

Cottonwood Creek Crossing Upgrade Project

Klamath Basin Restoration Program Grant # 07FG200133 - Northern California Resource Center

Klamath Project Mid-Pacific Region

Environmental Assessment



EA No.: KBAO-EA-11-007



U.S. Department of the Interior Bureau of Reclamation

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 related resources in an environmentally and economically sound manner in the interest of the American public.

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Chapter 1 Introduction and Background Information

1.1 Introduction

The Bureau of Reclamation proposes to provide Klamath Basin Restoration Program (KBRP) grant funding to the Northern California Resource Center (NCRC) to upgrade a stream crossing in Cottonwood Creek (see Figure 1), a tributary to the Klamath River.

The goal of the KBRP is to provide funding assistance for the protection of fish and wildlife and their habitat affected by the Klamath Reclamation Project. The projects funded under KBRP focus on the protection and improvement of species listed under the Endangered Species Act (ESA) that are affected by the Klamath Reclamation Project and to protect and/or improve conditions for those species. The ESA-listed species directly affected by the Klamath Reclamation Project include: threatened coho salmon (*Onchorhynchus kisutch*), and endangered shortnose sucker (*Chasmistes brevirostris*) and Lost River sucker (*Delistes luxatus*).

This Environmental Assessment (EA) includes a discussion of the purpose and need for the proposed action, alternatives, environmental consequences of the alternatives, and a listing of agencies and persons consulted (40 CFR 1508.9). The EA was prepared to satisfy the procedural requirements of the National Environmental Policy Act (NEPA) (P.L. 91-190, as amended) and to determine if an Environmental Impact Statement or Finding of No Significant Impact should be prepared.

1.2 Purpose and Need

The purpose of the proposed action is to provide funding to NCRC to replace an existing low water ford with a pre-constructed single span bridge. The replacement of the ford is needed to remove a flow mediated fish barrier that prevents coho salmon, chinook salmon, and steelhead from migrating to areas upstream where additional habitat improvements have been performed including sediment reduction and fish screening of diversions on private and public lands.

1.3 Background

The Cottonwood Creek Crossing Upgrade Project (Project) is proposed by the NCRC who will perform the proposed activities under agreement with R Ranch. Cottonwood Creek is a tributary to the Lower Klamath River in northwestern California. Project implementation has been funded wholly by Reclamation's Klamath Basin Restoration Program.



Cottonwood Creek Fish Passage Project

Figure 1. Map showing proposed project location.

Coho salmon in the Klamath Basin are part of the Southern Oregon/Northern California Coasts Evolutionary Significant Unit (SONCC ESU) which were listed as threatened under the Endangered Species Act in 1997. Data regarding the fate of juvenile Coho rearing in mainstem Klamath River habitats is limited (Soto et al. 2008; Hillemeier et al. 2010). It is thought that conditions in the Klamath River become unsuitable for juvenile Coho and that few Coho rely solely on mainstem habitats for survival.

Cottonwood Creek is part of the Klamath River Hydrologic Area, and Hornbrook Hydrologic Sub-Area (HSA) as defined by CDFG in their California coho salmon recovery strategy (2004). The Hornbrook HSA is located between the confluence of the Shasta River and the confluence of Little Bogus Creek.

CDFG (2004) indicates there are many problems facing coho salmon including a major impoundment (i.e. the existing collapsed crossing site) on Cottonwood Creek and summer diversions that dry some reaches. In addition, spawning gravels especially in the lower reaches of Cottonwood Creek were largely removed when Interstate 5 was constructed (CDFG 2004).

Coho salmon are known to be present in Cottonwood Creek. The proposed action addresses a flow mediated fish barrier and has the potential to:

- Allow unrestricted anadromous fish (Chinook, coho, Steelhead) migration past the Project site to areas upstream where additional habitat exists and where ongoing stream restoration has been taking place over the past 10 years.
- Eliminate current negative impacts to the stream due to foot, equestrian, and ATV traffic which continue to utilize this collapsed crossing point.

Chapter 2 Proposed Action and Alternatives

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide funding to NCRC for the crossing upgrade in Cottonwood Creek. If no action was taken, the current dilapidated concrete ford would continue to be used for crossing Cottonwood Creek and the flow mediated fish barrier would persist. Further, taking no action would not meet the purpose and need for the proposed project.

2.2 Proposed Action

The proposed action would include Reclamation providing KBRP funding to upgrade the stream crossing in Cottonwood Creek. The project is located approximately 1 mile north of Hornbrook,

California on property adjacent to and including the Cottonwood Creek channel, owned and managed by the R Ranch. Currently, the R Ranch is managed as a private recreational area and is not open to the general public. The entire footprint of the project covers less than ¹/₄ acre. The project would consist of multiple activities necessary to complete the crossing upgrade.

The main ground disturbance components of the Project include the construction of a bridge abutment on each side of the stream, which would be just outside Cottonwood Creek's bank full width, and the removal of the existing collapsed concrete ford which is approximately 50 feet long and 8 feet wide. No equipment would enter into the wetted channel of Cottonwood Creek to remove the collapsed concrete barrier, as it would be excavated and lifted out of the stream using the extended arm of an excavator, operating from both the stream bank and the concrete ford. The concrete remnants would then be disposed of offsite and upslope from any floodplain area. The new bridge is pre-fabricated (see Figure 2) and would be placed on the abutments.



Figure 2. Photograph of the span bridge proposed to replace existing concrete ford.

The Project includes equipment staging, construction of two bridge abutments, placement of bridge on the abutments, removal of the existing concrete low flow ford from the Cottonwood Creek channel, and finish work/cleanup. The Project would be implemented during times of low flow, preferably September 1 through October 15. However, work may be extended based on weather conditions and National Marine Fisheries Service (NMFS) approval. The anticipated time to complete each phase of the Project is shown in Table 1.

Project Phase	Estimated Completion Time	
Equipment staging	1 day	
Construction of two abutments 2 weeks		
Bridge placement	1 day	
Removal of concrete barrier	1 day	
Finish work and cleanup	2 days	

Table 1. Anticipated	time expected to	o complete each	Project phase.
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Equipment Staging

The staging area would be confined to a flat grass/dirt surface area on river right that has been previously disturbed by vehicle use. This staging area is located next to the project site and is set back approximately 100ft. from stream edge. Silt fencing and hay bales would be placed along both sides of the Cottonwood Creek channel as far away from the wetted channel as possible, to ensure that any sediment or contaminants resulting from Project activities would be intercepted before entering Cottonwood Creek. No vegetation would be removed for equipment staging areas, and no streamside vegetation providing effective canopy shade on either side of the channel would be disturbed by Project staging. Staging areas would be used for vehicle parking, servicing, storage of tools and supplies, and storage of hazardous material containment equipment. Refueling of equipment would be limited to the staging area.

The following equipment may be on site and used during various phases of the Project:

- Backhoe/excavator/loader (abutment construction, bridge placement, and concrete ford removal)
- Small track dozer (D4 or smaller; abutment construction)
- Dump truck (5-yard typical; abutment construction)
- Air compressor/jackhammer (abutment construction)
- Concrete delivery trucks and concrete pump trucks (abutment construction)

Channel Protection Measures

On the east and west side of the Cottonwood Creek channel, silt fencing and hay bales would be placed as far as possible from the wetted channel of Cottonwood Creek for a linear distance of 30 feet adjacent to both abutment locations. Disturbance and/or removal of vegetation would not exceed the minimum necessary to complete operations, and is expected to consist of approximately 30 linear feet of vegetation on either side of Cottonwood Creek. The main vegetation component at the project site is willow and several low stature broadleaved trees. It is expected that, if cut off at the root collar at the start of Project operations, willows that have their tops removed will re-grow within one growing season. Other broadleaved trees that impede Project work will be pruned as needed, but will be retained in place.

Abutment/Approach Construction

Channel protection measures would be in place prior to construction of the abutments and approaches. Abutments would be excavated, formed, and concrete would be poured into the temporary forms and allowed to set. All work would be accomplished according to the engineered plans.

The abutments would be located outside of the wetted channel and above the normal bank full width for Cottonwood Creek. Complete studies and engineering designs (SHN Engineering) were completed (see Appendix A) to establish bridge site, stream cross section survey and analysis information, scour and erosion information and topographic information.

Bridge Assembly and Placement

The bridge structure is single span, pre-constructed, and would be used for foot, equestrian, and ATV use. The bridge placement/assembly would not touch the wetted channel at any time and would be set with heavy equipment staged on the stream channel banks outside of the wetted channel.

Removal of Existing Concrete Low Water Crossing Fish Barrier

Minimal excavation and no stream entry would be required to remove the existing concrete low flow ford/barrier. Working from the stream bank and on the ford itself, the excavator would lift the collapsed sections of the ford out of the stream, and dispose of the concrete waste at an appropriate, hydrologically disconnected site. Ford removal would occur after the new bridge has been placed and completed.

Finish Work and Cleanup

Finish work would consist of the following activities:

- Cleaning up all construction debris including any rock or debris that accumulates behind the channel protection fences and hay bales
- Removal of equipment, construction materials and signage
- Final inspection of all work

Finish work and cleanup of the project site would occur immediately post-Project. All excess spoils/waste would be removed from the work area and would be disposed of in a legal manner The project area would be returned to as close to pre project conditions as practicable.

Mitigation Measures Incorporated into the Proposed Action

- Ford removal would temporarily cease if the removal process causes a plume of turbidity above background levels. The temporary cessation will allow any plumes of turbidity that form to dissipate back to background levels before ford removal resumes (CDFG 2010).
- Project should be accomplished in a manner which prevents excessive sediment being deposited downstream.
- Project should be accomplished during times of low flow, September 1 through October15. These timing restrictions are to minimize effects to Coho salmon. These timeframes are established windows for instream work when Coho salmon are not expected to be present.
- Cease work and implement erosion control measures when there is a forecast of more than 50% chance of rain, or at the onset of any precipitation. Monitoring of the 72 hour forecast from the National Weather Service would be continuous during the Project.

- Allow the work area to "rest" during the process of removing the concrete ford if the work causes a plume of turbidity above background levels. Work should resume only after the stream has reached the original background turbidity levels.
- Installation of Project structures would be such that Cottonwood Creek flow is not impaired, and upstream or downstream passage of fish and all aquatic life-forms is assured at all times.
- The project would at all times include adequate erosion and sediment control devices/measures to prevent the degradation of water quality.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Resources Considered

Evaluation of the Proposed Action indicates the following resources could be affected by the project:

- Surface Water Resources
- Biological Resources
- Cultural Resources
- Land Use and Recreation
- Indian Trust Assets
- Climate Change
- Environmental Justice

3.2 Resources Not Analyzed in Detail

Evaluation of the Proposed Action indicates that there would be little to no indirect, direct, or cumulative effects on several resources. The resources include:

- Groundwater Resources
- Air Quality
- Geology and Soils
- Hazards and Hazardous Materials
- Mineral Resources
- Public Services
- Utilities and Infrastructure
- Socioeconomics
- Noise

As a result, these resources are not discussed further in this EA.

