

RECLAMATION

Managing Water in the West

Environmental Assessment

Reintroduction of Crampton's Tuctoria to Olcott Lake at Jepson Prairie Preserve, California



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

October 2014

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Section 1 Introduction

1.1 Background

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with Reclamation providing \$63,500 from the Central Valley Project Conservation Program (CVPCP) to Carol W. Witham, sole proprietor, to reintroduce Crampton's tuctoria to Olcott Lake, a large vernal pool at Jepson Prairie Preserve. The Preserve is located in Solano County, California (Figure 1).

This EA was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and DOI Regulations (43 CFR Part 46). Reclamation has also prepared a Finding of No Significant Impact, which explains why the Proposed Action would not have any significant effects on the human or natural environment.

1.2 Need for the Proposed Action

The need for the project is to recover populations of Crampton's tuctoria, a vernal pool plant which is listed as endangered under the Federal and California endangered species acts. The Central Valley Project (CVP) has had a significant impact on vernal pools within the historic range of this species. Losses of vernal pools to agricultural and urban conversion have occurred in and around the CVP service area. Holland (2009) concludes that 2,716 acres of vernal pool habitat was lost in Yolo County between 1989 and 2005, and 3,497 acres were lost in Solano County between 1994 and 2005. He attributed the majority of those losses to agricultural conversion.

Section 2 Alternatives Including the Proposed Action

2.1 No Action Alternative

Reclamation would not provide \$63,500 from the CVPCP to Carol W. Witham to reintroduce Crampton's Tuctoria to Olcott Lake at Jepson Prairie Preserve. She would have to obtain funding from other sources to implement the project.

2.2 Proposed Action

Reclamation would provide \$63,500 from the CVPCP to Carol W. Witham to reintroduce Crampton's tuctoria to Olcott Lake at Jepson Prairie Preserve. (See Figure 1).

Jepson Prairie Preserve is the site where Crampton's tuctoria was first documented in 1958 but at which it has not been seen since 1993. Therefore, the species is presumed to have been extirpated from the site. The reintroduction project would take place over the course of five years, beginning in 2015. Seed for the reintroduction would be collected from the Davis Communication Annex and the Yolo Grasslands Regional Park, both in Yolo County, California (Yolo Sites). Only seed from the Yolo sites would be introduced into Olcott Lake in the locations in which the species previously occurred. The general locations of the collection sites are known to Ms. Witham, and exact placement of the reintroduction sites in Olcott Lake would be refined in the field by using botanist Beecher Crampton's historic photographs and other documentation.

2.2.1 Proposed Tasks:

1. Finalize Permits and Access:

The project proponent would obtain all Federal and State permits, and permissions to access collection and planting sites on private lands, before beginning work. Because both the Jepson Prairie Preserve and the Yolo sites are non-Federal land, an Endangered Species Act Section 10(a)(1)(A) Recovery Permit must be obtained from the U.S. Fish and Wildlife Service (Service) before any activities are undertaken that may result in "take" of Crampton's tuctoria. On July 13, 2014, Ms. Witham submitted to the Service a request to amend her existing 10(a)(1)(A) permit to include Crampton's tuctoria. It is anticipated that the amendment will be issued well before any component of the project is begun that may affect the species. In no case will Ms. Witham conduct any such activity until the amendment has been received.

