

# RECLAMATION

*Managing Water in the West*

## FINDING OF NO SIGNIFICANT IMPACT

### CAPTIVE PROPAGATION AND REINTRODUCTION OF LARGE- FLOWERED FIDDLENECK IN CONTRA COSTA AND SAN JOAQUIN COUNTIES, CALIFORNIA

FONSI 13-11-MP

Recommended by:

  
Douglas Kleinsmith  
Natural Resource Specialist  
Mid-Pacific Regional Office

Date: 7/12/13

Concurred by:

  
Dan Strait  
Program Manager, Central Valley  
Project Conservation Program  
Mid-Pacific Regional Office

Date: 7/18/13

Approved by:

  
Anastasia Leigh  
Regional Environmental Officer  
Mid-Pacific Region

Date: 7/31/2013



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

## Background

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared a Draft Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with Reclamation providing \$248,356 from the Central Valley Project Conservation Program (CVPCP) to Vollmar Natural Lands Consulting (Vollmar) to establish self-perpetuating populations of the endangered large-flowered fiddleneck (*Amsinckia grandiflora*) (AMGR) on suitable sites within its current and historic range in Alameda, Contra Costa, and San Joaquin Counties.

The primary purpose of the project is to establish additional populations of (AMGR) on suitable sites within its current and historic range. This will help fulfill a need identified by the U.S. Fish and Wildlife Service (FWS) to recover populations of the species, and to compensate for impacts to the species that have occurred as a result of the continuing operation of the Central Valley Project.

## Alternatives Including the Proposed Action

**No Action:** Reclamation will not contribute \$248,356 from the CVPCP to Vollmar to establish self-perpetuating populations of AMGR. Vollmar will have to obtain funding from other sources to implement the project.

**Proposed Action:** Vollmar will conduct the following activities involving AMGR: (1) review literature on AMGR to prepare the propagation and reintroduction plan (2) convene a Technical Advisory Group (TAG); (3) conduct an analysis, both remotely and in the field, of sites where the species occurs; (4) conduct site surveys and analyses of habitat suitability; (5) conduct captive propagation and reintroduction to suitable sites; (6) monitor and manage reintroduction sites; and (7) prepare interim and final reports.

Captive propagation will be conducted at the University of California, Berkeley, Botanical Garden, and/or at a site in Sonoma County managed by Planet Horticulture. Surveys and reintroductions will be conducted within the species' current and historic range.

The AMGR Recovery Plan designated three geographic or recovery areas for the species within its historic range: Northern (north of Mount Diablo), Central (south of Mount Diablo and north of Interstate 580), and Southern (south of Interstate 580). Vollmar will identify ten AMGR reintroduction sites based on the field surveys and analyses conducted under the above objectives 1-3 and will attempt to establish at least some of these sites within all three of the above recovery areas for the species. Reintroduction sites include the Black Diamond Mines Regional Preserve (Northern Recovery Area), the Contra Costa Water District and/or Tres Vaqueros Repower project site (Central Recovery Area), and the Connolly Ranch (Southern Recovery Area).

Each of the ten proposed AMGR planting sites will be carefully prepared for planting. This includes, but is not limited to, scraping the surface of the ground at each area where a seed or plug will be planted, removing nonnative annual grasses and forbs as needed to reduce competition without using herbicides, installing netting above the plantings to prevent birds from damaging the plantings), and providing water for the plantings as needed.

A minimum of approximately 40,000 AMGR seeds and plugs will be planted in 2013 and 2014, with more of the plantings occurring in the first year. It is estimated that a reintroduction plot may range in size from 20 x 20 feet, to a few acres.

Vollmar would conduct four years of monitoring and low intensity management following seeding/planting of the reintroduction site. Since the sites are intended to be self-sustaining, Vollmar would not conduct intensive management of the site, such as for rodent control. Because there are only two sites where AMGR is known to occur, any increase in numbers of plants or stable new sites would be viewed as favorable. Establishment of at least one new site with over 1,000 plants would be considered a moderate success, and each successful additional site with a re-established population would be seen as significant. If the AMGR plantings at all 10 reintroduction sites survive, it would be considered a significant recovery action by the FWS. Unused seeds remaining after project completion would supplement the existing AMGR seedbank at UC Berkeley or another suitable seed bank, helping ensure that there would be genetically diverse AMGR plant material available for use in future re-establishment efforts.