3.4 Surface Water Resources

3.4.1 Affected Environment

Cottonwood Creek is a perennial stream with very low flows occurring usually from August -November annually. The watershed contains the main stem and the West Fork of Cottonwood Creek, which is a significant tributary to the main stem. Channel types consist of Rosgen type A in the headwater areas to Rosgen type B and C in the middle and lower reaches. The stream gradient at the project site is less than 4% with a mixed substrate of sand and small cobble with reaches of bedrock upstream of the project site. Average annual precipitation in the watershed is 10-15 inches with snowfall in the headwaters of 3-6 ft.

Native vegetation is mostly riparian woodland, confined to a narrow strip (~20 feet) along the creek corridor. Precipitation in the watershed falls as primarily rain during the traditional winter months, with snowfall sometimes occurring in the surrounding low elevation mountains within the watershed. Average annual precipitation in the watershed is 10-15 inches with snowfall in the headwaters of 3-6 ft. Flow peaks typically during spring snow melt and after heavy rain on snow events which can result in flashy flood events which can overtop the creek river banks and spread to the floodplain. Historically there have been 100 year flood events in 1955 and 1964. The creek flow during the very dry summer period results in only a very narrow margin of riparian vegetation along the creek. The area beyond the riparian area, which is upslope and dry, consists of perennial bunch grasses and forbs, with some semblance of a chaparral zone.

Cottonwood Creek within the main project area is termed a "riverwash." The Siskiyou County Soil Survey (USDA 1982) indicates that this map unit is on a flood plain, which is flooded almost every year. The creek consists of unstabilized and stratified mixture of sand, silt, clay, stone, cobble, and gravel sediment, which is reworked by water most every year.

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading the crossing in Cottonwood Creek. If no action was taken, the current dilapidated concrete ford would continue to be used for crossing Cottonwood Creek and the flow mediated fish barrier would persist. However, NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA.

Proposed Action

Under the Proposed Action, Reclamation would release grant funding to NCRC for the purpose of upgrading the stream crossing in Cottonwood Creek.

The Proposed Action includes limited activities that would occur within the surface water resource of Cottonwood Creek including abutment and approach construction and removal of the concrete ford. Channel protection measures would be implemented throughout the project duration. These channel protection measures would include silt fencing and hay bales places as far as possible from the wetted channel of Cottonwood Creek and for a linear distance of 30 feet adjacent to both abutment locations. The purpose of the channel protection measures is to reduce the potential for sediment to reach the stream channel during upland project activities. Additional measures would be implemented in an effort to minimize impacts to water quality and the biological resources that depend on them as follows:

- Project should be accomplished in a manner which prevents excessive sediment being deposited downstream and be accomplished during times of low flow, September 1 through October15.
- Cease work and implement erosion control measures when there is a forecast of more than 50% chance of rain, or at the onset of any precipitation. Monitoring of the 72 hour forecast from the National Weather Service will be continuous during the Project.
- Allow the work area to "rest" during the process of removing the concrete ford if the work causes a plume of turbidity above background levels. Work should resume only after the stream has reached the original background turbidity levels.
- All excess spoils should be removed from the work area and shall be disposed of in a legal manner which prevents them from re-entering the creek system in such a manner so they do not negatively affect aquatic species and/or other sensitive native habitat communities.
- Installation of Project structures will be such that Cottonwood Creek flow is not impaired, and upstream or downstream passage of fish and all aquatic life-forms is assured at all times.
- The project will at all times include adequate erosion and sediment control devices/measures to prevent the degradation of water quality.
- Hay bales will be placed in the Cottonwood Creek Channel during removal of concrete ford to arrest any potential plumes of turbidity that may result from this activity.

Potential water quality impacts including temporary increases in turbidity would be temporary in nature and only persist during construction activities.

The project proponent has consulted various agencies to ensure compliance as follows:

- Kelley Reid from the U.S. Army Corps of Engineers (project # 2010-00260). After receiving and reviewing the project information, Kelley advised that there was no need for a permit and deferred to California Department of Fish and Game as lead agency (pers comm. Larry Alexander September 22, 2011).
- Andrew Baker from the Northern California Water Quality Board. After reviewing the 401 Notice of Intent provided and email confirmation that the application had been reviewed and approved (see attached email).
- California Department of Fish and Game. Provided a 1600 (c) Permit (attached).

The grantee shall be responsible for acquiring any required permits supplemental or in addition to those already obtained prior to implementation of project activities. Further, the grantee shall ensure that all required stipulations as described in the attached permit documentation are followed throughout project implementation.

The activities associated with the proposed project are not expected to have an effect on the quantity of the surface water resource.

Therefore, no significant impacts to surface water resources would occur as a result of the Proposed Action.

Cumulative Impacts

Implementation of the Proposed Action would not affect the quantity or long term quality of the surface water resources. Therefore, the Proposed Action would have no significant cumulative impacts on surface water resources.

3.5 Biological Resources

3.5.1 Affected Environment

Cottonwood Creek is considered a significant steelhead trout, Chinook salmon, and Coho salmon stream. A narrow strip of mostly native vegetation composed of riparian woodland exists along the creek corridor (~20 feet). The environmental setting outside the riparian area is upslope and dry with the native vegetation consisting perennial bunch grasses and forbs, similar to a what would be considered a chaparral zone (Resource Management unknown date). Currently, the

area is infested with several exotic species and the noxious weeds Himalayan blackberries and yellow starthistle (Resource Management unknown date).

The project area has been highly disturbed from mining, roads, and the railroad which is just a few hundred feet away from the east side of the creek. The west side of the creek is a camping ground with maintained lawns and camping areas and is devoid of natural vegetation.

A species list was downloaded from the United States Fish and Wildlife Service, Arcata Office website on September 22, 2011 pursuant to section 7(c) of the Endangered Species Act of 1973 (see Appendix 2). The list is dated September 22, 2011 and is considered the current listing of species that may occur within the Hornbrook 7.5 minute USGS Quad Map.

3.5.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading the crossing in Cottonwood Creek. If no action was taken, the current dilapidated concrete ford would continue to be used for crossing Cottonwood Creek and the flow mediated fish barrier would persist. However, NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to NCRC for the purpose of upgrading the stream crossing in Cottonwood Creek.

The Proposed Action area is located within Cottonwood Creek, on the R-Ranch, a privateownership, gated ranch and recreational community near Hornbrook, California. The project area is highly disturbed by recreational use and private residences. Upstream of the project area, the land use is primarily agriculture and timber lands located on private and public lands. Potential impacts associated with the Proposed Action could occur both within the stream and in the adjacent upland staging area.

Through informal ESA consultation activities with NCRC and NMFS, Reclamation determined the proposed action may affect, but is not likely to adversely affect ESA listed coho salmon, nor adversely modify critical habitat. Reclamation submitted a letter to the NMFS on September 13, 2011 requesting NMFS' concurrence with this determination. On September 28, 2011, written concurrence was received from NMFS. Effects minimization measures would be implemented throughout the proposed project to avoid negative impacts to fisheries and water quality as described in Section 3.4.2.

Resource Management (a contractor hired by NCRC) performed two separate biological investigations for the project area. These investigations resulted in two reports titled *Biological Assessment for Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California* and *Botanical Resource Survey for Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California*. Both investigations resulted in negative findings for the project location when considering rare, threatened, or endangered species.

Therefore, based on an analysis of current survey results and information pertaining specifically to the project area and information on known existing populations and habitat requirements, no freshwater or terrestrial protected species are expected to occur at the proposed project area. Therefore, no impacts are expected.

The Proposed Action is not expected to result in negative effects on migratory birds protected under the Migratory Bird Treaty Act (MBTA). However, to ensure compliance with the MBTA, between the dates of March 15 and August 31 all vegetation scheduled to be disturbed shall be inspected for the presence of bird nests immediately prior to being disturbed. If an active nest is discovered vegetation clearing activities will not be allowed to proceed in the vicinity of the nest(s). No activities shall occur within an appropriate buffered distance from active nests until after the young birds have fledged from the nest.

The Proposed Action would have no effect on Bald Eagles because no trees would be affected by and the project is scheduled to occur outside the seasonal restriction timeframes. Further, the Proposed Action would have no effect on Golden Eagles because they are not known to nest in the project location.

Overall, the proposed project is being performed in an effort to benefit Coho salmon in the long term by potentially providing access otherwise inaccessible to approximately 15 miles of habitat. Therefore, based on the information included and analyzed in this EA, no significant impacts to biological resources are expected as a result of the Proposed Action.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to biological resources. Further, the proposed project is being performed to ultimately benefit anadromous fish species, particularly Coho salmon by providing access to habitat otherwise unavailable. Therefore, the Proposed Action would represent a negligible amount of contribution when considering all cumulative impacts to biological resources.

3.7 Cultural Resources

3.7.1 Affected Environment

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources included in, or eligible for inclusion in, the National Register of Historic Places (National Register). Those resources that are in or eligible for inclusion in, the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency must take to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, it must first be determined if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, the Federal agency must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Officer (SHPO), to seek concurrence on these findings. In addition, the Federal agency is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.7.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to the NCRC for the purpose of upgrading the stream crossing in Cottonwood Creek. Without the use of Federal funds from Reclamation, there would be no undertaking as defined by Section 301(7) of the NHPA. As a result, Reclamation would not have a statutory requirement to comply with Section 106 of the NHPA. Current conditions would persist within Cottonwood Creek. NCRC could choose to retain additional Federal and non-Federal funding sources to help implement the proposed project; however, the acquisition of financial resources from sources other than Reclamation would not require Reclamation to comply with Section 106 or consider impacts to cultural resources. If Reclamation initiates the No Action alternative, there would be no impact to cultural resources.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to the NCRC for the purpose of upgrading the crossing in Cottonwood Creek. The use of federal funds constitutes an undertaking as defined by Section 301(7) of the NHPA and as the proposed action includes the type of activities that have the potential to cause effects to historic properties assuming historic properties are present, resulted in the need to initiate the Section 106 process as outlined in the Section 106 implementing regulations at 36 CFR 800.

