

RECLAMATION

Managing Water in the West

Environmental Assessment

Shasta River Water Association WaterSMART Grant: Irrigation Water Measurement and Billing Accounting System

Siskiyou County, California

2016-EA-001



U.S Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Klamath Basin Area Office

October 2016

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities

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

Contents

Section 1: Introduction and Background Information	5
1.1 Introduction	5
1.2 Need for the Proposal	6
Section 2: Proposed Action and Alternatives	6
2.1 No Action Alternative	6
2.2 Proposed Action	6
2.3 Proposed Tasks.....	7
2.3.1 Phase 1	7
2.3.2 Phase 2	8
2.3.3 Phase 3	9
Section 3: Affected Environment & Environmental Consequences.....	11
3.1 Resources Not Analyzed in Detail	11
3.1.1 Indian Trust Assets	11
3.1.2 Indian Sacred Sites.....	11
3.1.3 Environmental Justice.....	11
3.1.4 Climate Change and Greenhouse Gases	11
3.1.5 Noise	12
3.1.6 Socioeconomics	12
3.2 Resources Analyzed in Detail	12
3.2.1 Water Resources	12
3.2.1.1 Affected Environment.....	12
3.2.1.2 Environmental Consequences.....	13
3.2.1.3 Cumulative Impacts	13
3.2.2 Biological Resources	13
3.2.2.1 Affected Environment.....	13
3.2.2.2 Environmental Consequences.....	15
3.2.2.3 Cumulative Impacts	15
3.2.3 Cultural Resources	15
3.2.3.1 Affected Environment	16
3.2.3.2 Environmental Consequences	16

3.2.3.3	Cumulative Impacts.....	17
3.2.4	Air Quality	17
3.2.4.1	Affected Environment	17
3.2.4.2	Environmental Consequences	17
3.2.4.3	Cumulative Impacts.....	18
Section 4	Environmental Commitments	18
Section 5	Consultation and Coordination	20
5.1	Public Review Period	20
5.2	Persons or Agencies Consulted During Development of EA	20
Section 6	References.....	21
Section 7	Appendices.....	22
Appendx A:	Photographs of the Proposed Project Sites	22
Appendx B:	Reclamation Indian Trust Assets Coordination and Consultation.....	23
Appendx C:	Reclamation Cultural Resource Coordination and Consultation.....	26

Figures

Figure 1:	Site Locations	10
-----------	----------------------	----

Tables

Table 1:	Endangered, Threatened, Proposed, and Candidate Species that May Occur in Sisikiyou County, California.....	14
----------	--	----

Section 1: Introduction and Background Information

1.1 Introduction

This Environmental Assessment (EA) has been prepared to examine the potential direct, indirect, and cumulative impacts to the affected environment as a result of the Bureau of Reclamation's Klamath Basin Area Office (KBAO) WaterSMART provision of grant funding for Shasta River Water Association's (SRWA) Irrigation Water Measurement and Billing Accounting System Project.

The EA has been prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), and the Department of the Interior regulations for the Implementation of the NEPA (43 CFR Part 46). If there are no significant environmental impacts identified as a result of the analyses, a Finding of No Significant Impacts (FONSI) can be signed to complete the NEPA compliance process.

Background

SRWA is a small irrigation association located in central Siskiyou County, California approximately three miles east of the town of Yreka. The SRWA has been in operation since 1912, and it covers roughly 3400 acres that serves approximately 110 agricultural irrigators and one lumber mill. The SRWA delivers irrigation flows (42 cubic feet per second) to a mosaic of small ranches and farms between the towns of Grenada and Montague. In the existing delivery system, flows are pumped from a state of the art pump station on the Shasta River with two pipelines delivering water upslope to contour lateral delivery ditches flowing north and south along a hill to the west of the river. The system wraps around the nearby hills and spreads out across the flats between the towns of Grenada, Yreka, and Montague. Flood irrigation directly from the main ditches is common, and most fields are wild flood or border flood irrigated on a time or shares rotation.

Periodic drought puts pressure on the SRWA to conserve flows by more effective irrigation. Current Endangered Species Act (ESA) concerns for coho salmon also present opportunities to assist with instream flow contributions while avoiding water supply fluctuations and shortfalls. The combined factors of land use pressures, agricultural economics, and increased environmental regulations have made improved water efficiencies imperative for the sustainability of the Association. These factors contribute to a continued focus on sharing scarce water resources with natural resources. This proposed project is needed to assist with efforts to protect the cold water contributions in the upper river reaches by reducing warm tail-water inputs and moderating irrigation demand in the lower reaches and thus result in better management of California's water resources.

The project includes upgrades to the irrigation delivery infrastructure, installation of new electronic

equipment to control and measure flows more accurately, and implementation of a new conservation billing system. The proposed project would be accomplished by installing new concrete structures for water control with head gates within the SRWA owned canal system. Water from the pump station on the Shasta River would be conveyed through these new structures to the irrigation users within the Association. The project is expected to result in a savings of 1,560 acre-feet annually, and conserved water will stay in the Shasta River for instream benefits and downstream users.

1.2 Need for the Proposal

The purpose of this undertaking is to address both the inaccurate flow measuring and monitoring equipment along SRWA's irrigation ditch system and the Association's antiquated billing practices. The project is needed to achieve the goals of the WaterSMART Program by conserving water in the Shasta River, which, in turn, provides benefit to the anadromous fishes in the River and greater watershed by improving water flow and quality.