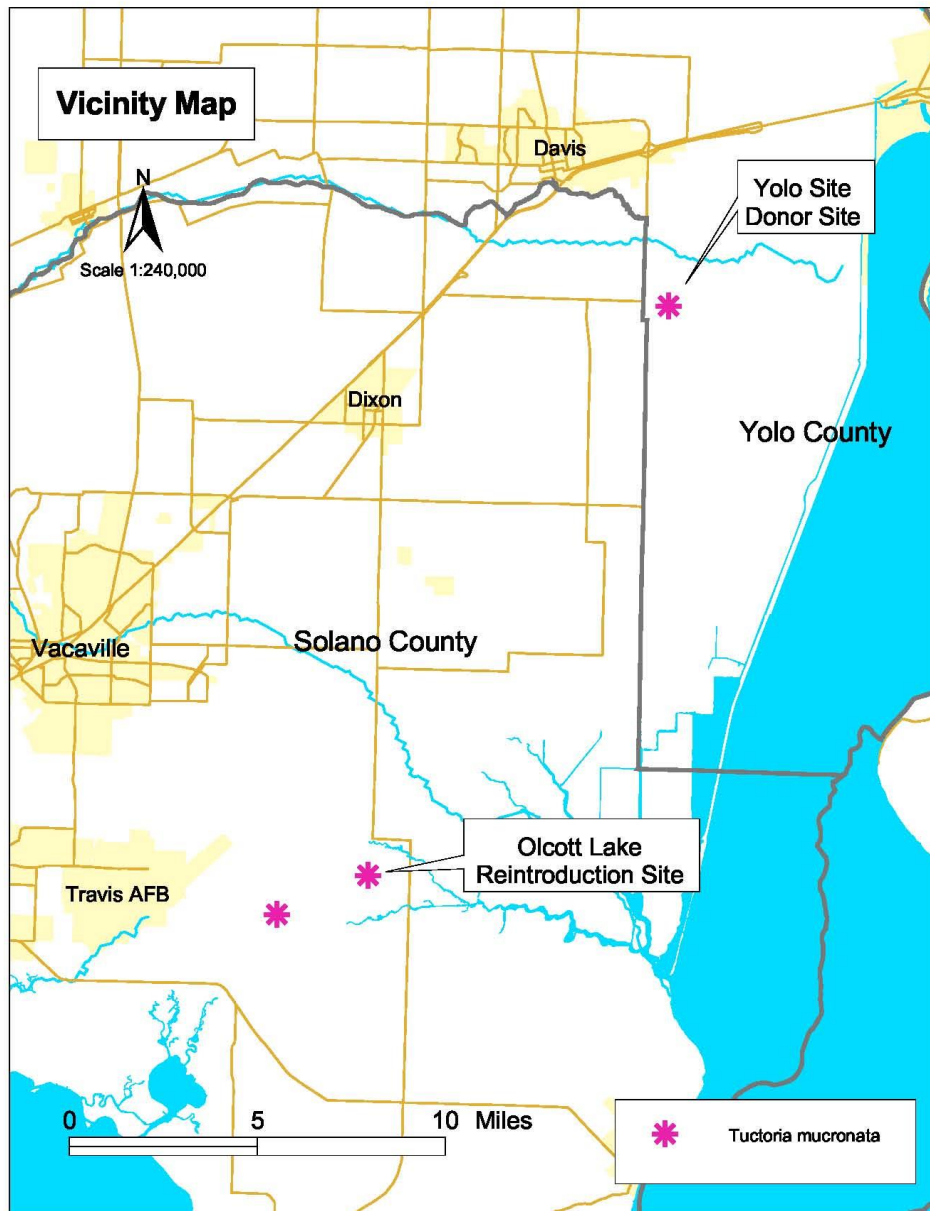


Figure 1. Crampton's Tuctoria Reintroduction and Donor Sites

2. Census Donor Population, Seed Collection, Site Inoculation, and Implementation:

2a. Census Donor Population

In 2015, prior to any seed collection, populations of Crampton's tuctoria at the Yolo sites (the "donor site") would be quantitatively monitored. Seed would only be collected if the population is greater than 1,500 plants, the size at which it has been determined that the population can continue to sustain itself when seeds from that year's production are removed. Seed collection may need to be postponed if 2015 is a year of poor seed production for the species.

2b. Seed Collection and Treatment

No more than 5% (or 250 plants, whichever is smaller) of the total population of seed-bearing Crampton's tuctoria plants would be collected from the donor site. Collections would be made in the late fall before the first significant rains of the season. The seeds would be collected in 2015 if timing and population size permit.

2c. Site Inoculation and Reintroduction Planting

Inoculation (planting of seed) would be planned to occur either just prior to, or just following, the first significant storm of fall/winter 2015. To facilitate efficient seeding, planting sites in Olcott Lake would have already been chosen and field marked. Also just prior to inoculation, the stored seed-bearing plants would be broken up to small pieces but the seed would not be otherwise cleaned. At the reintroduction sites, the soil would be lightly raked to fill in the soil cracks. A report would be prepared after the inoculation is completed to document the seed collecting and inoculation activities.

3. Post Reintroduction Monitoring:

3a. Germination and Survival

The reintroduction locations in Olcott Lake would be at some distance from the Lake's upland margin. To observe seedlings at the reintroduction locations would require the observer to repeatedly walk into the vernal pool while it is still quite muddy. This could be harmful to Crampton's tuctoria and several other listed species that occupy Olcott Lake. Because of that concern, the reintroduction sites would be visited only as soon as the soils are dry enough to support being walked on.

3b. Annual Population Census

After seed inoculation, the planted area and its surroundings will be thoroughly surveyed for Crampton's tuctoria each year for the duration of the project. Donor populations of Crampton's tuctoria at the Yolo site would also be monitored annually. The monitoring would take place each year after the inoculation occurs until September 2019 when the Reclamation grant agreement expires.