Pursuant to 36 CFR Part 800.4, various efforts to identify historic properties at the project location were performed. NCRC engaged a consultant to conduct an archeological survey for the purpose (undated, though survey dates are listed as April 09, 2009, and March 17, 2010). In summary, a records search was completed with the Northeast Information Center at California State University Chico and Native American Tribes and individuals who may have an interest in the project or have knowledge of historic properties which may be affected by the proposed action were contacted by letter. No cultural resources were identified as a result of these efforts. On August 1, 2011, Reclamation cultural resources staff conducted a cultural resources survey of the project area. Further, pursuant to 36 CFR Parts 800.(c)(2)(B) and 800.3(f), Reclamation consulted with the Quartz Valley Indian Reservation, the Karuk Tribe of California, and the Shasta Indian Nation in an effort to identify sites of religious and cultural significance that may be affected by the proposed project. No historic properties were identified as a result of this effort.

Based on the identification efforts and investigations, Reclamation concluded that the proposed project would result in no affect to historic properties pursuant to the regulations at 36 CRF Part 800.4(d)(1). Reclamation submitted this finding to the California SHPO for concurrence on August 29, 2011 and received concurrence on October 4, 2011. Therefore, Reclamation concludes that the Section 106 process has been completed. Pursuant to Reclamation's determination that no historic properties would be affected by the proposed project, the Proposed Action would result in no impact to cultural resources.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to cultural resources, and therefore, would not contribute to cumulative impacts to cultural resources.

3.8 Land Use and Recreation

3.8.1 Affected Environment

The project area is located approximately 1 mile north of Hornbrook, California. The project would occur on property adjacent to and including the Cottonwood Creek channel, owned and managed by the R Ranch. The R Ranch is a privately owned, gated ranch and recreation community on 5,119 acres and is not open to the general public. The immediate project area is primarily recreational use and private residences. Currently, the R Ranch is used for a variety of purposes including camping, hiking, fishing, horse riding, all-terrain vehicular (ATV) use, and hunting. Upstream of the project, the land use is primarily agriculture and timber management on private and public lands.

3.8.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading a stream crossing within Cottonwood Creek. As a result, the collapsed concrete ford would remain in place and a bridge would not be installed. As a result, use of the collapsed ford by would continue by R-Ranch members accessing lands located on the east side of the creek. Further, current land use practices would continue at the project location. The NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to the NCRC for the purpose upgrading the stream crossing on Cottonwood Creek. Implementing the proposed action would not result in alteration of current land use practices or recreational use. The proposed project location is located on a private ranch where access is limited to paying members. Therefore, implementing the proposed project would not affect current practices at the project site. Further, the proposed project would be beneficial by providing safe passage for foot, equestrian, and ATV traffic across Cottonwood Creek for R Ranch members. The project would also be beneficial by limiting current potentially occurring impacts to the surface water and fishery resources.

Reclamation's KBRP funding provided to NCRC for the proposed project does not give the Federal Government explicit or implied authority to regulate and/or enforce land use activities in the immediate or adjacent affected project area.

Implementation of the Proposed Action Alternative is not expected to result in negative impacts to land use or recreation.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to land use and recreation and therefore, would not contribute to cumulative impacts associated with this resource.

3.9 Indian Trust Assets

3.9.1 Affected Environment

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individuals. Trust status originates from rights imparted by treaties, statutes, or executive orders. These rights are reserved for, or granted to, tribes.

Reclamation's policy is to protect ITAs from adverse impacts resulting from Reclamation programs and activities whenever possible. Types of action that could affect ITAs include an interference with the exercise of a reserved water right, degradation of water quality where there is a water right or noise near a land asset where it adversely affects uses of the reserved land.

3.9.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading a stream crossing within Cottonwood Creek. As a result, the collapsed concrete ford would remain in place and a bridge would not be installed. However, the NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA. The current land use practices would continue at the proposed project locations resulting in no adverse impacts to ITAs.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to the NCRC for the purpose upgrading the stream crossing on Cottonwood Creek. In an email dated September 28, 2011, Patricia Rivera, Reclamation Indian Trust Assets Coordinator, stated that "the proposed action does not have the potential to affect Indian Trust Assets. Therefore, no impacts to ITAs would result from implementation of the Proposed Action Alternative.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to ITAs and, therefore, would not contribute to cumulative impacts to ITAs.

3.10 Climate Change

3.10.1 Affected Environment

The United Nations Intergovernmental Panel on Climate Change predicts that changes in the Earth's climate will continue through the 21st century and that the rate of change may increase significantly in the future because of human activity. Climate change may be changing faster than had been anticipated as little as three years ago (GCCIG 2008).

3.10.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading the crossing in Cottonwood Creek. If no action was taken, the current dilapidated concrete ford would continue to be used for crossing Cottonwood Creek and the flow mediated fish barrier would persist. However, NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA. As a result, there would be no impacts to climate change.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to the NCRC for the purpose of upgrading the crossing in Cottonwood Creek. The Proposed Action is limited in scope and duration. Therefore, any potential to contribution to climate change would be negligible. As a result, the Proposed Action would not cause any significant change on the composition of the atmosphere and therefore would not result in adverse impacts to climate change.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to climate change and, therefore, would not contribute to cumulative impacts to climate change.

3.11 Environmental Justice

3.11.1 Affected Environment

Pursuant to Executive Order 12898 (dated February 11, 1994), Reclamation is required to consider any potential effects to minority or low-income populations resulting from its actions.

3.11.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not release grant funding to NCRC for the purpose of upgrading the crossing in Cottonwood Creek. If no action was taken, the current dilapidated concrete ford would continue to be used for crossing Cottonwood Creek and the flow mediated fish barrier would persist. However, NCRC could still seek other financial partners or fund the Proposed Action themselves, which is outside the scope of this EA. As a result, the No Action alternative would not result in a disproportionate effect upon those populations.

Proposed Action Alternative

Under the Proposed Action, Reclamation would release grant funding to the NCRC for the for the purpose of upgrading the crossing in Cottonwood Creek. The proposed action would not result in a disproportionate impact on economically disadvantaged or minority populations.

Cumulative Impacts

The Proposed Action would not result in adverse impacts to economically disadvantaged or minority populations and, therefore, would not contribute to cumulative impacts to those groups.

3.12 Summary of Environmental Effects

The environmental effects of the Proposed Action Alternative are summarized in the Table below.

Resource/Issue	Potential Effects
Surface Water Resources	No significant effect. Temporary and limited in nature.
Biological Resources	May Affect Not Likely to Adversely Affect Coho Salmon.
Cultural Resources	No Historic Properties Affected.
Land Use and Recreation	No effect.
Indian Trust Assets	No effect.
Climate Change	No effect.
Environmental Justice	No effect.

Table 2. Summary of Environmental Effects.

Chapter 4 Consultation and Coordination

4.1 Federal Laws

The following federal laws were considered during the preparation of this EA and the evaluation of the potential impacts from the Proposed Action were described in Chapter 3.

4.1.1 Endangered Species Act (16 USC. 1521 et seq.)

Section 7 of the Endangered Species Act (ESA) requires Federal agencies to ensure that all federally associated activities within the United States do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. When a proposed action is likely to impact listed species, action agencies must consult with the U.S. Fish and Wildlife Service, which maintains current lists of species that have been designated as threatened or endangered, to determine the potential impacts a project may have on protected species.

4.1.3 Migratory Bird Treaty Act (16 USC § 703 et seq.)

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

4.1.4 Clean Water Act (33 USC § 1251 et seq.)

Section 404 of the Clean Water Act requires that a permit from the USACE be obtained for the discharge of dredged of fill material into waters of the United States, including wetlands that have a significant nexus with a water of the United States.

Section 401 of the Clean Water Act requires any applicant for a federal license or permit for activities that may result in any discharge into waters of the United States to provide the federal permitting agency, (United States Army Corps of Engineers) with a certification from the respective state.

4.1.5 National Historic Preservation Act (16 USC § 470 et seq.)

The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation which outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on historic properties listed on or eligible for inclusion in the National Register of Historic Places.

4.2 Public Involvement

The Final EA and FONSI were posted on the Reclamation website with a press release advising the public of the decision.

Chapter 5 List of Preparers and Reviewers

Kristen Hiatt, Natural Resource Specialist, Klamath Basin Area Office – Preparation of EA Bill Soule, Archaeologist, Mid-Pacific Region – Preparation of Cultural Resources Section Jennie Land, Sr. Environmental Specialist, Klamath Basin Area Office – Review of EA Chuck Korson, Fish Passage Coordinator, Klamath Basin Area Office – Resource Information Larry Alexander, Biologist, Northern California Resource Center – Resource Information

References

- California Department of Fish and Game (CDFG). 2004. Recovery Strategy for California Coho Salmon. Report to the Fish and Game Commission. February 4, 2004.
- California Department of Fish and Game (CDFG). 2010. Streambed alteration agreement No. 1600-2009-0268-R1. California Department of Fish and Game, 601 Locust Street, Redding, California 96001. August 6.
- Hillemeier D., T. Soto, A. Corum, L. Lestelle., and others. 2010. The role of the Klamath River mainstem corridor in the life history and performance of Juvenile Coho Salmon (*Oncorhynchus kisutch*) Year 2 report May 2007-May 2008. DRAFT report to the U.S. Bureau of Reclamation, Klamath Area Office, Klamath Falls, Oregon.
- Resource Management. Unknown date. Biological Assessment for Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California.
- Resource Management. Unknown date. Botanical Resource Survey for Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California.
- Rock, Jim. Unknown date. Archaeological Resource Report for Proposed Cottonwood Creek Fish Passage Improvement Project.
- The Governor's Climate Change Integration Group (GCCIG). 2008. Final Report to the Governor – A Framework for Addressing Rapid Climate Change. State of Oregon, January 2008. Access at: <u>http://www.oregon.gov/ENERGY/GBLWRM/docs/CCIGReport08Web.pdf?ga=t</u>
- United States Department of Agriculture (USDA). 1982. *Soil Survey, Klamath National Forest Area*, California, Forest Service, Pacific Southwest Region, in cooperation with USDA Soil Conservation Service, and the Regents of the University of California, (Agricultural Experiment Station)

Listed/Proposed Threatened and Endangered Species for the HORNBROOK Quad (Candidates Included)

September 22, 2011

Document number: 493171842-155118

==== KEY:

(PE) Proposed Endangered Proposed in the Federal Register as being in danger of extinction

(PT) Proposed Threatened Proposed as likely to become endangered within the foreseeable future

(E) Endangered Listed in the Federal Register as being in danger of extinction

(T) Threatened Listed as likely to become endangered within the foreseeable future

(C) Candidate Candidate which may become a proposed species Habitat Y = Designated, P = Proposed, N = None Designated * Denotes a species Listed by the National Marine Fisheries Service

Туре	Scientific Name	Common Name	Category	Critical Habitat
Plants				
	Fritillaria gentneri	Gentner's fritillary	Е	Ν
Invertebrates				
	Branchinecta lynchi	vernal pool fairy shrimp	Т	Y
Fish				
	Chasmistes brevirostris	shortnose sucker	E	Р
	Deltistes luxatus	Lost River sucker	E	Р
*	Oncorhynchus kisutch	S. OR/N. CA coho salmon	Т	Y
Birds				
	Coccyzus americanus	Western yellow-billed cuckoo	С	Ν
	Strix occidentalis caurina	northern spotted owl	Т	Y
Mammals				
	Martes pennanti	fisher, West Coast DPS	С	Ν

National Historic Preservation Act Compliance Request Form

(This form is to be used for actions that would relate only to the National Historic Preservation Act Section 106 as determined by either the bureau or office.)

