costa wallflower)

About the Document

Title:

Draft Amendment Adding Recovery Criteria to the Recovery Plan for Three Endangered Species Endemic to Antioch Dunes, California: Lange’s metalmark butterfly (*Apodemia mormo langei*), *Oenothera deltoides* subsp. *howellii* (Antioch Dunes evening-primrose), and *Erysimum capitatum* var. *angustatum* (Contra Costa wallflower)

Description of the Document:

This document proposes draft recovery criteria for Lange’s metalmark butterfly (*Apodemia mormo langei*; Lange’s metalmark), *Oenothera deltoides* subsp. *howellii* (Antioch Dunes evening-primrose), and *Erysimum capitatum* var. *angustatum* (Contra Costa wallflower) that will be made available to the public for review and comment. The intent of the draft recovery criteria is to establish objective, measurable criteria which, when met, would result in determinations for downlisting and delisting of Lange’s metalmark, *O.d.* subsp. *howellii*, and *E.c.* var. *angustatum*.

About the Peer Review Process

Type of Review: Individual letters

The U.S. Fish and Wildlife Service (Service) will provide each peer reviewer with information explaining their role and instructions for fulfilling that role, the draft recovery criteria, and a list of citations as necessary. The purpose of seeking independent peer review is to ensure use of the best scientific and commercial information available and to ensure and to maximize the quality, objectivity, utility, and integrity of the information upon which the report is based, as well as to ensure that reviews by recognized experts are incorporated into the recovery planning process. Peer reviewers will be advised that they are not to provide advice on policy. Rather, they should focus their review on identifying and characterizing scientific uncertainties. Peer reviewers will be asked to answer questions pertaining to the logic of our assumptions, arguments, and conclusions and to provide any other relevant comments, criticisms, or thoughts. Specific questions put to the reviewers include the following:

1. Are the draft recovery criteria objective and measurable?
2. Do the draft recovery criteria provide accurate and adequate review and analysis of individual population and species viability with respect to changes in status from endangered to threatened and to delisting?
3. Are there any significant oversights, omissions, or inconsistencies in our draft recovery criteria?
4. Are the conclusions we reach logical and supported by the evidence we provide?
5. Did we include all the necessary and pertinent literature to support our assumptions/arguments/conclusions?

Peer reviewers will provide individual, written responses to the Service. Peer reviewers will be advised that their reviews, including their names and affiliations, will: (1) be included in the administrative record regarding these species' recovery criteria and, (2) be available to the public upon request once all reviews are completed. We will summarize and respond to the issues raised by the peer reviewers in the record. The final recovery criteria for Lange's metalmark, *O.d.* subsp. *howellii*, and *E.c.* var. *angustatum* are expected to be completed by September 16, 2019.

Number of Reviewers: The peer review process includes written requests for peer review from at least three reviewers for the Lange's metalmark recovery criteria and at least three reviewers for the *O.d.* subsp. *howellii*, and *E.c.* var. *angustatum* recovery criteria.

Selection of Peer Reviewers: The Service's San Francisco Bay-Delta Fish and Wildlife Office, with assistance from the Antioch Dunes National Wildlife Refuge, provided lists of potential peer reviewers based on expertise with the subject matter and other considerations (listed below), to the Service's Region 8 Science Applications Program (R8 SAP). The Service's R8 SAP selected peer reviewers.

- **Expertise:** Expertise sought for the review includes familiarity with the life history, threats, and habitat requirements for the respective species, conservation biology, conservation genetics, and the Service's endangered species recovery plans and planning processes.
- **Independence:** The reviewer should not be employed by the Service. Academic, consulting or government scientists should have sufficient independence from the Service if the government supports their work. We will not be providing financial compensation to peer reviewers.
- **Objectivity:** The reviewer should be recognized by his or her peers as being objective, open-minded, and thoughtful. In addition, the reviewer should be comfortable sharing his or her knowledge and perspectives and openly identifying his or her knowledge gaps.
- **Conflict of Interest:** The reviewer should not have any financial or other interest that conflicts or that could impair his or her objectivity or create an unfair competitive advantage. If an otherwise qualified reviewer has an unavoidable conflict of interest, the Service may publicly disclose the conflict.

Estimated Start Date of Peer Review: Prior to or concurrently with public review, which is scheduled to begin sometime after April 2019.

About Public Participation

Opportunities for the Public: The proposed recovery criteria document has a public comment period that will begin sometime after April 2019 (a Docket ID reference number is not yet available). Public comments are to be submitted electronically through www.regulations.gov.

Contact:

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