Section 2: Proposed Action and Alternatives

This EA considers two possible actions including the No Action Alternative and the Proposed Action. The No Action Alternative reflects conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment as a result of implementing the Proposed Action.

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide \$253,000.00 cost share under the WaterSMART grant program to SRWA for completing the proposed project as designed. Improvements of the irrigation infrastructure and implementation of a new conservation billing system would not be feasible. As a result, SRWA's current delivery system would remain inefficient, and no conserved water would be available to the Shasta River for instream benefits and downstream users. Because no water conservation nor benefits to aquatic habitats would be realized by the No Action Alternative, it does not meet the purpose and need of the project; however it will continue to be evaluated throughout this EA.

2.2 Proposed Action

Under the Proposed Action Alternative, Reclamation would provide \$253,000.00 cost share to SRWA to execute its Irrigation Water Measurement and Billing Accounting System Project. The project would consist of installing new pre-cast concrete structures with head gates and/or installing new electronic flow measuring equipment at eleven specific sites within the SRWA owned canal system (see location map in Figure 1) and implementing a new conservation billing system. The proposed construction activities, including mobilization of equipment and materials, would commence October 2016 and

conclude March 2018 as weather allows. No construction is planned during the irrigation season that extends from April 1 to October 1. The cumulative area of potential effect for all eleven sites equals approximately 0.85 acres, all of which is located within the pre-disturbed context of the existing SRWA irrigation system and adjacent agricultural fields. The Proposed Action Alternative will be further evaluated throughout this EA.

2.3 Proposed Tasks

This construction and installation of equipment for this project is divided into three separate phases. Each phase has been assigned the same timeline to allow for prioritization of construction based on weather, funding and other considerations such as SRWA preference and match funding that they will contribute. A general depiction of construction and amount of disturbance that is expected to occur at each construction site can be described as follows:

- Access to, and staging of materials at, each of the eleven construction locations will be via existing roads, ditch banks, and overland driving in pastures along the ditch system.
- Earth work is defined as excavation to a depth of 12 inches below the canal bottom; the amount excavated would be less than 10 cubic yards per site.
- Construction will be performed in areas that have been consistently disturbed by annual ditch maintenance.
- Minor earth disturbances during construction caused by transport of equipment and materials and parking of vehicles are defined as a depth of 4 inches depending on soil moisture.
- Construction debris will be hauled off-site for disposal at an appropriate facility. Any remaining, suitable material (i.e., soil) may be spread at the sites and graded during the clean-up process, and the areas will be seeded or mulched as necessary to prevent soil erosion.

2.3.1 Phase 1

Phase 1 includes sites 1, 2, 3, and 4.

2.3.1.1 Site 1

Site 1 will involve the installation of electronics (SonTek IQ, Flow Display, Cellular modem, mast, enclosure, solar panel, charge controller, battery, conduit and wiring) in an existing pipe. Labor and limited equipment (one or two pick-up trucks) will be needed at the site to accomplish all the work. Staging for this work will be within 100 feet of the site, on dry ground above the ditch bank. No earth disturbing activities are planned beyond a fence around the new equipment.

2.3.1.2 Sites 2, 3, and 4

Sites 2, 3, and 4 will each have new pre-cast concrete water control structures installed, after clearing and clean-up of the immediate area around the existing canal and structure. This preparation work may require the use of a dump truck, backhoe, pick-up trucks and manual labor. Construction of new boxes will require some excavation and concrete work to install the new structures. Installation of electronics (SonTek IQ, Flow Display, Cellular modem, mast, enclosure, solar panel, charge controller, battery, conduit and wiring) at the three sites will require minor earth disturbance beyond a fence around the

new equipment and a mounting pole. Staging for this construction will be done as near to each site as possible, on dry flat ground within 100 feet of the site, and above the ditch bank where possible.

Note that sites 3 and 4 are labeled as one point in Figure 1 due to the extreme proximity of the sites.

2.3.1.3 Phase 1 Timeline

- Mobilize and move equipment to sites: October 2016
- Materials moved to site: November 2016
- Construction at site, new boxes delivered and poured at sites: November 2016 through March 2017 (weather dependent)
- Equipment installation and testing: February 2017 to March 2017

2.3.2 Phase 2

Phase 2 includes sites 5, 6, 7, and 8.

2.3.2.1 Site 7

Site 7 will require minor earth disturbance during the installation of the electronics and the hook up to the existing equipment, a fence, and a pole for the solar panel. Any staging of equipment will be done from a pick-up truck parked on the ditch bank, upslope or on dry ground or on the nearby road (Scala Lane).

2.3.2.2 Sites 5, 6, and 8

Sites 5, 6, and 8 will have new pre-cast concrete structures and electronic equipment installed after clearing and clean-up of the immediate area around the existing canal and structure. Staging of equipment and materials at each site will be done to minimize damage to irrigated pastures and field ditches. Each site will have a designated staging area on a ditch bank or other flat spot. This preparation work may require the use of dump truck, backhoe, pick-up truck, and manual labor. Construction of new boxes will require some excavation and concrete work to install the new structures. Installation of electronics (SonTek IQ, Flow Display, Cellular modem, mast, enclosure, solar panel, charge controller, battery, conduit and wiring) at the three sites will require minor earth disturbance to build a fence around the new equipment and a mounting pole.