## **Findings**

Based on the attached EA, Reclamation finds that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. The attached EA describes the existing environmental resources in the Proposed Action area and evaluates the effects of the No Action and Proposed Action alternatives on the resources. The EA was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and DOI Regulations (43 CFR Part 46). Effects on several environmental resources were examined and found to be absent or minor. This analysis is provided in the attached EA, and the analysis in the EA is hereby incorporated by reference.

Following are the reasons why the impacts of the proposed action are not significant:

- 1 The proposed action will not adversely affect threatened or endangered species.
2. The proposed action has no potential to affect historic properties.
3. The proposed action will not affect any Indian Trust Assets.
4. Implementing the proposed action will not disproportionately affect minorities or low-income populations and communities.
5. The proposed action will not affect any Indian Sacred Sites.
6. The proposed action will not have significant cumulative impacts.
7. There is no potential for the effects to be considered highly controversial.

# RECLAMATION

*Managing Water in the West*

## **Environmental Assessment**

### **CAPTIVE PROPAGATION AND RE-INTRODUCTION OF LARGE-FLOWERED FIDDLENECK IN CONTRA COSTA AND SAN JOAQUIN COUNTIES, CALIFORNIA**



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

**July 2013**

### **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 \$248,356 from the Central Valley Project Conservation Program (CVPCP) to Vollmar Natural Lands Consulting (Vollmar) to establish self-perpetuating populations of the endangered large-flowered fiddleneck (*Amsinckia grandiflora*) (AMGR) on suitable sites within its current and historic range in Alameda, Contra Costa, and San Joaquin Counties.

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 (FONSI), 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 the endangered AMGR and to compensate for impacts to the species that have occurred as a result of the continuing operation of the Central Valley Project (CVP). The CVP has contributed to land use and species composition changes within the Central Valley and adjacent foothill grassland habitats. These changes have had an indirect impact on the species by facilitating conversion of AMGR habitats to cattle grazing and other agricultural lands, and other land uses that have caused those habitats to be lost or degraded. Since only two populations of AMGR are known to remain, it is important that additional self-sustaining populations be established, or re-established, within the range of the species.

## 1.3 Potential Resource Issues

This EA analyzes the affected environment of the Proposed Action and No Action Alternatives in order to determine potential impacts and cumulative effects to Biological Resources.

## 1.4 Required Analysis

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

#### **1.4.1 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).

#### **1.4.2 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 Lytton Rancheria approximately 26 miles west of the project location (see Appendix B).

#### **1.4.3 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.

#### **1.4.4 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.

## **Section 2     Alternatives Including the Proposed Action**

### **2.1    No Action Alternative**

Reclamation would not contribute \$248,356 from the CVPCP to Vollmar to establish self-perpetuating populations of AMGR. Vollmar would have to obtain funding from other sources to implement the project.

### **2.2    Proposed Action**

Reclamation would contribute \$248,356 from the CVPCP to Vollmar to establish self-perpetuating populations of the endangered AMGR.

Vollmar would conduct the following activities involving AMGR: (1) review literature on AMGR to prepare the propagation and reintroduction plan; (2) convene a Technical Advisory Group (TAG); (3) conduct an analysis, both remotely and in the field, of sites where the species occurs; (4) conduct site surveys and analyses of habitat suitability; (5) conduct captive propagation and reintroductions to suitable sites; (6) monitor and manage reintroduction sites; and (7) prepare interim and final reports.

Four plans would be developed before implementing the propagation and reintroduction objectives: (1) captive propagation plan; (2) site selection plan; (3) site preparation and planting plans; and (4) management and monitoring plan. These plans would be reviewed and approved by the TAG, U.S. Fish and Wildlife Service (FWS), Reclamation, and California Department of Fish and Wildlife (CDFW). As many as ten reintroduction sites would be approved by the TAG, FWS, Reclamation, and CDFW.