**Please send your request to: BOR MPR Cultural Resources Section cc: Jennie M. Land at <u>iland@usbr.gov</u>, Kristen Hiatt at <u>khiatt@usbr.gov</u>, and Jennifer Birri at jbirri@usbr.gov.

AREA OFFICE CONTROL NO: KBAO- NHPA-2011-022

DATE: 7/18/2011	PROPOSING AGENCY/APPLICANT: KBAO/Resource Management		
PROJECT: Cottonwood Creek Fish P	ROJECT: Cottonwood Creek Fish Passage Project REQUESTING OFFICE: KBAO		
LICENSE OR CONTRACT NUMBER: N/A ANTICIPATED NEPA DOC TYPE: Unknown		ANTICIPATED NEPA DOC TYPE: Unknown	
NATURE OF ACTION: Reclamation the purpose of removal and replacement	Action: Provide fundent of a foot bridge of	ding as pa ver Cotto	art of the Klamath Basin Restoration Program for nwood Creek
PROJECT LOCATION (Township, R	ange & Section or)	(Y cords) T47N R6W Section 17 (see attached map)
COST AUTHORITY NO.: A30-0012-4	990-001-00-0-0	COST	CENTER: 2530000
7.5 minute quad map: 41122 - H5; H	ornbrook		
DETAILED PROJECT DESCRIPTION	۷:		
Reclamation proposes to provide gran of a foot bridge over Cottonwood Cree barrier for fish passage. The grantee replace the crossing with an 8'6" wide this request.	at funding to Resource ek. The current conce proposes to remove by 75' long railroad	e Manag rete foott the existi flatcar bri	ement for the purpose removal and replacement oridge has become dilapidated and created a ng structure. The grantee further proposes to dge as shown in the specifications attached to
The activities are proposed to occur o for project implementation may exist in	n R Ranch which is a n a modified context.	a recreati	onal ranch property. Some of the areas proposed
Also attached to this request is a culture resources compliance process.	ral resources report	that may	aid your efforts in completing the cultural
PREPARE'S NAME AND TITLE: Kri	sten L. Hiatt, Natura	Resourc	es Specialist
CONCUR:	1. Holt		Date: 10/19/2011
- C			

V:\NEPA\Cultural Resources\2011 NHPA Requests\KBOA-NHPA-2011-022\2011-NHPA-022.doc

Hiatt, Kristen L

From:	Soule, William E
Sent:	Wednesday, October 05, 2011 9:15 AM
To:	Hiatt, Kristen L
Cc:	Perry, Laureen (Laurie) M; Barnes, Amy J; Fogerty, John A; Nickels, Adam M; Dunay, Amy L;
	Bruce, Brandee E; Williams, Scott A; Goodsell, Joanne E; Overly, Stephen A
Subject:	RE: 11-KBAO-219 Cottonwood Creek Fish Passage EA Review
Attachments:	17 BUR110831A Cottonwood Creek Fish Passage Project Hornbrook Shskiyou County.pdf; 20110929 Cottonwood Creek Bridge Replacement Project.doc

Kristen:

Attached is the SHPO concurrence letter regarding our finding of no historic properties affected for the Cottonwood Creek project and my comments on the draft EA. This email is the formal notification that the Section 106 process has been completed for this undertaking. Thank you for your assistance on this project and for the opportunity to comment on the draft NEPA document.

Sincerely,

Bill

William E. Soule, M.A., Archaeologist U.S. Bureau of Reclamation, Mid-Pacific Region 2800 Cottage Way, MP-153 Sacramento, CA 95825 Phone: 916-978-4694 Email: <u>wsoule@usbr.gov</u>

From: Hiatt, Kristen L
Sent: Tuesday, October 04, 2011 3:40 PM
To: Soule, William E
Subject: RE: 11-KBAO-219 Cottonwood Creek Fish Passage EA Review

Bill,

Thank you for the update.

Regards,

Kristen L. Hiatt

Natural Resources Specialist Klamath Basin Area Office Bureau of Reclamation Phone: (541) 880-2577 Fax: (541) 884-9053 6600 Washburn Way Klamath Falls, OR 97603 khiatt@usbr.gov

Do you really need to print this?

From: Soule, William E Sent: Tuesday, October 04, 2011 3:38 PM To: Hiatt, Kristen L Subject: RE: 11-KBAO-219 Cottonwood Creek Fish Passage EA Review

Kristen:

RE.: Cottonwood Fish Passage Project

I have called the CA SHPO regarding the letter for this undertaking. Jeff Brooke of the SHPO staff said that it should be signed shortly and should go out in the mail this week. The changes that I would make to the EA are largely based on the SHPO response (i.e., concurrence with our finding of effect) and a reference to the date of the SHPO's concurrence letter. Essentially, you already have everything else in you EA but that, largely from the Aug. 29 Reclamation letter requesting consultation.

When I receive the SHPO letter (I have asked Jeff to email me a copy ASAP when signed), I will forward it to you.

Bill

From: Hiatt, Kristen L Sent: Thursday, September 29, 2011 1:46 PM To: Soule, William E Subject: Cottonwood Creek EA Review

Bill,

While we are waiting for the concurrence from the SHPO, please review the cultural resources section of the attached EA for the subject project. Please review and comment at your earliest convenience but no later than Tuesday October 4, 2011.

Please let me know if you have any questions.

Thanks,

Krísten L. Híatt

Natural Resources Specialist Klamath Basin Area Office Bureau of Reclamation Phone: (541) 880-2577 Fax: (541) 884-9053 6600 Washburn Way Klamath Falls, OR 97603 khiatt@usbr.gov





United States Department of the Interior

BUREAU OF RECLAMATION Mid-Pacific Regional Office 2800 Cottage Way Sacramento, CA 95825-1898

AUG 29 2011

IN REPLY REFER TO:

MP-153 ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Milford Wayne Donaldson State Historic Preservation Officer Office of Historic Preservation 1725 23rd Street, Suite 100 Sacramento, CA 95816

Subject: National Historic Preservation Act (NHPA), Section 106 Consultation for the Cottonwood Creek Fish Passage Project, Hornbrook, Siskiyou County, California (Project No. 11-KBAO-219).

Dear Mr. Donaldson:

The Bureau of Reclamation is initiating the NHPA Section 106 process and is seeking your concurrence on a finding of no historic properties affected for the proposed removal of a collapsed concrete water crossing and the construction of a replacement railroad flatcar bridge on Cottonwood Creek near Hornbrook, Siskiyou County, California (Figures 1 and 2). Reclamation is providing funding for this project as part of the Klamath Basin Restoration Program in order to restore fish passage on Cottonwood Creek that has been disrupted by the collapse of the existing R Ranch concrete footbridge (Figure 3). This collapsed concrete bridge will be removed and replaced by a prefabricated, railroad flatcar bridge as shown in the enclosed *R Ranch Bridge Project Improvement Plans*. The expenditure of Federal funds for this project constitutes an undertaking pursuant to Section 301(7) of the NHPA (16 U.S.C. 470) as amended. Reclamation is consulting with you in accordance with the regulations at 36 CFR Part 800 implementing Section 106 of the NHPA.

The area of potential effects (APE) consists of an area approximately180 feet long by 52 feet wide that encompasses the existing bridge to be removed and the area where the new bridge (footings and approaches) will be constructed (Figure 2). The total acreage of the APE constitutes 0.21 acres. The project is located in the NE¼ of the SW¼ of Section 17, T47N, R6W, MDB&M on the Hornbrook, California 7.5' U.S. Geological Survey quadrangle (Figure 1).

In an effort to identify historic properties, Resource Management (project proponent) engaged Mr. Jim Rock, RPA, to conduct an archaeological survey for both California Environmental Quality Act (CEQA) purposes and Section 106 compliance pursuant to 36 CFR Part 800.4.

The results of this effort are documented in the enclosed cultural resource inventory by Mr. Rock (undated, though survey dates are listed as April 09, 2009, and March 17, 2010). In summary, Mr. Rock conducted a records search with the Northeast Information Center at California State University Chico; and contacted Native American Tribes and individuals who may have an interest in the project or have knowledge of historic properties which may be affected by the proposed undertaking. The records search and background research failed to identify any previous cultural resource survey efforts or previously recorded cultural resources. Additionally, Mr. Rock conducted a pedestrian survey of the project location. No cultural resources were identified as a result of the records search effort or physical pedestrian inventory.

Mr. William Soule and Mr. John Fogerty, Reclamation Archaeologists, and Ms. BranDee Bruce, Reclamation Architectural Historian, also conducted a cultural resources survey of the project location on August 1, 2011. This additional assessment was considered necessary to ensure survey coverage of the proposed footings for the new railroad car-type replacement bridge, and to provide an evaluation of the existing concrete footbridge, which was not described in the survey report by Mr. Rock. No historic properties were identified in this supplemental survey. Pursuant to the regulations at 36 CFR Part 800.4, Reclamation is consulting with the Quartz Valley Indian Reservation, the Karuk Tribe of California, and the Shasta Indian Nation in an effort to identify sites of religious and cultural significance which may be affected by the proposed undertaking. If Reclamation is made aware of resources, we will contact your office immediately.

Based on the above discussion; the enclosed document, *Archaeological Resources Report For Proposed Cottonwood Creek Fish Passage Improvement Project, Hornbrook, California,* Mr. Rock, and additional investigations conducted by Mid-Pacific Region cultural resources staff, Reclamation concludes that the proposed undertaking will result in no affect to historic properties pursuant to the regulations at 36 CFR Part 800.4(d)(1). Information provided by Resource Management indicated the existing concrete footbridge was constructed in the early 1990s and is not a historic property under the National Register of Historic Places eligibility criteria. No other historic properties were identified in the project APE.

Reclamation invites your comments on the delineation of the APE and the appropriateness of the identification efforts. We also request your concurrence on our finding of no historic properties affected for the proposed undertaking. If you have any questions, concerns, or comments, please contact Mr. Soule at 916-978-4694 or wsoule@usbr.gov. We look forward to your response.