Note that there are currently two possible locations identified for Site 6 (6a and 6b as identified in Figure 1); the specific location for construction will be determined as project design continues. This environmental analysis incorporates both locations.

2.3.2.3 Phase 2 Timeline

- Mobilize and move equipment to sites: October 2016
- Materials moved to site: November 2016
- Construction at site, new boxes delivered and poured at sites: November 2016 through March 2017 (weather dependent)
- Equipment installation and testing: February 2017 to March 2017

2.3.3 Phase 3

Phase 3 includes sites 10, 11, 13, and 14 (13 and 14 comprise the Lower Ditch Split which is identified in Figure 1 as one point).

2.3.3.1 Sites 10 and 11

Sites 10 and 11 will have new pre-cast concrete water structures installed after clearing and clean-up of the immediate area around the existing canal and structure. This preparation work may require the use of a dump truck, manual labor, and equipment (i.e. a backhoe). Construction of these new boxes will require some excavation and concrete work to install the new structures. Installation of electronic equipment (SonTek IQ, Flow Display, Cellular modem, mast, enclosure, solar panel, charge controller, battery, conduit and wiring) at the two sites will require little to no additional earth disturbance beyond a fence around the new equipment and a mounting pole. The staging area for site 10 will be on the north side of the ditch on the access road on the adjacent mill property. Materials for site 11 will be staged on Collier Lane.

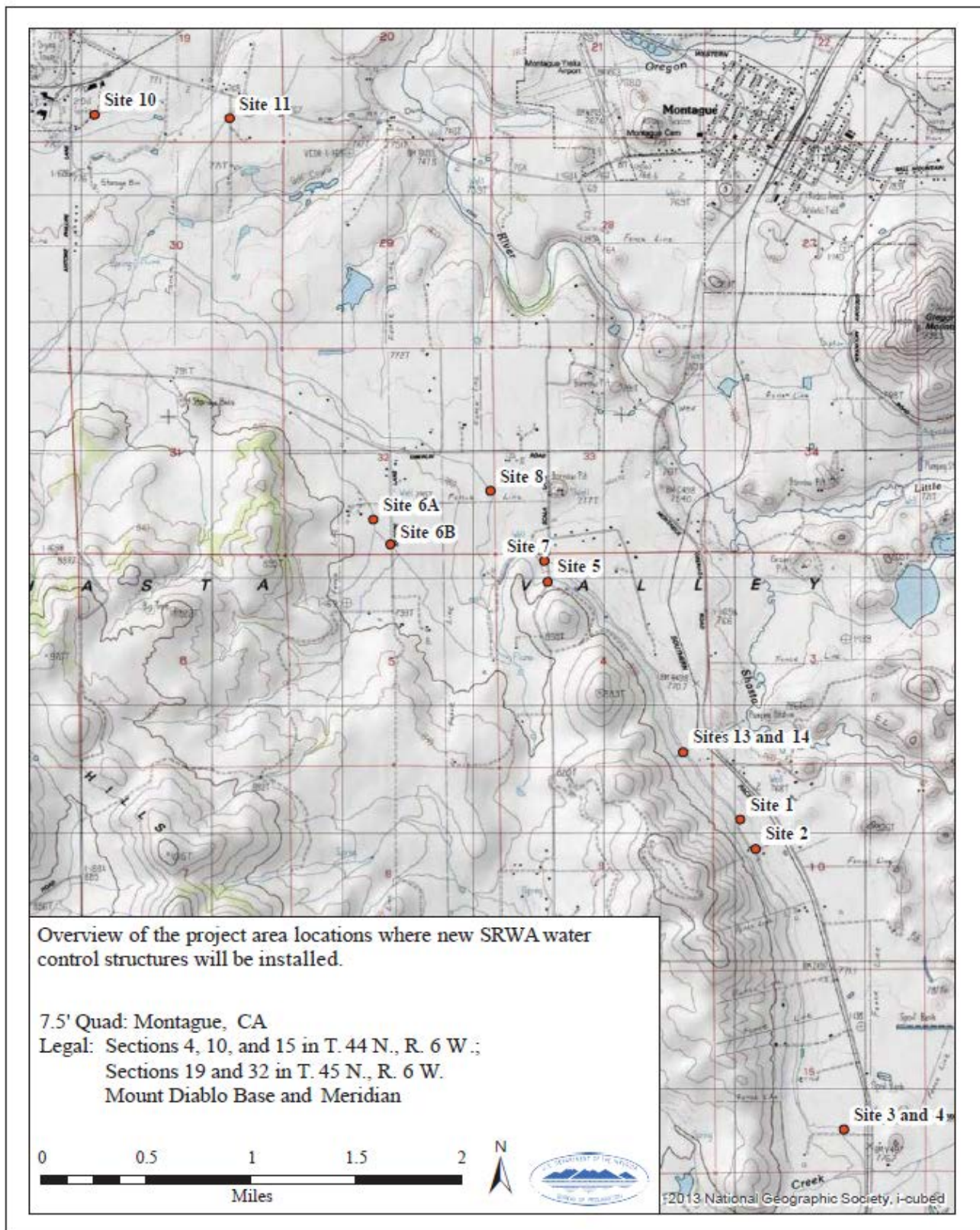
2.3.3.2 Sites 13 and 14 (Lower Ditch Split)

The lower ditch split site will have two new pre-cast concrete boxes installed with two sluice gates and electronics consisting of SonTek IQ, Flow Display, Cellular modem, mast, enclosure, solar panel, charge controller, battery, conduit and wiring. The work will entail clearing and clean-up of the immediate area around the canal area near the existing structures. This preparation work may require the use of an excavator, a dump truck, manual labor, and equipment (i.e. backhoe). Construction of the two new structures will require excavation and concrete work at the site. Installation of electronics to work the Watch Technology sluice gates assembly will require minor earth disturbance. There will be additional minor earth disturbance during the building of a fence and a mounting pole for the solar panel. Staging for this work will be on the barnyard area of the adjacent private property or as near to the site as possible.