Captive propagation, using AMGR seeds held at the University of California (UC) Berkeley Botanical Garden, would be conducted at the Botanical Garden, and/or at a site in Sonoma County managed by Planet Horticulture. Surveys and reintroductions would be conducted within the species' current and historic range in eastern Contra Costa County, western San Joaquin County, and perhaps eastern Alameda County.

The AMGR Recovery Plan (FWS 1997) designated three geographic or recovery areas for the species within its historic range: Northern (north of Mount Diablo); Central (south of Mount Diablo and north of Interstate 580); and Southern (south of Interstate 580) (see Figure 1). Vollmar would identify ten AMGR re-introduction sites based on the field surveys and analyses conducted under the above activities 1-3 and would attempt to establish at least some of these sites within all three of the above recovery areas for the species. Reintroduction sites include the Black Diamond Mines Regional Preserve (Northern Recovery Area), the Contra Costa Water

District and/or Tres Vaqueros Repower project site (Central Recovery Area), and the Connolly Ranch (Southern Recovery Area).

Each of the ten proposed planting sites would be carefully prepared for planting. This includes, but is not limited to, scraping the surface of the ground at each area where an AMGR seed or plug will be planted, removing nonnative annual grasses and forbs as needed to reduce competition without using herbicides, installing netting above the plantings to prevent birds from damaging the plantings, and providing water for the plantings as needed. Vollmar would develop an erosion control plan if soil conditions require it.

A minimum of approximately 40,000 AMGR seeds and plugs would be planted in 2013 and 2014, with more of the plantings occurring in the first year. It is currently estimated that a re-introduction plot may range in size from 20 x 20 feet, to a few acres.

Vollmar would conduct four years of monitoring and low intensity management following seeding/planting of the reintroduction site. Since the sites are intended to be self-sustaining, Vollmar would not conduct intensive management of the site, such as for rodent control. Because there are only two sites where AMGR is known to occur, any increase in numbers of plants or stable new sites would be viewed as favorable. Establishment of at least one new site with over 1,000 plants would be considered a moderate success, and each successful additional site with a re-established population would be seen as significant. If the AMGR plantings at all 10 reintroduction sites survive, it would be considered a significant recovery action by the FWS. Unused seeds remaining after project completion would supplement the existing AMGR seedbank at UC Berkeley or another suitable seed bank, helping ensure that there would be genetically diverse AMGR plant material available for use in future re-establishment efforts.