Sincerely,

Shane Hunt Acting Regional Environmental Officer

Enclosures - 5

Indian Trust Assets Request Form

**Please send your request to: Patricia Rivera, <u>privera@usbr.gov</u> - cc to Diane Williams and Ellie Robbins, <u>marywilliams@usbr.gov</u>, and <u>erobbins@usbr.gov</u>

Date:

Requested by	Kristen Hiatt – Natural Resource Specialist
Cost Authority (18 digits + 1)	A30-0012-4990-001-00-0-0
Cost Center (7 digits)	2530000
Region # if other than MP	
Project Name	Cottonwood Creek Crossing Upgrade Project
CEC or EA Number	KBAO-EA-11-05
Project Description	Reclamation proposes to provide grant funding to Resource Management for the purpose removal and replacement of a foot bridge over Cottonwood Creek. The current concrete footbridge has become dilapidated and created a barrier for fish passage. The grantee proposes to remove the existing structure. The grantee further proposes to replace the crossing with an 8'6" wide by 75' long railroad flatcar bridge
*Project Location (Township, Range, Section, e.g., T12 R5E S10, or XY cords)	T47N R6W Section 17 (see attached map)


Cottonwood Creek Fish Passage Project



0

0.05

0.1 Miles



Crossing Location

Hiatt, Kristen L

From: Sent: To: Subject: Rivera, Patricia L Wednesday, September 28, 2011 8:38 AM Hiatt, Kristen L RE: 20110927 Cottonwood Creek Crossing Upgrade ITA Request

Kristen,

I reviewed the proposed action to provide grant funding to Resource Management for the purpose removal and replacement of a foot bridge over Cottonwood Creek. The current concrete footbridge has become dilapidated and created a barrier for fish passage. The grantee proposes to remove the existing structure. The grantee further proposes to replace the crossing with an 8'6" wide by 75' long railroad flatcar bridge.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Karuk Reservation approximately 15 miles SSW of the project location.

Patricia



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July 14, 2011

Chuck Korson Bureau of Reclamation 6600 Washburn Way Klamath Falls, Oregon 97603

Dear Chuck:

Enclosed are the following documents regarding the Cottonwood Creek Bridge/Fish Passage Project:

- Photos of bridge to be installed
- Original project application to Calif. Dept. of Fish & Game
- California Environmental Quality Act Notice of Exemption
- Permit from California Dept. of Housing and Community Development
- State Water Resources Control Board permitting, email correspondence, monitoring plan and Notice of Intent
- Geotechnical Investigation Report
- Engineering drawings and specifications
- Archaeological Resource Report
- Botanical Resource Survey
- Biological Assessment
- Consultation letter with Sam Quenca, Wildlife Biologist, Klamath National Forest

As previously mentioned, I had phone consultation (July 2010) with Kelly Reid (Kelley.E.Reid@usace.army.mil), Army Corps of Engineers (project #2010-00260) and after receiving project information he saw no need for an Army Corp permit and deferred to Calif. Dept. of Fish and Game as agency lead.

Additionally, have had phone consultation with NMFS (Don Flickenger 530-842-5763 ext. 111.) early in 2010. Recently gave him an update call regarding possible needs you may have and he said he would contact you.

Thank you,

Larry Alexander

NOTICE: If you detach original enclosures to send with the out-going response letter or to keep for your files, please sign and date

Sign

Date

Resource Management P.O. Box 146 Fort Jones, California 96032 Phone: 530-468-2888 Fax: 530-468-4426





Dotty Lynn 475- 3495

Dotty 598-2065

Proposal Application Form

For DFG use only
Proposal No. Region

Section 1: Summary Information

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1. Project type:	HB, FP
2. Project title:	Cottonwood Creek R-Ranch Fish Passage Improvement
3. Applicant name:	Northern California Resource Center
4. Contact person:	Larry Alexander
5. Address:	P.O. Box 342
6. City, State, Zip:	Fort Jones, CA 96032
7. Telephone #:	530-468-2888
8. Fax #:	530-468-4426
9. Email address:	lalexander@sisqtel.net
10. Туре:	Public Agency Nonprofit Organization Indian Tribe
11. Certified Non-Profit Organization:	Yes No D If yes, specify the non profit organization registration number: Applied For
12. New grantee:	
13. Amount requested:	\$228,027.25
14. Total project cost:	\$275,227.25
15. Salmonid species benefited:	Chinook 🖂 Coho 🖂 Steelhead 🖾 Cutthroat 🗔
16. Project objectives:	 This project directly addresses the recommendations identified in the Recovery Strategy for California Coho Salmon and the Steelhead Restoration and Management Plan for California. The primary objectives of this project include: Removal of an old low water crossing which has created a fish passage barrier in Cottonwood Creek, historically one of the highest producing salmon streams contributing to the Klamath River. Prepare an engineering design/construction scope for a bridge replacement. Permitting, installation of grade control, abutment construction and bridge placement. Will open approximately 15 miles of anadromous habitat above this site within the Cottonwood Creek watershed.
17. Task number:	 KR-HB-03 Improve Coho Salmon passage at stream and road crossings, including measures to: a. Replace culverts on both the USFS and Caltrans roads with structures allowing coho salmon passage; b. Treat coho salmon passage problems associated with the USFS roads; c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.

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18. Time frame:	Spring 2008: Site review investigations Spring/Summer 2008: Engineering design Summer/Fall 2008: Permitting Winter/Spring 2008-2009: Final implementation preparation Late summer 2009: (low flows) Implement project
19. Stream:	Cottonwood Creek
20. Tributary to:	Klamath River
21. Major Watershed System:	Cottonwood Creek Watershed/Klamath River
22. County(ies):	Siskiyou County
23. Coastal Zone:	Yes No 🛛
24. Trinity River Basin:	Yes No 🛛
25. Klamath River Basin:	Yes No

Section 2: Location Information

1. Township, Range, Section:	T47N R2E Sec17
2. Latitude, Longitude (in decimal degrees):	41.9206°N, 122.5658°W
3. Location description:	On Cottonwood Creek approximately two miles north of Hornbrook, Calif.
4. Directions:	From City of Hornbrook, Calif., take Interstate 5 north to next exit and turn right to Cottonwood Creek and the R-Ranch Recreation area to project site.

Section 3: Watershed Information

1.	Watershed name:	Cottonwood Creek Watershed
2.	Watershed area:	~100 Square Miles
3.	Watershed area directly affected by the proposed project:	N/A (For PL & HU Projects Only)
4.	Land use statement:	The immediate project area is primarily recreational use and private residences. Upstream of the project the land use is primarily agriculture and timber management on private and public lands.
5.	Project area ownership:	% Private 100 % State % Federal
6.	Project area with landowners support of proposal:	The R-Ranch is in support of this project. (see attached landowner agreement). Additionally, neighboring landowners have been contacted and have indicated support of this project.
7.	Watershed length of blue line streams:	~ 50 Miles
8.	Length of blue line streams directly affected by proposal:	~ 20 Miles
9.	Limiting Factors to Salmonids:	 Water quantity (lack of flow, diversions, runoff) Water quality (temperature, chemistry, turbidity) Riparian dysfunction (lack of shade, excessive nutrients, roughness, elements) Excessive sediment yield (pool and gravel quality) Spawning requirements (gravel, resting areas-pools) Rearing requirements (velocity, lack of shelter, pools) Estuary / lagoon issues (closure during migration periods) Fish passage (emigration and immigration)
10.	Source(s) of above information:	Recovery Strategy for California Coho Salmon, Calif. Dept. of Fish and Game, U.S. Fish and Wildlife Service

11. Salmonids present:	Coho, Chinook, Steelhead
12. Source(s) of above information:	Recovery Strategy for California Coho Salmon, Calif. Dept. of Fish and Game, U.S. Fish and Wildlife Service
13. Salmonids historically present:	Coho, Chinook, Steelhead
14. Source(s) of above information:	Recovery Strategy for California Coho Salmon, Calif. Dept. of Fish and Game, U.S. Fish and Wildlife Service
15. Watershed Plan(s):	Recovery Strategy for California Coho Salmon, Mid Klamath Fisheries Restoration Plan

Section 4: Project Objectives

1. Background Information

The Cottonwood Creek Watershed has historically been a critical area for anadromous fishery. In the past, Calif. Dept. of Fish and Game has enhanced Cottonwood Creek with habitat and passage improvements to Cottonwood Creek from the confluence with the Klamath River upstream to this project site (approximately 2 miles). Above this project site additional habitat improvements have been established including, sediment reduction, and fish screening of diversions on private and public lands. This fish barrier project is one of the last needed actions in order to open up approximately 15 miles of additional anadromous spawning area within the Cottonwood Creek Watershed.

2. List task information:

KR-HB-03 Improve coho salmon passage at stream and road crossings, including measures to:

a. Replace culverts on both the USFS and Caltrans roads with structures allowing coho salmon passage;

b. Treat coho salmon passage problems associated with the USFS roads;

c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and

d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.

The removal of this fish barrier is one of the last needed actions in order to open up approximately 15 miles of additional anadromous spawning area within the Cottonwood Creek Watershed.

3. Need for project:	This project directly addresses the recommendations identified in the Recovery Strategy for California Coho Salmon and the Steelhead Restoration and Management Plan for California.
	The fish passage barrier consists of an old concrete low water crossing which, overtime, has buckled and settled, creating an extreme fish passage barrier. This old structure will be removed and replaced with a bridge.
	This is a cooperative project between the Upper mid Klamath Watershed Council, Northern California Resource Center, Resource Management and the R-Ranch.
	Northern California Resource Center will utilize the resources of an outside Engineering and Geology consulting firm for the needed components of this project.

·	<image/>
4. Known limiting factors addressed by project:	Water quantity (lack of flow, diversions, runoff) Water quality (temperature, chemistry, turbidity) Riparian dysfunction (lack of shade, excessive nutrients, roughness, elements) Excessive sediment yield (pool and gravel quality) Spawning requirements (gravel, resting areas-pools) Rearing requirements (velocity, lack of shelter, pools) Estuary / lagoon issues (closure during migration periods) Fish passage (emigration and immigration)
5. Limiting factor remediation:	The removal of this fish passage barrier and the replacement with a bridge will open up approximatley 15 miles of additional anadromous habitat within the Cottonwoood Creek Watershed. Additionally, this project will keep motorized vehicles out of stream.
6. Additional objectives:	By demonstration, will foster continued habitat improvement activities on private lands within the area.