2.3.3.3 Phase 3 Timeline

- Mobilize and move equipment to sites: October 2017
- Materials moved to site: November 2017
- Construction at site, new boxes delivered and poured at sites: November 2017 through March 2018 (weather dependent)
- Equipment installation and testing: February 2018 to March 2018

Figure 1: Site Locations.



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

Impacts to the following resources were considered and found to be minor or absent. Brief explanations for their elimination from further consideration are provided below.

3.1.1 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. As indicated in Appendix B, there are no Indian reservations, Rancherias or allotments in the project area, the nearest ITA is a public domain allotment approximately 2.42 miles west of the nearest project site. On August 26, 2016, Reclamation's KBAO ITA Coordinator, Kristen Hiatt, stated that "based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands, [and] it is reasonable to assume that the proposed action will not have any impacts on ITAs."

3.1.2 Indian Sacred Sites

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 affect and/or prohibit access to and ceremonial use of Indian sacred sites.

3.1.3 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. Reclamation has not identified adverse human health or environmental effects on any population as a result of implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area.

3.1.4 Climate Change and Greenhouse Gases

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change (e.g., changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil

fuels) (EPA 2016). Climate change implies a significant change having important economic, environmental, and social effects in a climatic condition such as temperature or precipitation. Climate change is generally attributed directly or indirectly to human activity that alters the composition of the global atmosphere, additive to natural climate variability observed over comparable time periods.

There would be no impacts contributing to climate change or greenhouse gases (GHG) under the No Action Alternative. Under the Proposed Action Alternative, Reclamation would provide \$253,000.00 cost share to SRWA to execute its Irrigation Water Measurement and Billing Accounting System Project that would provide a more efficient water delivery system. Potentially minor and temporary impacts to climate change or GHG could result from the use of backhoes, excavators, dump trucks, and other motorized equipment for intermediate periods over the course of construction. Any impacts to climate change or increases in GHG would be expected to be insignificant due to the size and scope of the project, small change from current conditions, duration of use that is limited to the project construction, and compliance with pollution related laws and regulations. Furthermore, SRWA would comply with applicable Federal, state, or local air pollution laws and regulations.

3.1.5 Noise

The proposed project area is typically impacted by the noise of farming machinery, railroad, and highway traffic, thus the additional temporary noise associated with construction is not expected to be a significant impact. Noise impacts would be minimized by reducing construction activities to 7:00 A.M. to 7:00 P.M., Monday through Sunday. Work hours outside this period would need approval in advance by Reclamation or SRWA. Upon approval, SRWA would be required to contact adjacent landowners prior to work commencing to inform them of the potential change in work hours and the anticipated level of temporary noise escalations during specific construction activities. There would be no long-term increases to the ambient noise levels from the implementation of the Proposed Action.

3.1.6 Socioeconomics

The Proposed Action would create a short term demand for construction related products and services that would support local vendors and may create short term employment opportunities. In general, the project would have an insignificant impact on socioeconomic conditions in the project region.

3.2 Resources Analyzed in Detail

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential impacts and cumulative effects to the following environmental resources.

3.2.1 Water Resources

3.2.1.1 Affected Environment

The water resources potentially affected would be surface water originating from the Shasta River and water that is conveyed through the SRWA ditch system for irrigation purposes within the boundaries of SRWA.

3.2.1.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. SRWA would not upgrade its irrigation delivery infrastructure, install new electronic flow measuring equipment, nor employ a conservation billing system. As a result, SRWA's current delivery system would remain inefficient with an estimated annual loss of 1,560 acre-feet, and no conserved water would be available to the Shasta River for instream benefits and downstream users.

Proposed Action

Under the Proposed Action Alternative, Reclamation would provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. The project would consist of installing new concrete structures with head gates and/or installing new electronic flow measuring equipment at eleven specific sites along the SRWA owned canal system and implementing a new conservation billing system. Upon completion of the project, water quantity and water measuring practices would be improved. SRWA would experience an estimated water savings of 1,560 acre-feet annually, and conserved water would remain in the Shasta River for instream benefits and downstream users which meets the intent of the project.

Construction activities associated with the Proposed Action do include minimal disturbances to the ground surface from earthwork that includes installation of concrete structures and headgates within the SRWA ditch system. Materials used during construction could contain chemicals that are potentially harmful to water resources; additionally, oil and other petroleum products used to maintain and operate construction equipment could pose potential threats to water quality. Impacts to water quality are expected to be minor, however, as the project activities would occur during the non-irrigation season when no water is present within the ditch system. A small amount of turbidity within the ditches may occur during periods of rain in which rainwater would accumulate and pass through the ditch system. Standard management practices would be included in the proposed project to avoid or minimize the release of sediments, pollutants, and chemicals into the environment during construction.