## 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      **Biological Resources**

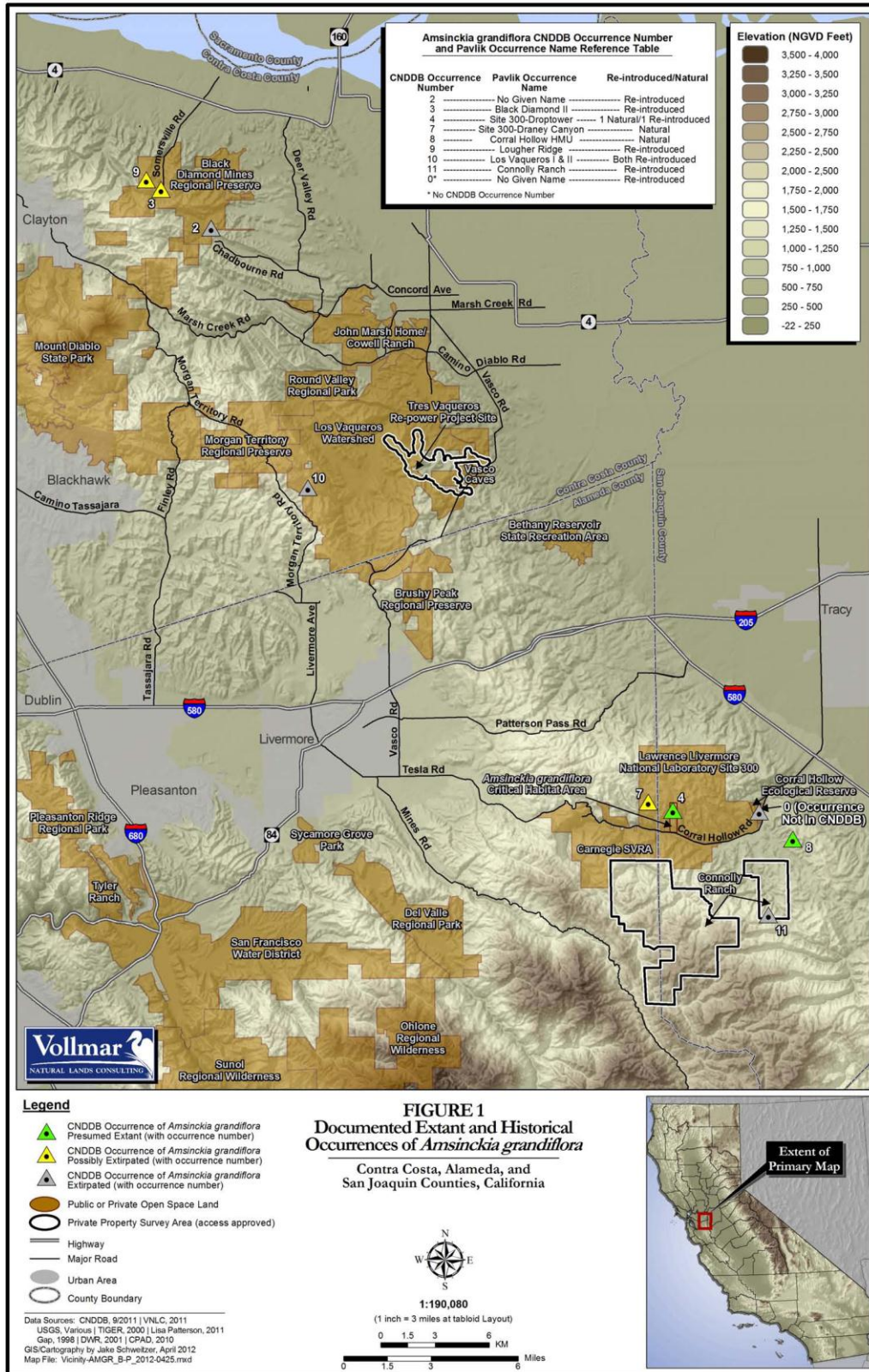
#### 3.1.1      **Affected Environment**

AMGR is a federally and state listed endangered annual herbaceous plant in the borage family. The species was federally listed in 1985 and state listed in 1982. Critical habitat was designated in 2000, consisting of 160 acres surrounding the Droptower population at Lawrence Livermore National Laboratory (LLNL) (Figure 1).

The species is known to exist at two locations, both in western San Joaquin County: the ‘Droptower’ population at LLNL Site 300 (consisting of one natural and one re-introduced subpopulation); and the ‘Carnegie Canyon’ population (natural) (Figure 1). There are six additional historical natural and re-introduced occurrences where the species is considered extirpated or possibly extirpated (i.e., has not been observed in at least several years) (Figure 1). In addition, specimens from several additional occurrences have been submitted to the U.C. Berkeley Jepson Herbarium, but these occurrences have not been verified and their collection locations are generally unspecific (Kersh pers. comm.).

Based on studies of natural populations, AMGR occupies a relatively narrow ecological niche within grassland habitats. This niche has been characterized as steep, primarily north-facing slopes with clay or clay-loam soils, often supporting at least a moderate cover of perennial bunchgrasses (Pavlik 1988). The documented existing and historical occurrences are distributed throughout its presumed historical range within eastern Contra Costa and Alameda Counties, and western San Joaquin County, at elevations ranging from 275 to 550 meters (CNDDDB 2011). This habitat has been largely supplanted by introduced annual grassland (Barbour and Major 1988).

The proposed planting sites in the recovery areas are likely to consist of introduced annual grassland on steep slopes disturbed by cattle grazing. Competition from nonnative annual grasses and forbs is considered the primary threat to AMGR. Annual grass species such as wild oats (*Avena* spp.) and bromes (*Bromus* spp.), which germinate early and grow rapidly, are particularly problematic, as they tend to crowd out and shade AMGR plantings during early growth stages (Espeland et al. 2005) when they are most vulnerable to competition from other plants.