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Section 5: Project Tasks and Results

1 Detailed project tasks:

- Site review investigations
- = Abutment design
- Engineering design
- Permitting
- · Barrier removal and construction of new bridge

2. Time frame:

Spring 2008: Site review investigations Spring/Summer 2008: Engineering design Summer/Fall 2008: Permitting Winter/Spring 2008-2009: Final implementation preparation Late summer 2009: (low flows) Implement project

3. Deliverables:

- Removal of existing fish passage barrier
- Replace with new bridge per engineered design
- Installation of grade control per engineered design
- Final report

4. DFG protocols to be used in project development and implementation:

DFG California Salmonid Stream Habitat Restoration Manual

List: Part VI Project Planning and Implementation

Part VII Project Implementation (Fish Passage)

DFG monitoring protocols for restoration project effectiveness and validation monitoring

List:

California Content Standards

National Science Content Standards

5. Other protocols: Accepted and licensed engineering practices.

6. Expected quantitative results (project summary):

humphitables Descript	Unite	Project	
luantitative Result	Units	Type(s)	Resul
 Stream length treated or affected by habitat improvement projects 	miles	ALL	
b. Workshop/training events	number	ED, TE	
c. Participants in workshop/training events/students educated	number	ED, TE	
d. Publications completed/distributed	number	ED, TE	
e. Schools/institutions reached	number	ED, TE	
f. Length of stream bank acquired/protected	miles	HA	
g. Area acquired/protected	acres	HA	
h. Barriers/blockages removed or modified (other than culverte	s) number	HB, FL	1
 Stream length made more accessible by removing barriers other than culverts 	miles	HB, FL	15
j. Stream crossings/culverts improved for fish passage	number	HB, FL	1
k. Stream length made more accessible by treating stream crossings	miles	HB, FL	15
I. Length of instream habitat treated	miles	HI	
m. Instream habitat and/or bank stabilization structures to be installed	number	HI, HS	
 Length of riparian stream bank treated (measure both sides the bank, if appropriate) 	of miles	HR	
o. Riparian area treated	acres	HR	
p. Trees planted	number	HR	
g. Fencing length to be installed/repaired	miles	HR	
 Stream bank stabilized (measure both sides of the bank, if appropriate) 	miles	HS	
s. Road length treated	miles	HU	
t. Watershed culverts treated	number	HU	
u. Sediment volume prevented from entering the stream	cubic yards	HU, HR	
v. Upslope area treated	acres	HU	
w. Stream sites monitored	number	MD, MO	
x. Public meetings	number	OR, PI	
y. Public meeting attendees	number	OR, PI	
z. Stream length assessed	miles	PL	
aa. Road length assessed	miles	PL	
bb. Area assessed	acres	PL	
cc. Juvenile fish produced	number	RE	
dd. Juvenile fish released	number	RE	
ee. Fish screens installed	number	SC	
ff. Flow rate of diversions treated	cfs	SC	
gg. Quantity of water protected by screens	acre-feet/year	SC	
hh. Flow of water (average or range) returned to or maintained i stream	n cfs	WC, WP	
ii. Water flow gauges installed	number	WD	
jj. Amount of water leased/purchased	acre-feet	WP	

7. Other products and results: N/A

8. <u>Applicant's qualifications and experience</u>: Northern California Resource Center, located near Fort Jones, California, in Siskiyou County, provides natural resource contract services to private land owners, public land management agencies and resource conservation organizations. It also works with the College of the Siskiyous to provide training and foster regional economic development in the natural resource field. Company and staff credentials include degrees in geology, environmental systems, biology, hydrology and organizational leadership with specialties in GIS, data management, botany and fisheries.

9. <u>Previously completed projects and outcomes under FRGP:</u> Northern California Resource Center, in collaboration with Resource Management, has successfully completed numerous restoration projects throughout Northern California. Previous projects under this grant program include:

- # P0210419 Shasta River Kuck Riparian Planting Project: Successfully completed on time and approved.
- # P9985077 Parks Creek Road Sediment Analysis. Successfully completed and approved.
- # P0010357 West Fork Cottonwood Creek Watershed Sediment Analysis. Successfully completed on time and approved.
- # P0110311 Hart Ranch Little Shasta Exclusion Fence. Successfully completed on time and approved.
- # P0310324 Sugar Creek Road Assessment. Successfully completed on time and approved.
- # P0410314 Shasta River Jim Rice Planting Project. Currently in progress.
- # P0410315 Shasta River Joe Rice Fencing and Planting Project. Currently in progress.
- # P0510312 Shasta River Joe Rice Fish Screen Project. Currently in progress.
- # P0510313 Shasta River Ekstrom Fish Screen Project. Currently in progress.
- # P0410332 Scott River Tailings Bank Stabilization and Channel Reconstruction Project. Currently in progress

Section 6: Landowners, Access and Permits

2. Permits:	CEQA Mitigated Negative Declaration, 401 Permit, 404 Permit, 1600 Permit, County Building permits, State Lands Commission Permits. Calif. Dept. of Fish and Game		
3. Lead CEQA agency:			
4. Required mitigation:	Yes No 🛛		

Section 7: Project Budget

1. Summary project costs (Please attach detailed budget[s]):

Sources of Funds	Cash	In-kind (if applicable)	Status S,P,U (secured, pending, unknown)	Anticipated award date	Total
Fisheries Restoration Grant Program	\$228,027.25	THE WAY STREAM THE	THE REAL PROPERTY OF	E CONTRACTOR YOU	\$228,027.25
Other State Agencies Name(s) and amount(s) of each:					
Federal Name(s) and amount(s) of each:					
Applicant:		\$29,200.00			\$29,200.00
Other Sources <u>Name(s) and amount(s) of each</u> : Landowner		\$18,000.00			\$18,000.00
Total	\$228,027.25	\$47,200.00			\$275,227.25

2. Estimated Project Cost by Task

Cottonwood Creek R-Ranch Fish Passage Removal			
Type of Work	Amount Requested	Cost Share	Total
Fish passage Improvement	\$228,027.25	\$47,200.00	\$275,227.25
Total	\$228,027.25	\$47,200.00	\$275,227.25

3. Budget justification: N/A

4. Administrative overhead: N/A

Provide justification if administrative overhead is greater than 10%.

Section 8: Supplemental or Specialized Information

In the order listed below, please attach the following required items to the application, as appropriate to the proposal project type:

- 1. Detailed budget (See examples and instructions in Appendix C. (All Project Types)
- 2. Scaled plan view diagram. See example in Appendix B. (Project Types: CF, FL, FP, HB, HI, HR, HS, HU, PM, SC, WC, WD)
- 3. Project location 7.5 minute topographic quadrangle map, (USGS). See example in Appendix B. (All Project Types except: AC, ED, OR, PI, PL, TE)
- 4. Watershed map. See example in Appendix B. (Project Types: HU, MD, MO, OR, PI, PL, WP)
- 5. Provisional Landowner Access Agreement. See examples in Appendix C. (All projects where access is necessary for completing any component of the project except AC.)
- 6. Written eligibility certification from CDF. (Project Type: CF)
- 7. Evaluation plan. (Project Types: ED, TE)
- 8. Curriculum list (Project Type: ED)
- 9. Status report (existing projects only). (Project Types: OR, PI)
- 10. 5-year management plan (new projects only). (Project Type: RE)
- 11. Outline of a Quality Assessment/Quality Control Plan. (Project Types: MD, MO)
- 12. Land acquisition/easement information documentation.
 - 8

(Project Type: HA)

1. 1.

- 13. Copies of photographs of property (Project Types: HA)
- 14. Regional Assessor's and site-specific map (Project Type: HA)
- 15. Narrative appraisal (Project Type: HA)
- 16. Written notification of the right to divert, use, store, or sell or transfer water. (Project Type: FP, FL, HB, SC, WC, WD, WP)
- 17. Written review that demonstrates that the activity being proposed meets all legal requirements. (Project Type: EF)

Supplemental Information Checklist by Project Type (Please refer to the item numbers above)

Project Type Item Number

CF ED EF FL FP HA HB HI HR HS HU MD Project Type	1, 4 1, 2, 3, 5, 6 1, 4, 5, 7, 8 1, 3, 5, 17 1, 2, 3, 5, 16 1, 2, 3, 5 1, 2, 3, 5 1, 2, 3, 5 1, 2, 3, 5 1, 2, 3, 4, 5 1, 3, 4, 5, 11 Item Number
MO	1, 3, 4, 5, 11
OR	1, 4, 5, 9
PI	1, 4, 5, 9
PL	1, 4, 5
PM	1, 2, 3, 5
RE	1, 2, 3, 5, 10
SC	1, 2, 3, 5, 10
TE	1, 2, 3, 5, 16
TW	1, 3, 5
WC	1, 2, 3, 5, 16
WD	1, 2, 3, 5, 16
WP	1, 3, 4, 5, 16

Project Budget						
Cottonwood Creek B-Ranch Fish Passage Improvement						
				Amount	Amount of	Total Project
			1	Requested	Cost Share	Cost
PERSONAL SERVICES	·					
	Number of	Hourly				
Level of Staff	Hours	Rate				
Project Coordination; Planning	60	\$ 50.00		\$ 3,000.00	\$ 4,000.00	\$ 7,000.00
Project Leader	200	\$ 30.00		\$ 6,000.00		\$ 6,000.00
Hydrology		\$ 75.00		\$ -		\$ -
Bio-Assessment	40	\$ 50.00		\$ 2,000.00		\$ 2,000.00
Cultural Resources	30	\$ 50.00		\$ 1,500.00		\$ 1,500.00
Engineering	355	\$ 100.00		\$ 35,500.00		\$ 35,500.00
Field Laborers	300	\$ 20.00		\$ 6,000.00		\$ 6,000.00
Subtotal				\$ 54,000.00	\$ 4,000.00	\$ 58,000.00
Staff Benefits @ 30%				\$ 16,200.00	\$ 1,200.00	\$ 17,400.00
TOTAL PERSONAL SERVICES				\$ 70,200.00	\$ 5,200.00	\$ 75,400.00
OPERATING EXPENSES						
	Number of					
Description	Units	Units	Unit Price			
Subcontractors						
Barrier removal - Heavy Equipment	60	hours	\$ 185.00	\$ 11,100.00		\$ 11,100.00
Bridge construction (pre-						
manufactured bridge)	1	Bridge	\$79,000.00	\$ 79,000.00		\$ 79,000.00
Abutment construction	1	Abutment	\$21,500.00	\$ 21,500.00		\$ 21,500.00
Approach road construction	1	Approach	\$ 9,000.00	\$ 9,000.00		\$ 9,000.00
Materials						1
Mileage	3500	Miles	\$ 0.485	\$ 1,697.50		\$ 1,697.50
Worker's Compensation Insurance				\$ 4,800.00	* • • • • • • • • •	\$ 4,800.00
Tools and Instruments				\$ -	\$24,000.00	\$ 24,000.00
Permits and Licenses				\$ 10,000.00		\$ 10,000.00
(10 yrs)				¢	¢ 19 000 00	¢ 18.000.00
				<u>⊅</u> -	\$ 18,000.00	\$ 18,000.00
TOTAL OPERATING EXPENSES				\$ 137.097.50	\$ 42,000,00	\$179.097.50
SUBTOTAL				\$ 207.297.50	\$ 47,200.00	\$254,497,50
10 %				\$ 20,729,75	+,======	\$ 20.729.75
				\$ 229 027 25	\$ 47 200 00	¢ 275 227 25
				\$220,027.25	\$41,200.00	\$215,221.25
COST SHARE – SOFT MAT	СН %	17.15%				
COST SHARE – HARD MAT	CH %					
		Landowner				\$ 18,000,00
Source and Amount of Cost Share		Applicant			\$ 29,200,00	
		TOTAL AN	MOUNT OF CO	OST SHARE:		\$ 47,200.00
						+,200.00

