

# Mattley Meadow Restoration Project

## Sensitive Plant Biological Evaluation

Stanislaus National Forest - Calaveras Ranger District

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### Introduction

The purpose of this biological evaluation (BE) is to determine whether implementation of the Mattley Meadow Restoration project would result in a trend toward Federal listing of any Sensitive Plant species as designated by the Regional Forester's sensitive species list.

### Proposed Action

See Mattley Meadow Restoration Project record.

### Project Area Species Evaluation

There are no listed or proposed botanical species or critical habitats within the project area. No effect is expected and listed or proposed botanical species will not be discussed further.

#### Regional Foresters Sensitive Species list – updated August 2013

The following sensitive species are **not** known or expected to occur in the project area. No impact is expected and they are not analyzed further:

*Allium jepsonii*, *A. tribracteatum*, *Arctostaphylos nissenana*, *Balsamorhiza macrolepis*, *Boechera evadens*, *Botrychium tunux*, *B. yaaxudakei*, *Calochortus clavatus* var. *avius*, *Cypripedium montanum*, *Dendrocollybia racemosa*, *Draba asterophora* var. *asterophora*, *Draba asterophora* var. *macrocarpa*, *Eriogonum luteolum* var. *saltuarium*, *Erythronium tuolumnense*, *Fissidens aphelotaxifolius*, *Horkelia parryi*, *Lewisia kelloggii* ssp. *hutchisonii*, *Lomatium stubinsii*, *Mielichhoferia elongata*, *Mielichhoferia shevockii*, *Mimulus pulchellus*, *Pinus albicaulis*.

The following sensitive are known or expected to occur in the project area and potential effects are analyzed further:

*Botrychium ascendens*, *B. crenulatum*, *B. lineare*, *B. lunaria*, *B. minganense*, *B. montanum*, *B. pedunculatum*, *B. pinnatum*, *Bruchia bolanderi*, *Helodium blandowii*, *Lewisia kelloggii* ssp. *Kelloggii*, *Meesia uliginosa*, *Peltigera gowardii*.

None of these species were found in the project area during surveys. Surveys were conducted in June and July of 2014. Surveys were focused to detect these species and performed at the appropriate time for reliable identification. Several of the species are notoriously difficult to detect and suitable habitat is

present. Individuals may be present therefore they were considered for possible impacts from project implementation.

Botrychium spp. (moonworts) - The project is within the geographic and elevation range of several of the sensitive Botrychium species. The habitat type is similar for all the species, typically wet meadows, seeps, springs and riparian areas. They do not present themselves every year and can be difficult to detect. Soil disturbance can be very detrimental to individuals and populations. There is potential to crush individuals and to disturb or even remove and relocate soil where botrychiums are present as part of this restoration project. Longer term the restored meadow conditions should maintain high quality botrychium habitat.

Brucia bolanderi– Habitat includes damp soils, meadows, streams, and riparian areas. Activities that permanently remove plants or populations and their habitat would be detrimental. The species does not compete well with other plants, some level of disturbance is necessary to maintain open habitat. Restoration projects should be surveyed prior to implementation so disturbance can be minimized.

Helodium blandowii (bog moss) – Wet meadows, fens, seeps, and under willows in leaf litter. Susceptible to trampling and changes in hydrology that result in drier conditions.

Lewisia kelloggii – Open gravelly or sandy flats. Vulnerable to trampling and disturbance from vehicles and recreation activities.

Meesia uliginosa (moss) – Meadows, fens, on decomposing wood. Threats to the species are changes in hydrology resulting in drier conditions and changes in nutrient concentration of incoming water.

Peltigera gowardii (lichen) –Shallow perennial streams fed by cold water springs. Increased stream flows beyond the range of variability resulting in scouring or changes in water chemistry will reduce habitat quality. Alteration of riparian vegetation and changes in water temperature can significantly impact occurrences.

## **Management Requirements**

If sensitive botanical species are observed in the project area during implementation, flag and avoid occurrences with a ten foot buffer where possible. Where populations may impede implementation, contact the District/Forest Botanist for further conversation and possible mitigations.

Apply appropriate weed/invasive species prevention measures.

## **Determinations**

The proposed action will have no impact/no effect on the following sensitive species:

*Allium jepsonii*, *A. tribracteatum*, *Arctostaphylos nissenana*, *Balsamorhiza macrolepis*, *Boechera evadens*, *Botrychium tunux*, *B. yaaxudakei*, *Calochortus clavatus var. avius*, *Cypripedium montanum*, *Dendrocollybia racemosa*, *Draba asterophora var. asterophora*, *Draba asterophora var. macrocarpa*, *Eriogonum luteolum var. saltuarium*, *Erythronium tuolumnense*, *Fissidens aphelotaxifolius*, *Horkelia*

*parryi*, *Lewisia kelloggii* ssp. *hutchisonii*, *Lomatium stubinsii*, *Mielichhoferia elongata*, *Mielichhoferia shevockii*, *Mimulus pulchellus*, *Pinus albicaulis*.

The proposed action may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability in the planning area for the following sensitive species:

*Botrychium ascendens*, *B. crenulatum*, *B. lineare*, *B. lunaria*, *B. manganense*, *B. montanum*, *B. pedunculatum*, *B. pinnatum*, *Bruchia bolanderi*, *Helodium blandowii*, *Lewisia kelloggii* ssp. *Kelloggii*, *Meesia uliginosa*, *Peltigera gowardii*.

None of the species were found during surveys in the project area. Individuals may be present, protections would occur if they are found. Overall restoration of the meadow and stabilization of the hydrologic function should improve habitat conditions.

## References

California Department of Fish and Game, Natural Diversity Database. 2020. RareFind, V.5, Government Version, data set January 2020. California Department of Fish and Game.

Region 5 Regional Foresters Sensitive Species Plant List, 2013

USDA 2017. Stanislaus National Forest, Forest Plan Direction. March 2017. Stanislaus National Forest, Sonora, CA.

USDA Forest Service, NRM - Threatened, Endangered and Sensitive Plants - Invasive Species (TESP/IS). 2019. Version 3.16.0

U.S. Department of Agriculture, Forest Service (USDA). 2012. Region 5 sensitive plant species evaluation and documentation form, 2012, Unpublished.

Project Survey Map