### **3.1.2 Environmental Consequences**

#### **3.1.2.1 No Action**

If Reclamation does not provide funding for the Proposed Action, Vollmar would have to find other sources of funding for the project. If funding were not obtained, Vollmar would not be able to establish additional populations of AMGR.

#### **3.1.2.2 Proposed Action**

The Proposed Action would initiate the establishment of one or more self-perpetuating populations of AMGR on suitable lands within its current and historic range. This could reduce the potential for extinction of the AMGR. The discovery of any new AMGR populations through the project may contribute additional genetic diversity to the species' seed bank.

Potential adverse impacts include depletion of the AMGR seed banks or over collection of seeds from the wild populations which could impact the viability of the occurrence or the species by removal of individuals from small populations.

Reclamation has coordinated with the FWS to address these potential impacts. Based on FWS recommendations, Vollmar would implement the following measures to avoid or minimize adverse effects to AMGR that may occur through the project:

1. Any biologist that collects voucher specimens, seed, or genetic material from listed plants must have all applicable State permits prior to the commencement of collection activities.
2. No more than 5 percent of the projected annual seed production of any wild individual listed plant or discrete population of plants will be collected.
3. At least 15 days prior to the start of plant or seed collection activities, a written proposal will be provided to FWS (email is acceptable). Collection activities will not commence until approval from FWS has been obtained. The proposal will be provided to the FWS Coast Bay/Forest Foothills Division Chief and/or the Fish and Wildlife Biologist listed in the FWS' concurrence letter (Appendix C). The proposal will include:
  - a) A statement of whether the collection of seeds, vouchers, or genetic material will be from an existing population, newly discovered population, distinct occurrence, or a rediscovered occurrence.
  - b) An estimate of the number of individuals present at the occurrence and the aerial extent of the occurrence (in acres or square feet) of the area where material is to be collected. Should the submission of this information prior to plant or seed collection activities be infeasible due to site access restrictions, this information may be provided after the plant or seed collection is completed.
  - c) A statement describing how the collection of plant materials is consistent with the principles of the Center for Plant Conservation (CPC), in particular the CPC requirement

that the collection shall not impact the viability of the occurrence or the species by removal of individuals from small populations.

## 3.2 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, FWS, and CDFW. During the period of December 2011 through March 2012, members of the Technical Team reviewed and scored proposals submitted to Reclamation for consideration for funding. *Captive Propagation and Re-Introduction of Large-Flowered Fiddleneck in Contra Costa and San Joaquin Counties* proposal ranked in the top tier of proposals and was selected for funding following evaluation by the Team. On March 29, 2012, Reclamation and FWS management approved the proposal for funding

### Endangered Species Act.

On October 29, 2012, Reclamation sent a memorandum to FWS requesting concurrence in Reclamation's determination that the captive propagation and re-introduction of large-flowered fiddleneck may affect, but is not likely to adversely affect AMGR. FWS concurred with this request on April 8, 2013 (see Appendix C).

## Section 5      References

Barbour, M.G. and Jack Major. 1988. Terrestrial Vegetation of California. California Native Plant Society, Special Publication Number 9.

California Natural Diversity Data Base (CNDDB). 2011. California Department of Fish and Game, Natural Heritage Division. September, 2011 Updates.

Espeland, Erin K., Carlsen, Tina M., and Don MacQueen. 2005. Fire and Dynamics of Granivory on a California Grassland Forb. *Biodiversity and Conservation* 14: 267-280.

Kersh, Kim. 2011. Personal Communication. Phone conversation with Jake Schweitzer, December 5. Mr. Kersh is the Collections Manager at the U.C. Berkeley Jepson Herbarium.

Pavlik, B. M. 1988. Nutlet Production and Germination of AMGR, I. Measurements from Cultivated Populations, California Department of Fish and Game, Endangered Plant Program, Sacramento, Calif.

U.S. Fish and Wildlife Service. 1997. Large-flowered Fiddleneck (AMGR) Recovery Plan. Portland, Oregon.

