

# RECLAMATION

*Managing Water in the West*

## **Environmental Assessment**

### **Temporary Transfer of Water from the City of Redding's Sacramento River Settlement Contract to the City of Redding's Central Valley Project Water Service Contract Mid-Pacific Region**

**EA-15-02-NCAO**



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

**January 2015**

## **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.

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# Section 1 Introduction

## 1.1 Background

The City of Redding (City) has two distinct water contracts with the Bureau of Reclamation, which have identical service areas. One is a Sacramento River Settlement Contract (Contract # 14-06-200-2871A-R-1), hereinafter referred to as the Settlement Contract, that provides for up to 17,850 acre-feet (af) of base supply and 3,150 af of Central Valley Project (Project) water. The other is the Project Water service contact (Contract #14-06-200-5272A-LTR1), hereafter referred to as the Buckeye Contract, that provides up to 6,140 af of Project Water.

In conformance with Article 3(e) of the City's Settlement Contract, the City has and continues to request Reclamations permission to transfer Project Water from the Settlement Contract to the Buckeye Contract to meet potential short falls in water to allow continued service to areas served by the Buckeye Contract.

## 1.2 Need for the Proposal

The Proposed Action is to allow the City to transfer Project Water from the Settlement Contract to the Buckeye Contract to meet and maintain municipal and industrial (M&I) needs of the City. These transfers are needed periodically when environmental (e.g., high turbidity) or infrastructure-related issues (inadequate filtration capacity) and/or the City's Foothills Water Treatment Plant (FWTP) are anticipated to not provide adequate volume to meet service needs for the areas served by the Buckeye contract. Scheduled or emergency maintenance of equipment at the Foothill Water Treatment Plant may require taking the treatment plant off-line for the duration of the maintenance or repair activities. The potential lack of water imposed by such limitations necessitate transferring available Project Water from the Settlement Contract to the Buckeye Service Contract to meet the City's needs until the FWTP is placed back in service. These requests typically occur at the end of the contract water year when Project Water resources of the Buckeye Contract are limited, turbidity levels in the Sacramento River tend to be higher from winter storms, and the Settlement Contract has unused Project Water for transfer.

## 1.3 Scope

This EA is being prepared to examine the impacts of approving an annual transfer of up to 2,000 af of Project Water from the Settlement Contract to the Buckeye Contract until February 28, 2023. The transfer would involve use of an existing point of diversion on the Spring Creek Conduit. Service areas considered in this action are located entirely within the county of Shasta (See Attachment A).

## 1.4 Resources of Potential Concern

This EA analyzes the affected environment of the Proposed Action and No Action Alternatives in order to determine the potential direct and indirect and cumulative effects to the following resources:

- Water Resources
- Hydropower Generation
- Biological Resources

## Section 2 Alternatives Including Proposed Action

### 2.1 No Action Alternative

The No Action Alternative would consist of Reclamation not approving the transfer of Project Water from the Settlement Contract to the Buckeye Contract.

### 2.2 Proposed Action Alternative

Reclamation would approve an annual transfer of up to 2,000 af of Project Water from the Settlement Contract to the Buckeye Contract until February 28, 2023. The transferred Project Water would be delivered to the City's Buckeye Contract with Whiskeytown Reservoir as its source. Project Water would serve the Buckeye Contract service area through an existing point of diversion on the Spring Creek Conduit which is located above the Spring Creek and Keswick powerplants. This water would be used to meet existing M&I needs typically of the winter months. The transferred water would become part of the Buckeye Contract with an appropriate reduction in Project Water from the remaining Settlement Contract amount of the present contract water year. Transfer water would not interfere with CVP operations. Existing facilities would be used for transfer water and no new ground disturbing activities are anticipated. Only minor adjustments to distribution quantities of each existing contract would be reflected in the annual accounting.

## 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 Alternative.

## 3.1 Surface Water Resources

### 3.1.1 Affected Environment

The City of Redding is located in Shasta County, at the northern end of the Sacramento Valley, and is the largest urban center between Sacramento and the Oregon border. The City has a population of approximately 90,000 people. Redding is a regional hub for medical services, state and Federal Government, transportation, and retail services. The City's corporate boundary encompasses approximately 60-square miles, with relatively low density development in many older areas of the City.