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1.5



HORNBROOK 7.5' quadrangle

M=16.359 G=0.29

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2.54

RESOURSE MANAGEMENT

(HABITAT RESTORATION PROJECT LANDOWNER AGREEMENT)

Northern California Resource Center

P.O. Box 342 Fort Jones, CA 96032

STREAM HABITAT RESTORATION PROJECT AGREEMENT

Cottonwood Creek R-Ranch Fish Passage Removal

1. PURPOSE

I. The "R" Reput habitat reationation project has been submitted to the Department of Fish and Game for funding consideration i understand the objectives of the project as proposed in the <u>Applicant Lanay Alexander</u> I support (see proposal). The project has been explained to me by the <u>Applicant Lanay Alexander</u> I support the goals of the project.

B. ACCESS PERMISSION

Landowner hereby grants <u>Hondhaw</u> <u>Cn. Recounce</u> <u>Can</u> and California Department of Fish and Game representatives permission to enter onto real property owned by the Landowner to perform pre-project evaluation, and, if an agreement for the project is entered into between the <u>Apple start</u> restoration work, conduct project inspections, and monitor project for needed maintenance for a 10-year period following project completion. Access shall be limited to those portions of Landowner's real property where actual scream restoration work is to be performed and those additional portions of the real property which must be traversed to gain access to the work site.

IL DURATION OF NOTICE

The term of this agreement shall be <u>24</u> months for work performance, and 10 years for maintenance inspection, and monitoring purposes from the last date of execution shown below. This is provided that <u>490 cms</u> or the California Department of Fish and Game shall give Landowner reasonable actual notice and any necessary arrangements are made prior to each needed access. Reasonable and ectual notice may be given by mail, in person, or by talephone

This agreement can be amended only by prior written agreement of both parties executing this permit.

IV. LIABILITIES

Reasonable procautions will be exercised by Manthexu CA. Recovered to avoid damage to persons and property

Northern talif. Resource Conter agrees to indemnify and hold harmless the Landowner and agrees to pay for reasonable damages proximately caused by reason of the uses authorized by this permit, except those caused by the gross negligence or intentional conduct of the Landowner

Date 5/15/01=

Date 5-11-06

kr, Company Representative

CALIFORNIA ENVIRONMENTAL QUALITY ACT NOTICE OF EXEMPTION

To: Office of Planning and Research 1400 Tenth Street, Room 121 Sacramento, California 95814 Date: August 6, 2010

From: California Department of Fish and Game

Northern Region 601 Locust Street Redding, California 96001

Project Title: Issuance of Streambed Alteration Agreement No. **1600-2009-0268-R1**, Cottonwood Creek, Tributary to the Klamath River, Siskiyou County.

Project Location (Specific): Hornbrook Road, Section 17, Township 47 North, Range 6 West, MDB&M.

Project Location (City and County): Hornbrook, Siskiyou County.

Description of Project: See Attached Agreement.

Name of Public Agency Approving Project: California Department of Fish and Game

Name of Agency Carrying Out Project: Mr. Larry Alexander, representing Resource Management.

Exempt Status (Class and Guidelines Section): Categorical Exemption: Class 4, Section 15304 - Minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes.

Reasons Why Project is Exempt: The Project proposes to remove a concrete ford and construct two bridge abutments. There will be no removal of healthy, mature, scenic trees as a result of this project. The Project will have no significant effect on the environment.

Lead Agency Contact Person: Tobi Freeny

Phone: (530) 225-2867

Signature:

Date: 08/00/10

Title:Image: Symplectic ApplicationImage: Symplectic ApplicationImage: Symplectic Application[] Signed by ApplicantDate received

Date received for filing at OPR:

CALIFORNIA DEPARTMENT OF FISH AND GAME NORTHERN REGION 601 LOCUST STREET REDDING, CA 96001



LAKE OF STREAMBED ALTERATION AGREEMENT, NOTIFICATION NO. 1600-2009-0268-R1 COTTONWOOD CREEK

MR. LARRY ALEXANDER COTTONWOOD CREEK CROSSING REPLACEMENT

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Resource Management as represented by Mr. Larry Alexander.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on July 22, 2009 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located at Cottonwood Creek, tributary to the Klamath River in the County of Siskiyou, State of California; Section 17, Township 47N, Range 6W, U.S. Geological Survey (USGS) map Hornbrook, Mount Diablo Base and Meridian.

PROJECT DESCRIPTION

The project is limited to the removal of a concrete ford by picking the ford out of the stream with minimal channel disturbance and the construction of two bridge abutments. No grading of the stream channel or bed shall be conducted as part of this project. All work shall be in accordance with submitted plans and diagrams and any subsequent revisions approved by the DFG in writing.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), steelhead trout (*O. mykiss*), willow flycatcher (*Empidonax traillii*), other non-game and game fishes, amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: increased turbidity and sedimentation, and disturbance from project activity.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

- 1.1 <u>Documentation at Project Site</u>. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 <u>Providing Agreement to Persons at Project Site</u>. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 <u>Notification of Conflicting Provisions</u>. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 <u>Project Site Entry</u>. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement, provided DFG: a) provides 24 hours advance notice; and b) allows the Permittee or representatives to participate in the inspection and/or monitoring
- 1.5 Permittee's notification (Notification of Lake or Streambed Alteration together with all maps, plans, photographs, drawings, and all other supporting documents submitted with notification to describe the activity) is hereby incorporated by reference into this Agreement. Permittee shall conduct project activities within the work areas and using the mitigative features described in the notification and supporting documents, unless such project activities, work areas or mitigative

features are modified by the provisions of this Agreement, in which case the activities shall be conducted as described in this Agreement.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

PROJECT TIMING AND COORDINATION

- 2.1 All work shall be confined to the period commencing July 1 and ending October 1, provided the stream is dry or at its lowest flow. If weather conditions permit and the stream is dry or at its lowest flow, the Permittee may perform work within the stream channel or on the banks outside of the above referenced work window, provided a written request is made to DFG at least five (5) days before the proposed work period variance. Written approval from DFG for the proposed work period variance must be received by the Permittee prior to the start or with the continuation of work outside of the above referenced work window.
- 2.2 If work is performed outside of the above referenced work window, the Permittee shall do all of the following:
 - a. Stage erosion and sediment control materials at the work site.

b. Cease work and implement erosion control measures when there is a forecast of more then 50% chance of rain, or at the onset of any precipitation. Monitoring of the 72 hour forecast from the National Weather Service is recommended.

2.3 The Permittee shall instruct all persons who will be completing any ground disturbing activity at a worksite to comply with the conditions set forth in this Agreement and shall inspect each work site before, during, and after completion of any ground-disturbing activity at the work site.

HABITAT AND SPECIES PROTECTION

- 2.4 The Permittee shall not begin site preparation or construction activities in the project area until after August 31 to avoid impacts to breeding/nesting willow flycatcher (*Empidonax traillii*) OR prior to construction or site preparation activities the Permittee shall have a qualified biologist conduct protocol level surveys. If no breeding/nesting birds are observed site preparation and construction activities may begin. If any willow flycatchers are discovered the Permittee shall contact DFG immediately.
- 2.5 The Permittee shall allow the work area to "rest" during the process of removing the concrete ford if the work causes a plume of turbidity above background levels. Work may be resumed only after the stream has reached the original background turbidity levels.

- 2.6 All work areas described in this Agreement shall be temporarily flagged or fenced to prohibit unauthorized and unnecessary disturbance of vegetation.
- 2.7 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations.
- 2.8 The Permittee shall only cut vegetation leaving the root structure in place so as not to disturb the substrate.
- 2.9 The Permittee shall remove all excess spoils from the work area and shall dispose of them in a legal manner which prevents them from re-entering "waters of the State", and in such a manner so that they do not negatively effect aquatic species and/or other sensitive native habitat communities.

INSTREAM STRUCTURES

- 2.10 At least thirty (30) days before the Permittee intends to begin the construction of the bridge abutments finalized construction plans shall be submitted to DFG for written review and approval. The plans should include a site map, plan views, sections, and details.
- 2.11 All crossing sites shall be designed to accommodate the estimated 100-year flow including sediment load and debris without diverting, and shall be installed in accordance with submitted plans and diagrams.
- 2.12 All crossing structures shall be properly aligned within the stream and shall be otherwise designed and sized to assure resistance to washout and erosion of the streambed, stream banks, and/or fill.
- 2.13 Installation of structures shall be such that water flow is not impaired and upstream or downstream passage of fish and all aquatic life-forms is assured at all times.
- 2.14 Road approaches to new or re-constructed permanent crossings on watercourses shall be treated to minimize erosion and sediment delivery to the watercourse. Road approaches shall be armored from the crossing for a minimum of 50 feet in both directions, or to the nearest effective water bar or point where road drainage does not drain to the crossing, with durable rock, compacted grindings, pavement, or chip-seal.
- 2.15 Any turbid water pumped from the ex site shall be disposed of in an upland location where it will not drain directly into any stream channel.
- 2.16 Groundwater and subsurface flow encountered during excavation of the streambed shall be pumped to a natural or excavated settling basin on stable soil outside of the channel. The settling basin shall not be allowed to drain to or be pumped to the stream until the stored water is less turbid than the stream flow into which it is released.