# **Appendix A**

## **Cultural Resources Compliance**



KLEINSMITH, DOUGLAS &lt;dkleinsmith@usbr.gov&gt;

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**CVPCP Funding for Large-Flowered Fiddleneck Propagation**

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**Perry, Laureen** <lperry@usbr.gov>  
To: DOUGLAS KLEINSMITH <dkleinsmith@usbr.gov>  
Cc: Anastasia Leigh <ALEigh@usbr.gov>

Tue, Jul 30, 2013 at 3:15 PM

Project: Captive Propagation and Re-Introduction of Large-Flowered Fiddleneck (CR Tracking #12-SCAO-185)  
Location: Alameda, Contra Costa, and San Joaquin Counties

I reviewed the Proposed Action to provide Central Valley Project Conservation Program funding to Vollmar Natural Lands Consulting to establish self-perpetuating populations of the endangered large-flowered fiddleneck on suitable sites within its current and historic range in Alameda, Contra Costa, and San Joaquin Counties. This action is needed to recover populations of the endangered large-flowered fiddleneck and to compensate for impacts to that species that have occurred as a result of the continuing operation of the Central Valley Project. Activities include: preparation of a propagation plan; analysis of sites where the species occurs; conducting site surveys and analyses of habitat suitability; conducting captive propagation and re-introductions to suitable sites; monitoring and managing sites; and reporting. Ten re-introduction sites will be identified and prepared for planting. A minimum of 40,000 seeds and plugs would be planted in 2013 and 2014. The proposed planting sites are likely to consist of introduced annual grassland on steep slopes disturbed by cattle grazing. Minimal ground disturbance is proposed within previously disturbed settings.

This proposed Federal action is the type of undertaking that has no potential to cause effects to historic properties, pursuant to 36 CFR 800.3(a)(1). Reclamation has no further obligation under the National Historic Preservation Act for the proposed action (36 CFR 800.3(a)(1)).

Laureen Perry

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Laureen M. Perry, MA, RPA  
Regional Archaeologist  
Bureau of Reclamation  
Mid-Pacific Regional Office  
2800 Cottage Way  
Sacramento, CA 95825  
916-978-6028  
916-335-3816 (cell)

## **Appendix B**

### **Indian Trust Assets Compliance**

**From:** Rivera, Patricia L  
**Sent:** Thursday, July 12, 2012 6:44 AM  
**To:** Kleinsmith, Douglas H  
**Subject:** RE: ITA request for Captive Propagation and Re-Introduction Of Large-Flowered Fiddleneck In Contra Costa And San Joaquin Counties, California

Doug,

I reviewed the Proposed Action to provide \$248,356 from the Central Valley Project Conservation Program to Vollmar Natural Lands Consulting (Vollmar) to establish self-perpetuating populations of the endangered large-flowered fiddleneck (*Amsinckia grandiflora*) on suitable sites within its current and historic range in Contra Costa and San Joaquin Counties.

The Proposed Action does not have a potential to affect Indian Trust Assets. The nearest ITA is Lytton Rancheria approximately 26 miles west of the project location.

Patricia Rivera  
Native American Affairs Program Manager  
Bureau of Reclamation  
Mid-Pacific Region  
Sacramento, CA 95825

## **Appendix C Endangered Species Concurrence Memo**



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825-1846



In Reply Refer To:  
08ESMF00-2013-I-0100

APR 08 2013

### Memorandum

To: Anastasia T. Leigh, Regional Environmental Officer, U.S. Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, California (Attn: Daniel Strait)

From:  Eric Tattersall, Deputy Assistant Field Supervisor, U.S. Fish and Wildlife Service, Sacramento, California 

Subject: Informal Endangered Species Consultation on Central Valley Project Conservation Program and Central Valley Project Improvement Act Habitat Restoration Program (CVPCP/HRP) funding for the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California (Reclamation file No. MP-152, ENV-7.00)