Water resources of the City come from groundwater resources and two surface water supply contracts with Reclamation. Local groundwater wells are located in the southern portion of the service area and provide about 25% of current annual supply. The service area for the Buckeye Contract includes most of the northwest area of the City (See Attachment A). There are three points of diversion under the Buckeye Contract: (1) the Spring Creek Conduit, which conveys water from Whiskeytown Lake to the Spring Creek Power Plant; (2) the Sacramento River near Dieselhorst Bridge; and (3) the Toyon Pipeline, which conveys water from Shasta Dam to the City of Shasta Lake. The Settlement Contract service area includes the remainder of the City, excluding small areas served by nearby water districts (Bella Vista Water District and Centerville Community Services District). The City's FWTP, in particular, is important for the distribution of water to these other service areas. The City's Pump House #1, which is located approximately 2.9 miles below Keswick Dam and near the Dieselhorst Bridge (see Attachment A), is of primary importance as a source of water to the FWTP.

### 3.1.2 Environmental Consequences

#### No Action

Under the No Action alternative there could be a minor and insignificant reduction of flow from Keswick Dam due to lack of need at the FWTP,. Correspondingly, the City would either have to rely on another water resource, or declare a water shortage in the Buckeye Contract service area, with attendant public safety and welfare problems of reduced firefighting capability and water rationing. While additional groundwater pumping could be used to meet the needs of a portion of southwest Redding, additional infrastructure improvements would be required to meet the needs of all service area customers (John Wendele Pers. Communication 1/8/2015). As a consequence, there would likely be times during the year (typically the winter month) when a portion of the Buckeye Contract service area would not receive adequate water to meet their needs.

#### Proposed Action

Under the Proposed Action, the transfer of water from the Settlement Contract account to the Buckeye Service contract would ensure adequate water for the areas served by this contract. Additionally, this water would be made available through gravity flow in existing infrastructure.

The transfer of up to 2,000 af of Project Water from Whiskeytown Reservoir would only require minor operational changes. The quantity and timing of delivery would occur at a rate lower than treatment facility capacity (less than 33 cfs) resulting in a relatively slow demand over time. This slow delivery results in only minor operational changes required at the Spring Creek Conduit to meet this need. Additionally, the basin drainage area above Whiskeytown Dam is large enough (203 square miles) to provide more than enough natural runoff to offset this need alone, so that there would not be any anticipated need to increase diversions from Carr Power House from the Trinity River basin. Furthermore, the volume of water contemplated is very small relative to the winter-time storage of Whiskeytown (i.e., 210 thousand acre-feet), and within basin natural runoff, so that any water elevation change that could occur in Whiskeytown Reservoir would be insignificant. For similar reasons, the reduction in flow of the Sacramento River between Keswick and the FWTP would be insignificant because it would be small relative to the mainstem flow and would be temporary in nature. Therefore, there would be no adverse impacts from the Proposed Action to surface water resources.

## 3.2 Hydropower Generation

### 3.2.1 Affected Environment

Water from Whiskeytown Lake is diverted through the Spring Creek Tunnel, a conduit roughly 2.4 miles (3.9 km) long and 18.5 feet (5.6 m) in diameter. This water serves multiple purposes including water for Redding's Buckeye Contract as well as hydropower generation at Spring Creek Power Plant and Keswick Power house.

In recognition that water transfers from the City of Redding Settlement Contract to the Buckeye Contract would be required in certain years of reduced Project Water allocation, the US Department of Energy's Western Area Power Administration (WAPA) and the City signed Amendment 2 to Contract 92-SAO-18001 that established a means of compensating WAPA for foregone generation at the Spring Creek and Keswick powerplants. This contract remains valid through 2024.

### 3.2.2 Environmental Consequences

#### No Action

Under the No Action Alternative, there could be a minor reduction in flow, if any, from Keswick (that would likely be Shasta Reservoir water) and correspondingly only a minor or no reduction in hydropower generation anticipated at these locations. Water deliveries through spring tunnel and associated power plants would continue as planned.

#### Proposed Action

The City's proposed transfer of up to 2,000 acre-feet (AF) of Project Water would change the delivery point from downstream of Reclamation's Spring Creek and Keswick generators to an alternate upstream delivery point known as the Spring Creek Conduit that serves the Buckeye Contract. As a consequence, the transfer water diverted at this different location would result in a loss in hydropower generation at Spring Creek and Keswick Power plants. This loss of power production would affect the cost recovery

borne by other Project customers. As a consequence, the City would be required to replace the value of the energy associated with the foregone generation created by a transfer, consistent with their Contract with WAPA.

### 3.3 Biological Resources

#### 3.3.1 Affected Environment

The river is kept artificially cold in the vicinity of Redding year round as mitigation for the construction of Shasta Dam, which blocked salmon access to historic spawning grounds. Three salmonid species are listed under the Endangered Species Act as threatened or endangered, the winter and spring run Chinook salmon, and the steelhead trout. These species only persist in the river system below Keswick Dam. Reclamation has identified these as the only species of potential concern relative to this action.