3.2.1.3 Cumulative Impacts

Although the Proposed Action would possibly have minor negative effects on water quality, the resulting impacts would be temporary and localized. Therefore, it has been determined that the Proposed Action would have no significant cumulative impacts to water quality. Water quantity would be improved upon project completion, and comparable projects from nearby irrigation districts would supplement this goal.

3.2.2 Biological Resources

3.2.2.1 Affected Environment

A list of federally registered endangered, threatened, proposed, and candidate species potentially occurring within the project area is shown in Table 1. The listing was generated by accessing and querying the U.S. Fish and Wildlife Service database at <http://www.fws.gov/klamathfallsfwo/es/es.html>.

Table 1: Endangered, Threatened, Proposed, and Candidate Species that May Occur in Siskiyou County, California.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
 Klamath Falls Fish and Wildlife Office
 1936 California Avenue, Klamath Falls, Oregon 97601
 (541) 885-8481 FAX (541)885-7837
kfalls@fws.gov



LISTED, PROPOSED, AND CANDIDATE SPECIES THAT MAY OCCUR IN SISKIYOU COUNTY, CALIFORNIA

Status: **Endangered**

Phylum	Common Name	Scientific Name	Critical Habitat
Fish	Lost River sucker	<i>Deltistes luxatus</i>	Designated
Fish	Shortnose sucker	<i>Chasmistes brevirostris</i>	Designated
Mammal	Gray wolf	<i>Canis lupus</i>	
Invertebrate	Shasta crayfish	<i>Pacifistacus fortis</i>	
Plant	Yreka phlox	<i>Phlox hirsute</i>	
Plant	Greene's tuctoria	<i>Tuctoria greenei</i>	Designated
Plant	Gentner's fritillary	<i>Fritillaria gentneri</i>	Designated

Status: **Threatened**

Phylum	Common Name	Scientific Name	Critical Habitat
Bird	Northern spotted owl	<i>Strix occidentalis caurina</i>	Designated
Bird	Yellow-billed cuckoo (Western DPS)	<i>Coccyzus americanus occidentalis</i>	Proposed
Amphibian	California red-legged frog	<i>Rana aurora draytonii</i>	Designated
Amphibian	Oregon spotted frog	<i>Rana pretiosa</i>	
Plant	Slender Orcutt grass	<i>Orcuttia tenuis</i>	Designated

Status: **Proposed**

Phylum	Common Name	Scientific Name	Critical Habitat
Mammal	Wolverine	<i>Gulo gulo luscus</i>	

Status: **Candidate**

Phylum	Common Name	Scientific Name
Plant	Whitebark Pine	<i>Pinus albicaulis</i>

Updated July 18, 2016

3.2.2.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. SRWA would not upgrade its irrigation facilities, install new electronic flow measuring equipment, nor employ a conservation billing system; thus, no conserved water would be made available to the Shasta River for instream benefit. Current conditions would remain the same as the existing condition if no action were taken. There would be no impact to wildlife, including threatened and endangered species, or their critical habitat.

Proposed Action

Under the Proposed Action Alternative, Reclamation would provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. The project would consist of installing new concrete structures with head gates and/or installing new electronic flow measuring equipment at eleven specific sites along the SRWA owned canal system and implementing a new conservation billing system. As a result, SRWA would experience an estimated water savings of 1,560 acre-feet annually, and conserved water would remain in the Shasta River for instream benefits.

The potential impacts to all species listed in Table 1 as a result of the construction activities of the Proposed Action Alternative have been considered, and it has been determined that the Proposed Action Alternative would have no effect on these species or their habitats as construction would occur in the previously disturbed context of SRWA's irrigation delivery system during the non-irrigation system when the ditches are dry. A positive effect upon wildlife, particularly aquatic species, would be realized upon project completion as conserved water would remain within the Shasta River and would improve habitat for fish. This decision is based on analysis of current information on the potential effects of the action, known existing populations, and habitat requirements for the species.

3.2.2.3 Cumulative Impacts

Construction activities associated with the Proposed Action would be temporary and localized and, therefore, would not contribute to cumulative impacts to the resource. Long term impacts resulting from the Proposed Action would include improved habitat for wildlife within the Shasta River and adjacent riparian environments. Furthermore, similar proposed activities from neighboring irrigation districts would augment the goals of this Proposed Action for the resource.

3.2.3 Cultural Resources

"Cultural Resources" is a broad term that applies to prehistoric, historic, and architectural resources, as well as to traditional cultural properties. Cultural resources can include both archaeological sites, which contain evidence of past human use, and the built environment, which consists of structures such as buildings, roadways, dams, and canals. The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation that outlines the Federal government's responsibilities related to cultural resources. Section 106 of the NHPA requires the Federal government to take into consideration the effects of its undertakings on historic properties. Historic properties are, by definition, cultural resources that are included in, or eligible for inclusion in, the National Register of Historic Places (National Register). The evaluation criteria for National Register eligibility are outlined at 36 CFR Part 60.4.

Compliance with Section 106 of the NHPA follows a process outlined at 36 CFR Part 800. This process includes determining the area of potential effects (APE) for an undertaking, consulting with Indian tribes and other interested parties, identifying if historic properties are present within the APE, assessing the effects the undertaking will have on historic properties, and resolving any adverse effects to historic properties before an undertaking is implemented. The Section 106 process also requires consultation with the State Historic Preservation Officer (SHPO), or Tribal Historic Preservation Officer (THPO) where applicable, to seek concurrence with the finding of effect for the undertaking.