This memorandum is in response to the October 19, 2012 memorandum from the U.S. Bureau of Reclamation (Reclamation) to the U.S. Fish and Wildlife Service (Service) requesting informal consultation on the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California. Your request was received by us on October 29, 2012. At issue are the effects of this action on the endangered large-flowered fiddleneck (*Amsinckia grandiflora*), endangered Tiburon paintbrush (*Castilleja affinis* ssp. *neglecta*), and endangered Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*). This response is provided in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This document was prepared based on: (1) information provided in Reclamation's October 19, 2012, letter; (2) the December 8, 2011, grant proposal entitled *Research facilitating recovery of the endangered serpentine endemic Tiburon paintbrush (Castilleja affinis ssp. neglecta) at Coyote Ridge in southern Santa Clara County* prepared by Creekside Center for Earth Observation; (3) the December, 2011, grant proposal entitled *Captive propagation and re-introduction of large-flowered fiddleneck (Amsinckia grandiflora) in Contra Costa and San Joaquin Counties, California* prepared by Vollmar Natural Lands Consulting; (4) the December 6, 2011, grant proposal entitled *Reintroduction of the Metcalf Canyon Jewelflower (Streptanthus albidus ssp. albidus) at Tulare Hill in southern Santa Clara County* prepared by Dr. Justen Whittall, Santa Clara University; and (5) other information available to the Service.

The proposed federal action involves providing grant funding through the CVPCP/HRP to 1) survey for, propagate, and reintroduce large-flowered fiddleneck in Alameda, Contra Costa, and San Joaquin counties; 2) to propagate and reintroduce Metcalf Canyon jewelflower on Tulare Hill and supplement an existing population at Motorcycle County Park in Santa Clara county; and 3) to test whether seeding or outplanting Tiburon paintbrush with potential parasitic hosts will facilitate survival and fecundity in the lab and at sites in Santa Clara county.

The following conservation measures will be implemented to avoid adverse effects to listed plants:

1. Any biologists that will collect voucher specimens, collect seed, or collect genetic material from listed plants must have all applicable State permits prior to the commencement of collection activities.
2. No more than 5 percent of the projected annual seed production of any wild individual plant or discrete wild population of plants will be collected.
3. At least 15 days prior to initiation start of plant or seed collection activities, a written proposal will be provided to the Service (email is acceptable). Collection activities will not commence until approval from the Service has been obtained. The proposal will be provided to the Coast Bay/Forest Foothills Division Chief and/or the Fish and Wildlife Biologist listed at the conclusion of the this letter. The proposal will include:
  - a) A statement of whether the collection of seeds, vouchers, or genetic material will be from an existing population, newly discovered population, distinct occurrence or a rediscovered occurrence.
  - b) An estimate of the number of individuals present at the occurrence and the aerial extent of the occurrence (in acres or square feet) of the area where material is to be collected. Should the submission of this information prior to plant or seed collection activities be infeasible due to site access restrictions, this information may be provided after the plant or seed collection is completed.
  - c) A statement describing how the collection will comply with the principles of the Center for Plant Conservation (CPC), in particular the CPC requirement that the collection shall not impact the viability of the occurrence or the species by removal of individuals from small populations.

Based on the limited collection of specimens and seeds described in the three grant proposals, implementation of the proposed conservation measures, and the beneficial effects to listed plant species that are anticipated to result from the proposed projects, the Service concurs that the proposed Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, if implemented as proposed, may affect, but is not likely to adversely affect the large-flowered fiddleneck, the Tiburon paintbrush, or the Metcalf Canyon jewelflower.

Supervisory Biologist

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This letter does not provide authorization for the incidental take of any listed species. Unless new information reveals effects of the proposed action that may affect listed or proposed species in a manner or to an extent not considered, or a new species or critical habitat is designated or proposed that may be affected by the proposed action, no further action pursuant to the Endangered Species Act of 1973, as amended, is necessary.

If you have any questions regarding our response on the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California, please contact Stephanie Jentsch, Fish and Wildlife Biologist, ([Stephanie\\_Jentsch@fws.gov](mailto:Stephanie_Jentsch@fws.gov)) or Ryan Olah, Coast Bay/Forest Foothills Division Chief, ([Ryan\\_Olah@fws.gov](mailto:Ryan_Olah@fws.gov)) at (916) 414-6600.

cc:

Craig Weightman, California Department of Fish and Wildlife, Napa, CA