#### 3.3.2 Environmental Consequences

##### No Action

No significant changes in the amount or timing of water deliveries to the Sacramento River below Keswick Dam would occur. As a result, the No Action Alternative would not affect biological resources or endangered species.

##### Proposed Action

As with the No Action Alternative, under the Proposed Action no significant change would occur to the quantity or quality of water resources in areas affecting listed species or their habitat. Use of the different point of diversion is located upstream of impassable barriers to listed fish species. In addition, no impacts to listed fish species are anticipated because the action would not result in any significant impact to the flow of the Sacramento River between Keswick Dam and the FWTP and the transfers would occur during the winter when water temperature-related issues are not a concern.. Similarly, there would be no additional diversions through Judge Francis Carr Powerhouse from the Trinity River basin so that natural resources of that basin would not be affected.

### 3.4 Cumulative Impacts

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.

The Proposed Action could be implemented in successive years due to extended drought that may result in reduced Project Water allocations to M&I. As a result, the overall effect of the Proposed Action would be to maintain current water supply demands for areas served by both water contracts that would otherwise not be available in the absence



of approval. In doing so, the Proposed Action serves to eliminate cumulative adverse impacts that could otherwise occur in the No Action Alternative.

There would be no cumulative impacts to the biological resources in either the No Action or Proposed Action alternatives. Water would be conveyed periodically and temporarily in existing infrastructure and at a time of the year that cumulative impacts would not occur.

The Proposed Action is not anticipated to have any cumulative impacts on hydroelectric generation because the action would be periodic and temporary in nature and represents a relatively small quantity of water. In addition, there are no other known significant changes to any hydroelectric generation that could be influenced by this action. Furthermore, a contract between the City and WAPA is in place to compensate WAPA when energy production is altered.

### **3.5 Resources Eliminated from Further Analysis**

Reclamation analyzed the affected environment of the Proposed Action and No Action Alternatives and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

#### **Indian Trust Assets**

The closest Indian Trust Asset is the Redding Rancheria immediately south of the City, and hence across town from the area of proposed water use. Implementation of the Proposed Action would not affect the City's ability to service the Rancheria or its casino, gas station, and hotel properties (see Attachment B)

#### **Indian Sacred Sites**

Reclamation has determined that there would be no impacts to Indian sacred sites as a result of the Proposed Action because it would not affect the physical integrity of sacred sites or limit access to and ceremonial use of Indian sacred sites.

#### **Cultural Resources**

Under the Proposed Action alternative, the water transfer would only use existing conveyance infrastructure and does not change land use but does maintain water use by the City of Redding. In doing so, the Proposed Action would merely allow continued service to existing residential developments. Cultural resources would not be affected by the Proposed Action (See Attachment C).