3.2.3.1 Affected Environment

The proposed project is located within SRWA's right-of-way in areas that have been previously disturbed by the construction of SRWA's main water conveyances and appurtenant facilities. The discontinuous project areas of potential effects (APE) include a cumulative total area of approximately 0.85 acres.

As part of the Section 106 process, efforts to identify significant cultural properties in the proposed project APE were conducted by William Rich Associates (WRA) and Reclamation, the former working on behalf of SRWA. In a cultural resources inventory conducted by WRA, no archaeological resources were identified. The SRWA irrigation system was determined to be a historic property, eligible for listing in the National Register. Reclamation identified and sent correspondence to Indian Tribes and Native American organizations in the area who might attach religious and cultural significance to historic properties within the APE, but no formal responses have been received at this time. Reclamation consulted with the SHPO and received confirmation that the SRWA irrigation system is eligible for listing in the National Register of Historic Place and concurrence on a finding of no adverse effect to historic properties pursuant to 36 CFR §800.5(b) (see Appendix C).

3.2.3.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. SRWA would not upgrade its irrigation delivery infrastructure, install new electronic flow measuring equipment, nor implement a conservation billing system. There would be no change to the existing facilities, and, consequently, there would be no change in impacts to cultural resources from current conditions under the No Action Alternative.

Proposed Action

Under the Proposed Action Alternative, Reclamation would release grant funding to SRWA to implement the Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program to improve the irrigation delivery system. The use of federal funds would constitute an undertaking as defined by 36 CFR §800.16(y), and the Proposed Action is a type of activity that has the potential to cause effects on historic properties under 36 CFR §800.3(a). After consultation with the SHPO, concurrence on a finding of no adverse effect to historic properties pursuant to 36 CFR §800.5(b) was determined. Should cultural resources be identified during construction, the project shall be halted, and Reclamation shall be contacted to discuss any such discovery and determine how to proceed.

3.2.3.3 Cumulative Impacts

The Proposed Action would result in no adverse effects to cultural resources, and therefore, would not contribute to cumulative impacts to cultural resources.

3.2.4 Air Quality

Section 176 (c) of the Clean Air Act (CAA) (42 U.S.C. 7506 (c)) requires that any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken.

On November 30, 1993, the U.S. Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all Federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed Federal action in a non-attainment or maintenance area if the total direct and indirect emissions of the relevant criteria pollutant(s) and precursor pollutant(s) caused by the Proposed Action equal or exceed certain threshold amounts, thus requiring the Federal agency to make a determination of general conformity.

3.2.4.1 Affected Environment

The Proposed Action lies within the Shasta Valley in Siskiyou County where NAAQS and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). The CAAQS has also set standards for hydrogen sulfide (H₂S), sulfates, and visibility reducing particles.

Areas are classified under the CAA as either "attainment" or "non-attainment" areas for each criteria pollutant based on whether or not the NAAQS have been achieved. Attainment relative to California standards is determined by the California Air Resources Board (CARB). After querying the CARB database at <https://www.arb.ca.gov/desig/adm/adm.htm>, it was determined that Siskiyou County is currently designated as either an unclassified or an attainment area for all Federal and State recognized criteria pollutants.

3.2.4.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. SRWA would not upgrade its irrigation delivery infrastructure, install new electronic flow measuring equipment, nor employ a conservation billing system. Though no new construction would ensue, regular operation and maintenance activities of SRWA's ditch system, which would require the use of vehicles and other powered equipment, would continue to occur as in the past and perhaps increase as the facilities continue to age. As a result, a potential for increased air quality impacts over

the long term could materialize.

Proposed Action

Under the Proposed Action Alternative, Reclamation would provide funding to implement SRWA's Irrigation Water Measurement and Billing Accounting System Project through the WaterSMART program. The Proposed Action would not conflict with or obstruct the implementation of the air quality management plan of Siskiyou County. Emissions would be associated with construction but would be temporary. Post-construction activities along the ditch system (i.e., operation and maintenance) would not contribute significantly to criteria pollutant emissions relative to past operation. Standards set by the CARB and Federal agencies relating to the Proposed Action would be required and incorporated at applicable design and approval stages; this may include, but may not be limited to, the application of water as necessary on and around construction sites to reduce fugitive emissions associated with construction activities.

3.2.4.3 Cumulative Impacts

Emissions associated with the construction of the Proposed Action would have temporary minor effects on air quality. Considering long-term operation, air quality impacts would be reduced as the need for ditch maintenance actions on new/improved facilities would be decreased. Therefore, the Proposed Action would have no significant cumulative impact on air quality.

Section 4 Environmental Commitments

The following environmental commitments would be implemented before, during, and after construction to prevent and reduce the impacts of the Proposed Action.

- **Environmental Permitting** – SRWA would be responsible for complying with all environmental requirements identified in this EA and any other applicable Federal, State, and local permits.
- **Water Resources** – SRWA would perform all work when the irrigation facilities are dewatered to avoid contributing to surface water quality impacts. Standard management practices would be included in the proposed project to avoid or minimize the release of sediments, pollutants, and chemicals into the environment during construction.
- **Cultural Resources** – In the case that any cultural resources, either surface or subsurface, are inadvertently discovered during construction, construction in the area of the inadvertent discovery will cease, and a Reclamation's Mid-Pacific Regional archaeologist would be notified. Reclamation's archaeologist would make an assessment of the resource and conduct additional consultations as required. Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land, must immediately provide telephone notification of the discovery to a Reclamation official and to Reclamation's Mid-Pacific Regional archaeologist. If applicable, Reclamation would consult under the Native American Graves Protection and Repatriation Act NAGPRA for a discovery of Native American human

remains or NAGPRA objects. Work will not resume at that location until notified by Reclamation to proceed.