3c. Success Criteria

This project would be considered successful if 1) Crampton's tuctoria is re-established in Olcott Lake and 2) if the species persists over time. Unfortunately, four years of monitoring (2016 through 2019) is not long enough to determine persistence or trends in the reintroduced populations, so there is no assurance that the effort will be successful in the long term.

4. Interim, Annual and Final Reporting:

Semi-annual reports will be submitted to Reclamation over the duration of the five year project. A draft final report would be submitted by September 30, 2019, with a comprehensive final report to be submitted by December 31, 2019.

Section 3 Affected Environment & Environmental Consequences

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternatives.

3.1 Resources Not Analyzed in Detail

Department of the Interior Regulations, Executive Orders, and Reclamation guidelines require a discussion of the following resources when preparing environmental documentation:

3.1.1 Cultural Resources

The Proposed Action has no potential to cause effects to historic properties pursuant to Section 106 National Historic Preservation Act implementing regulations at 36 CFR Part 800.3(a)(1) (see Appendix A).

3.1.2 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. The Proposed Action does not have a potential to affect Indian Trust Assets. The nearest ITA is Auburn Rancheria which is 31 miles northeast of the project location. (See Appendix B).

3.1.3 Indian Sacred Sites

Indian sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." The Proposed Action would not be located on or impact any Federal lands and therefore would not affect access to Indian sacred sites.

3.1.4 Environmental Justice

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. The Proposed Action would not result in any adverse human health or environmental effects to minority or low-income populations.

3.2 Biological Resources

3.2.1 Affected Environment

The Jepson Prairie Preserve consists of 1,566 acres of remnant natural prairie in a wide alluvial floodplain, most of which has been converted to agriculture and other uses. The Preserve protects one of the best few remaining vernal pool habitats and remnants of native bunchgrass prairie, of which the largest pool is the 93-acre Olcott Lake at which the Proposed Action would be conducted. The Preserve provides the only known home for the federally threatened delta green ground beetle and federally and state endangered Crampton's tuctoria. Altogether, over 400 species and 64 families of plants, including 15 rare and endangered plants, are found at the Preserve. The Preserve is owned by the Solano Land Trust. The University of California, Davis, provides a supporting role in the management of the Preserve.

Crampton's tuctoria, also known as Solano grass, is entirely endemic to Solano and Yolo counties within the Solano-Colusa vernal pool region. Only three populations have ever been recorded of this species. Discovered in 1958, the type locality is Olcott Lake (CNDDDB EO#1). No plants have been observed at this site since 1993. In 1985, a second Solano County population was discovered in a playa pool on private property near Jepson Prairie (CNDDDB OE#2, Woodward 1985). While not surveyed every year, the population at that site appears to be small but persistent. Population sizes have ranged from 1 to 763 plants in the nine years it has been monitored. Crampton's tuctoria occurs in three distinct patches within this pool (Witham 2013). In 1993, the Davis Communication Annex population was discovered (CNDDDB EO#3). The plants there occur in four depressions within two large pools. This population has fluctuated from zero plants (2007) to over 20,000 plants during the period of 2003-2011. A fourth occurrence (CNDDDB EO#4) at the Davis Communication Annex was introduced into created pools on the adjacent Yolo Grasslands Park site (Gerlach 2009, Gerlach 2011).

Crampton's tuctoria only grows on salt-affected clay soils in alkaline vernal pools or alkaline playas that are subject to long periods of inundation (Crampton 1959, Environmental Science Associates 2005, Gerlach 2009, Gerlach 2011). It is also generally found immediately above or in the lowest areas of vernal pools and in shallow depressions on the otherwise flat bottoms of alkaline playas (Woodward 1985, Environmental Science Associates 2005, Gerlach 2009, Gerlach 2011).

3.2.2 Environmental Consequences

3.2.2.1 No Action

If Reclamation does not provide funding for the Proposed Action, Carol Witham would have to find other sources of funding for the project. If funding were not obtained, she would not be able to reintroduce Crampton's tuctoria to Olcott Lake at Jepson Prairie Preserve.

3.2.2.2 Proposed Action

The Proposed Action would initiate the establishment of a self-perpetuating population of Crampton's tuctoria at a suitable site within its current and historic range. This could reduce the potential for extinction. The passive reintroduction techniques (minimal ground disturbance) of the Proposed Action would help maintain the vernal pool species diversity on the project site.

This project, along with implementation of the Solano Habitat Conservation Plan (under development), and the Yolo Habitat Conservation Plan (under development) could lead to stabilizing the known populations of Crampton's tuctoria and reduce the threat of extinction. If a persistent population of Crampton's tuctoria can be re-established in Olcott Lake, then it together with the Yolo site could serve as inoculum for introduction into other large playa pools in the Jepson Prairie ecoregion.