#### **Environmental Justice**

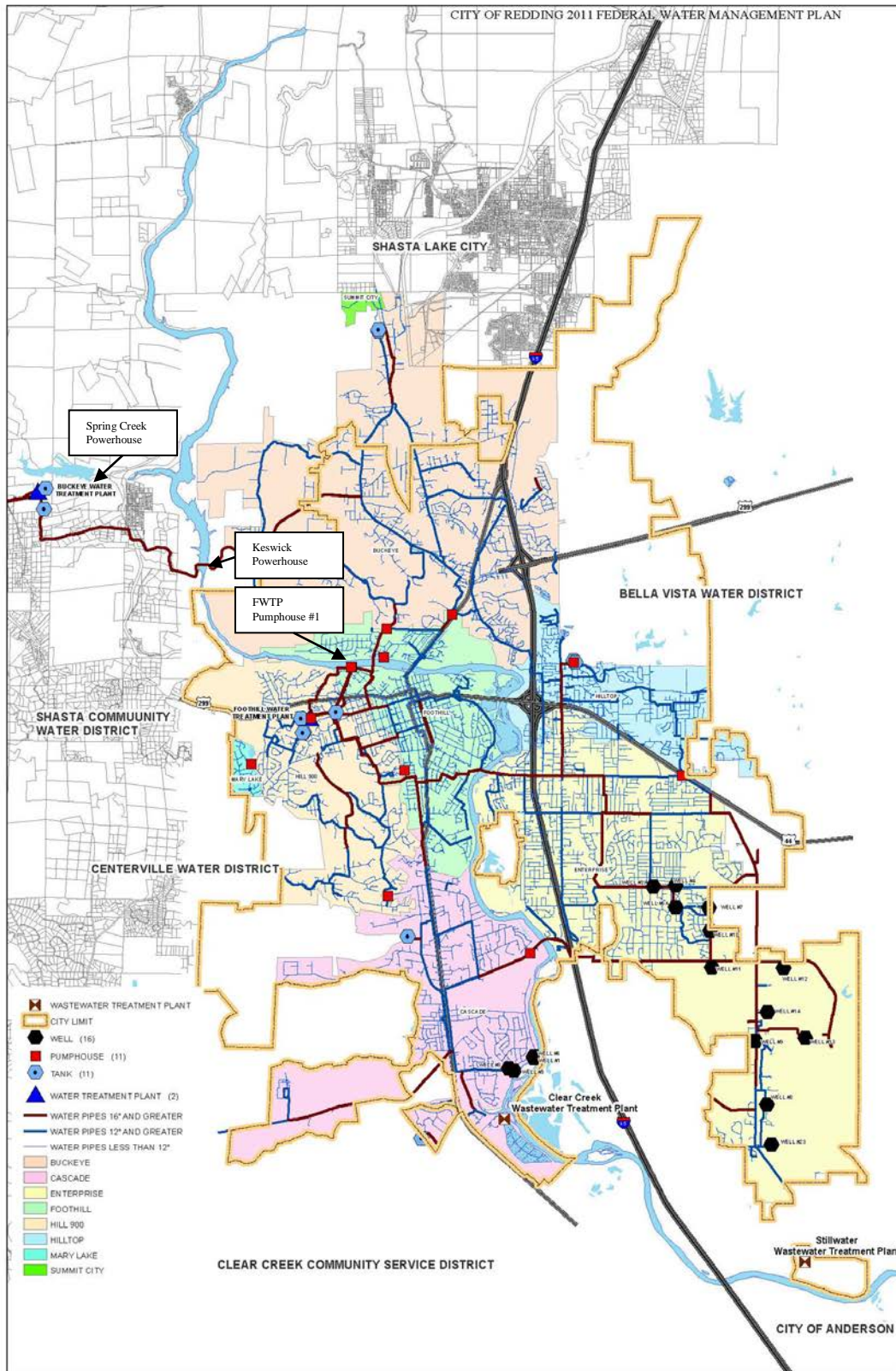
The No Action Alternative could disproportionately affect minority and low-income populations if their distribution was uneven within the water service boundaries served by the Buckeye Contract. In contrast, implementation of the Proposed Action would help maintain water service to areas served by the Buckeye Contract.

## **Section 4      Consultation and Coordination**

Given the lack of effect on listed species, no consultation with the U.S. Fish and Wildlife Service and NOAA Fisheries was required.

## **Section 5      Personal Communication**

John Wendele, Water Utility Manager, City of Redding. January 8, 2015



**Attachment B. ITA Concurrence email.**



Zedonis, Paul <pzedonis@usbr.gov>

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**ITA**

1 message

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**STEVENSON, RICHARD** <rstevenson@usbr.gov>  
To: Paul Zedonis <pzedonis@usbr.gov>

Tue, Jan 13, 2015 at 1:45 PM

Paul,  
I reviewed the proposed action to approve the City of Redding's (City) request to transfer of up to 2000 acre-feet (af) of water from the City's settlement contract service area to the City's water service contracts service area during January and February of 2015. The purpose of the transfer is to help alleviate the shortfall in the City's Buckeye Contract allocation that serves the municipal and industrial needs of northwest Redding.

The proposed actin does not have a potential to affect Indian Trust Assets.

—

**Richard M. Stevenson**  
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**Attachment C. Cultural Resources concurrence of no effect**

**CULTURAL RESOURCES COMPLIANCE  
Mid-Pacific Region  
Division of Environmental Affairs  
Cultural Resources Branch (MP-153)**

MP-153 Tracking Number: 15-NCAO-061

Project Name: Temporary Transfer of Water from the City of Redding's Sacramento River Settlement Contract to the City of Redding's Central Valley Project Water Service Contract

NEPA Document: EA-15-02-NCAO

MP-153 Cultural Resources Reviewer: Joanne Goodsell

Date: January 13, 2015

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Reclamation proposes to approve the transfer of up to 2000 acre feet of Central Valley Project (CVP) water from the City of Redding's Sacramento River Settlement Contract (Settlement Contract) to the City of Redding's CVP Service Contract (Buckeye Contract) for a 10-year period ending February 29, 2023. The Settlement Contract and Buckeye Contract have identical service areas. The proposed transfer would involve use of an existing point of diversion on the Spring Creek Conduit and would require no new ground disturbance.

Reclamation has determined that the proposed action would have no impacts to cultural resources and is an undertaking that has no potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). At this time, Reclamation has no further obligations under Section 106 of the National Historic Preservation Act (54 U.S.C. § 300101 *et seq.*) related to the proposed action.

This document communicates the completion of the NHPA Section 106 review process for this undertaking. If there are any changes to the proposed action prior to implementation, additional Section 106 review would be required. Please retain a copy of this document with the administrative record for this action.