- **Air Quality** – Reasonable precautions for air quality would be implemented by SRWA to control emissions during construction activities. SRWA would follow Federal and State requirements to control methods for aggregate storage pile emissions to minimize dust generation, including the watering of staging areas and unimproved access roads as necessary. All loads that have the potential of leaving the bed of the truck during transportation would be covered or watered to prevent the generation of fugitive dust.
- **Access** – Construction access and staging of materials and equipment would utilize existing improved and unimproved roads whenever possible. SRWA will coordinate with local property owners as needed if such property must be traversed to access the construction sites.
- **Disturbed Areas** - Areas disturbed during construction would be graded and reseeded to as near their pre-project condition as practicable. In an effort to reduce soil erosion, seeding and planting would occur at appropriate times with weed-free seed mixes of native plants and agricultural grasses and distributed where appropriate.
- **Noise Impacts** – Construction activities would be conducted 7:00 A.M. to 7:00 P.M., Monday through Sunday. SRWA would contact adjacent property owners approximately one week prior to commencement of construction activities in order to notify landowners of the potential noise disturbance.
- **Additional Analysis** – If the proposed action were to change significantly from the alternative described in this EA, additional environmental analyses would be undertaken as necessary.

Section 5 Consultation and Coordination

This section presents the agencies and parties that were coordinated or consulted with during development of the document.

5.1 Public Review Period

Reclamation prepared this EA to evaluate the effects of the Proposed Action Alternative, and, if after evaluation no significant effects are determined to result from the proposed action, Reclamation will draft the FONSI document. The CEQ regulations do not require that an EA be made for public review. Per 40 CFR 1501.4(e)(2), agencies, in certain limited circumstances, are required to make FONSIs available for public review if the proposed action is, or is closely similar to, one which normally requires an Environmental Impact Statement (EIS) or if the nature of the proposed action is one without precedent. As this project does not meet the criteria stated in the CFR, no public comment period was made available.

5.2 Persons or Agencies Consulted During Development of EA

- California State Historic Preservation Officer
- Ayn Perry, Shasta Valley Resource Conservation District
- Shasta River Water Association

Section 6 References

California Environmental Protection Agency – Air Resources Board. Area Designations Maps / State and National. 2016. Website: <https://www.arb.ca.gov/desig/adm/adm.htm>

Environmental Protection Agency. Climate Change – Basic Information. 2016. Website: <http://www.epa.gov/climatechange/basicinfo.html>

U.S. Fish and Wildlife Service. Request A Species List: Listed, Proposed, and Candidate Species Lists (Siskiyou County, California). 2016. Website: <http://www.fws.gov/klamathfallsfwo/es/es.html>

Section 7 Appendices

Appendix A: Photographs of the Proposed Project Sites.



Figure 2: Site 3



Figure 3: Site 7



Figure 4: Site 8



Figure 5: Site 10



Figure 6: Site 13 and 14 (Lower Ditch Split)

Appendix B: Reclamation Indian Trust Assets Coordination and Consultation.

Indian Trust Assets Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Deputy Regional Resources Manager.

Date: 8/25/16

Requested by (office/program)	Kirk Young, Natural Resource Specialist, KBAO
Fund	15XR0680A1
WBS	RY.30180006.SRWCA0E
Fund Cost Center	25320000
Region # (if other than MP)	
Project Name	Shasta River Water Association WaterSMART Grant: Irrigation Water Measurement and Billing Accounting System
CEC or EA Number	KBAO-EA-2016-001
Project Description (attach additional sheets if needed and include photos if appropriate)	<p>The Shasta River Water Association is proposing to implement improvement activities as part of its Irrigation Water Measurement and Billing Accounting System Project that is being funded through the WaterSMART Program. This project includes upgrades to the irrigation delivery infrastructure, installation of new electronic equipment to control and measure flows more accurately, and implementation of a new conservation billing system. The proposed project would be accomplished by installing new concrete structures for water control with head gates within the SRWA owned canal system. Water from the pump station on the Shasta River would be conveyed through these new structures to over 100 irrigation users within the Association. The project is expected to result in a savings of 1,560 acre-feet annually, and conserved water will stay in the Shasta River for instream benefits and downstream users.</p> <p>Refer to Exhibit B for overview map of project and Exhibit C for a continued description specific to each project site.</p>

***Project Location
(Township, Range,
Section, e.g., T12
R5E S10, or
Lat/Long cords,
DD-MM-SS or
decimal degrees).
Include map(s)**

Sections 4, 10, and 15 in Township 44N, Range 6W; Sections 19 and 32 in
Township 45N, Range 6W of Mount Diablo Meridian



Signature

KIRK YOUNG

Printed name of preparer

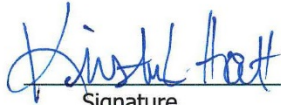
8-26-2016

Date

ITA Determination:

The closest ITA to the proposed **Shasta River Water Association Irrigation Water Measurement and Billing Accounting System Project** activity is the **Karuk Tribal Land** about **2.42** miles to the west of the nearest project site (see attached image in Exhibit A).

Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.



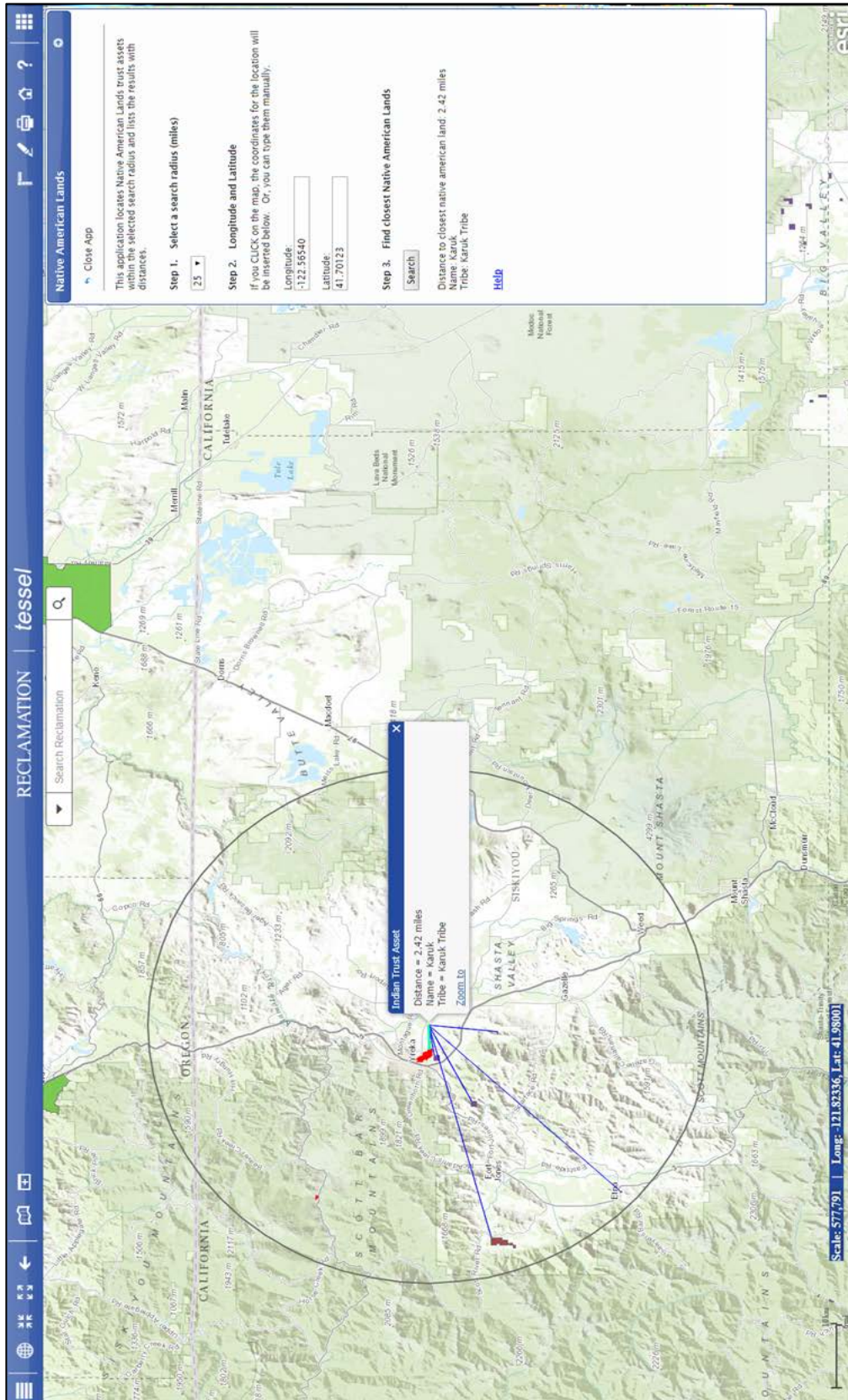
Signature

Kristen L. Matt

Printed name of approver

8/26/16

Date



Appendix C: Reclamation Cultural Resource Coordination and Consultation.

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

MP-153 Tracking Number: 15-KBAO-202

Project Name: Shasta River Water Association (SRWA) Flow Control and Water Measurement Upgrade Project

NEPA Document: KBAO-2016-EA-001

MP 153 Cultural Resources Reviewer: Lex Palmer

Date: July 8, 2016

This proposed undertaking by Reclamation is for providing partial grant funding for the proposed SRWA Flow Control and Water Measurement Upgrade on the Shasta River, Siskiyou County, California. SRWA applied for WaterSMART grant funds administered by Reclamation, to assist in funding their upgrade project. Reclamation determined that the issuance of the grant is an undertaking as defined in 36 CFR § 800.16(y) and involves the type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a).

Based on historic properties identification efforts conducted by SRWA, Reclamation consulted with, and received concurrence from, the State Historic Preservation Officer (SHPO) on a finding of no adverse effect to historic properties pursuant to 36 CFR §800.5(b). Consultation correspondence between Reclamation and the SHPO has been provided with this cultural resources compliance document for inclusion in the administrative record for this action.

This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, additional NHPA Section 106 review, including further consultation with the SHPO, may be required. Thank you for providing the opportunity to comment.

Attachment:

Letter: SHPO to Reclamation dated July 8, 2016