3.3 Cumulative Effects

According to the CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions*. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

There are no adverse impacts associated with implementing the Proposed Action, and therefore there are no cumulative effects to consider.

Section 4 Consultation and Coordination

CVPCP and Habitat Restoration Program (HRP) Technical Team

CVPCP and HRP program managers are guided by a Technical Team of biologists and natural resource specialists from Reclamation, the Service, and the California Department of Fish and Wildlife. During the period of November 4, 2013 through February 20, 2014, members of the Technical Team reviewed and scored proposals submitted to Reclamation for consideration for funding. The *Reintroduction of Crampton's Tuctoria (Tuctoria mucronata) to Olcott Lake at Jepson Prairie Preserve, California* proposal ranked in the top tier of proposals and was selected for funding following evaluation by the Team. In March, 2014, Reclamation and Service management approved the proposal for funding.

Section 5 References

CNDDDB. 2013. California Natural Diversity Database species occurrence information accessed via Rarefind. Dataset as provided September 29, 2013.

Crampton, B. 1959. The Grass Genera *Orcuttia* and *Neostapfia*: a Study in Habitat and Morphological Specialization. *Madrono* 15:97-110.

Environmental Science Associates and Yolo County Planning & Public Works Department (ESA). 2005. CALFED at-risk plant species, habitat restoration and recovery, and non-native species management ERP-02-P46: final conservation and management plan. CALFED Ecosystem Restoration Program, Sacramento.

Gerlach, J. D. 2009. Final Report: Biology, Ecology, and Habitat Requirements of Solano Grass (*Tuctoria mucronata*) and Colusa Grass (*Neostapfia colusana*). Prepared for the Solano County Water Agency, December 23, 2009.

Gerlach, J. D. 2011. Final report: Grasslands Regional Park Agreement No. 2011-170. Prepared for Yolo County. August 30, 2011.

Holland, R.F. 2009. California's Great Valley Vernal Pool Habitat Status and Loss: Rephotorevised 2005. Unpublished report prepared for Placer Land Trust. Available at: <http://www.placerlandtrust.org/vernalpoolreport.aspx>.

Witham, C.W. 2013. Status surveys for seven federally listed vernal pool grasses and *Chamaesyce hooveri* in the Sacramento and San Joaquin Valleys. Report prepared for USFWS under a CVPIA/HRP grant. March 25, 2013. Available at <http://www.vernalpools.org>.

Woodward, R. A. 1985. Survey of *Tuctoria mucronata* and *Neostapfia colusana* at the Jepson Prairie Preserve. Report prepared for The Nature Conservancy, Davis.

Appendix A

Cultural Resources Compliance

**CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch**

MP-153 Tracking Number: 14-MPRO-265

Project Name: Reintroduction of Crampton's Tuctoria to Olcott Lake

NEPA Document: EA

Project Manager/NEPA Contact: Dan Strait

MP 153 Cultural Resources Reviewer: Adam Nickels 

Date: 08/12/14

The proposed undertaking to use Federal funds to reintroduce Crampton's Tuctoria to Olcott Lake has no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

The proposed action will involve the collecting of seeds from seed bearing plants in Yolo County Vernal pools and seeding and propagating them in appropriate habitat conditions at the Prairie Preserve at Olcott Lake.

After reviewing the proposed projected description I have concluded that no additional cultural resources considerations are necessary for this undertaking concluding the Section 106 process for this undertaking. This conclusion statement is intended to convey the conclusion of the Section 106 process for this undertaking.

Thank you for providing the opportunity to comment on this undertaking. Please retain a copy of this conclusion statement with the administrative record for the proposed project.

Appendix B

Indian Trust Assets Compliance



KLEINSMITH, DOUGLAS <dkleinsmith@usbr.gov>

Re: ITA request for Crampton's tuctoria reintroduction

RIVERA, PATRICIA <privera@usbr.gov>

Wed, Jun 11, 2014 at 1:38 PM

To: DOUGLAS KLEINSMITH <dkleinsmith@usbr.gov>

Doug,

I reviewed the proposed action to provide \$63,500 from the CVPCP to Carol W. Witham to reintroduce Crampton's tuctoria to Olcott Lake at Jepson Prairie Preserve. Seed for this reintroduction project would be collected from the Davis Communication Annex and the Yolo Grasslands Regional Park. Seed from the Yolo site would be introduced into Olcott Lake in the locations in which the species previously occurred.

The proposed action does not have a potential to impact Indian Trust Assets. The nearest Indian Trust Asset is Auburn Rancheria, approximately 31 miles northeast of the project location.

Patricia Rivera
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