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PETROLEUM, CHEMICAL AND OTHER POLLUTANTS

- 2.17 The Permittee shall install necessary containment structures to prevent fugitive wet concrete from entering into the active channel.
- 2.18 At all times when the Permittee is pouring or working with wet concrete there shall be a designated monitor to inspect the forms and ensure that no fugitive concrete or other debris enters into the active channel.
- 2.19 The Permittee shall install a secondary containment wall beyond the headwall forms adjacent to the active channel to prevent fugitive wet concrete from entering into the active channel.
- 2.20 Staging, storage, and re-fueling areas for machinery, equipment, and materials shall be located outside of the stream a minimum distance of 150 feet from waters of the State.
- 2.21 No equipment or machinery shall be operated within any flowing stream.
- 2.22 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.
- 2.23 Stationary equipment such as motors, pumps, generators, and welders that contain deleterious materials, located within or adjacent to a stream shall be positioned over drip pans.
- 2.24 All activities performed in or near a stream shall have absorbent materials designated for spill containment and clean up activities on-site for use in an accidental spill. The Permittee shall immediately notify the California Emergency Management Agency at 1-800-852-7550 and immediately initiate the clean up activities. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.
- 2.25 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, asphalt, paint or other coating material, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.

EROSION AND SEDIMENT CONTROL

2.26 The project shall at all time feature adequate erosion and sediment control devices to prevent the degradation of water quality.

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 - 2.27 The Permittee shall prevent the discharge of sediment, and/or muddy, turbid, or silt-laden waters, resulting from the project, into the stream channel. Where necessary to prevent such discharge, the Permittee shall properly install and maintain sediment barriers (including but not limited to filter fabric fencing, fiber mats, rice straw or fiber wattles or rolls) capable of preventing downstream sedimentation/turbidity. Said devices shall be cleaned of all trapped sediment as necessary to maintain proper function. Recovered sediment shall be disposed of where it shall not return to the waters of the State. Said devices shall be completely removed from the channel, along with all temporary fills, upon completion of operations.
- 2.28 Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches (except hydro-mulch) shall be applied in a layer not less than two inches deep. All mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.
- 2.29 If necessary to prevent mobilization of loose soils, fiber mats shall be laid over loose soils prior to mulching and tracking.
- 2.30 Soils adjacent to the stream channel that are exposed by project operations shall be adequately stabilized when rainfall is reasonably expected during construction, and immediately upon completion of construction, to prevent the mobilization of such sediment into the stream channels or adjacent wetlands. National Weather Service forecasts shall be monitored by the Permittee to determine the chance of precipitation.
- 2.31 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective DFG approved control devices are installed, or abatement procedures are initiated.

ROCK SLOPE PROTECTION (RSP)

- 2.32 RSP materials shall consist of clean rock, competent for the application, sized and properly installed to resist washout. RSP slopes shall be supported with competent boulders keyed into a footing trench with a depth sufficient to properly seat the footing course boulders and prevent instability (typically at least 1/3 diameter of footing course boulders).
- 2.33 RSP slopes and footing trenches shall feature an underlayment of appropriate grade geo-textile fabric to protect fill from tractive forces.

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2.34 Excavation spoils shall not be side-cast into the channel nor is any manipulation of the substrate of the channel authorized except as herein expressly provided.

EQUIPMENT ACCESS

2.35 Vehicles shall not be driven, or equipment operated, in water covered portions of a stream, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the Agreement to complete authorized work.

CONTACT INFORMATION

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Resource Management Post Office Box 146 Fort Jones, California 96032 Attn: Mr. Larry Alexander Fax: (530) 468-4426 lalexander@sisqtel.net

<u>To DFG</u>:

Department of Fish and Game Northern Region 601 Locust St. Redding, California 96001 Attn: 1600 Program – Tobi Freeny Notification No. 1600-2009-0268-R1 Fax: (530) 225-0324 tfreeny@dfg.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement. Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake

Notification #1600-2009-0268-R1 Lake or Streambed Alteration Agreement Page 9 of 10

or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire on December 31, 2013, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to

Notification #1600-2009-0268-R1 Lake or Streambed Alteration Agreement Page 10 of 10

protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR RESOURCE MANAGEMENT

Larry Alexander

Date

FOR DEPARTMENT OF FISH AND GAME

08/06/10 Date

Acting Habitat Conservation Program Manager

Prepared by: Tobi Freeny Environmental Scientist

DFG - REDDING RECEIVED B 8

TIME : 08/24/2010 14:30

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	Business, Transportation and Housing Agency Department of Housing and Community Development Division of Codes and Standards Mobilehome and Special Occupancy, Parks Programs. APPLICATION FOR PERMIT TO CONSTRUCT	
(SEE REVE	RSE SIDE OF FORM FOR INSTRUCTIONS AND ADDITIONAL INFORMATION)	CIPOR
CONTRACTOR/OWNER BUILDER DECLARATIONS Not required for commercial modulars or Recreational Vehicles	SECTION 1 - OWNER/APPLICANT INFORMATION	DEPARTMENT USE ONLY
1. LICENSED CONTRACTORS DECLARATION	Park Name R-Ranch	ID. No.
under provisions of Chapter 9 (commencing with Section 700) of Divisions of Chapter 9 (commencing with Section 700)	Park Address 16416 Hombrook Road	MP AS MHI
iconse bin full loce and effect.		Closed By
License Class B Uc. Not 82/340 Exp. Date N/A	City HombrookCounty_ Siskiyou	Date Closed
Contractor Resource Management Date 0/19/10	Zip_96044Unincorporated_XIncorporated	COLLECTION INFORMATION
2. Unreaded by affirm under penalty of perjuy, that I am exempt : from the Contractors License Law for the following reason (Sec.	Pork Owner_R-Ranch P.O.A.	Collection #
703). 5), Business and Professions Code: Any city or county which reguines a permit to construct, after, Improve, demoisti	APPLICANT	
or repoir any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or		
she is licensed pursuant to the provisions of the Cantroctors Upense Law (Chapter 9 (commencing with Section 7000) of	16416 Hornbrook Road	Fee Rec'd
Dryson 3 on the Business and Professions Code) of Induine of she is exempt therefore and the basis for the alleged	Horphrook CA 96044	t <u>a antica a transmis</u> t
for a permit subjects the opplicant to a civil periotity of not more than five hundred datas(\$500.):	Tel. No. 530-475-3495	Collection Date
□ t. as owner of the property: ar my employees with waaes as	Architect/Engineer_SHN Consulting Lic, No. 35379	Assioned To
their sole compensation, will do the work and the structure is not intended of offered tor sale (Sec. 7044, Business and	Address 350 Hartnell Ave, Suite B Tel. No. 530-221-5424	Dended 2.1
Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereary, and	Redding, CA 96002	Roufed by
who does such work himself or nerself or falcugn his or her own employees, provided that such improvements are not intended	SECTION 2 - DESCRIPTION OF WORK AND VALUATION	telease, and payment of fees, this
sold within ane year of completion, the owner-builder will have the builder of completion, the owner-builder will have		permit is issued only for items
for the purpose of sole.).	Construct an 86° wide by 75 long railroad flatcar bridge	
L as owner of the property, am exclusively contracting with icensed contractors to construct the project (Sec. 7044,	over Cottonwood Creek to be used as a pedestrian and	
Business and Professions Code: The Contractors Ucense Law: does not apply to an owner of property who builds or improves	equestrian access to R-Ranch properties.	MH ACC/S
therean, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License		MP
aw.). I am exempt under Sec, 8. & P.C. for this reason:		BLDG
n an		хада
OwnerDate	· · · · · · · · · · · · · · · · · · ·	
3. WORKERS' COMPENSATION DECLARATION hereby affirm under penalty of perjury one of the following		MISC.
declarations: I have and withmaintain a certificate of consent to self-insure	Valuation \$135,000.00	
to workers compensation, as provided for by section 3700 of the Labor Code, for the performance of the work for which this		PLC'K
A have and will maintain workers' compensation insurance,	SECTION 3 - ACCESSORY BUILDINGS OF STRUCTURES	S.M.J.
performance of the work for which this permit is issued. My	LXI NEW. LI REINSTALL Standard Plan Approval No.	
Come: State Fund	Awning Carport Porch Cabona	1550E:
Policy Number 1664340-08	X Other (specify) Equestrian Bridge	
(his section need to the completed if the permit is for one rundred dollars (\$100) or less).	CHARTER R-Ranch P.O.A. 530-475-3495	DIVISION PROCESS RECORD
I certily that in the performance of the work for which this permit is issued; I shall not employ any person in any manner so		Application
a to become subject to workers' compensation laws of California, and agree that if I should become subject to	Address 16416 Hombrook Road, Hombrook, CA 96044	Local Planning
variants compensation provisions of Section 3700 of the Labor Code, I shall farithwith comply with those provisions.	RESIDENT N/A Tel. No. N/A	Local Fire
Date	Lot No. N/A	
WARNING: FAILURE TO SECURE WORKERS' COMPENSATION		
O CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED HOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF	SECTION 4 - MANUFACTURED HOME/MOBILEHOME INSTALLATION	Public Works
COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 DF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.	Owner <u>N/A</u>	Environmental Impact
CONSTRUCTION LENDING AGENCY	Address	Neortive
narrows animum on a penary or penary indi inferension construction lending agency for the performance of the work or which this permittic lay and Sec 3007. Chr. Chr.	Resident Lot No	Declaration
enders has presta a socio (accionari cha cu).		School Impact
ender's Address	Serial Number(s) Manufacturer Name/	Fees
	Date of MFG Model Name	Date
L Certify that I have read this application and state that the		for and the
and county ordinances and state lows relating to building construction, and hereby authorize representatives of this	SECTION 5 - PARK OWNER, OPERATOR OR MANAGER SIGNATURE	ISSUED BY
spection purposes	APPROVED;	
12mg le gen 8/19/10 (<u> </u>	Expires
ignature of Applicant or Agent Date	(signature kedulred) / "Date	

Larry Alexander

From:Rhonda Muse [RMuse@sisqtel.net]Sent:Tuesday, August 24, 2010 1:56 PMTo:'Larry Alexander'Subject:FW: 401 Notice of Intent for Cottonwood Creek

FYI

Rhonda Muse Business Resource Associate of Northern California Resource Center PO Box 342 Fort Jones, CA 96032 (530)468-2802 <u>rmuse@sisqtel.net</u>

Office Hours: Tue-Thu 9:00-4:00 Mon & Fri by appointment

-----Original Message-----From: Andrew Baker [mailto:ABaker@waterboards.ca.gov] Sent: Thursday, July 22, 2010 9:44 PM To: RMuse@sisqtel.net Subject: Re: 401 Notice of Intent for Cottonwood Creek

Hi Rhonda. We reviewed your application and you should be good to go. You should get a letter with wdid# as proof. That should be it for this very streamlined permit. I would like the opportunity to look at the project. Please send me an email when the project is underway. Thanks. A. ----Original Message-----From: Rhonda Muse <RMuse@sisqtel.net> To: Baker, Andrew <ABaker@waterboards.ca.gov> Cc: Alexander', 'Larry <lalexander@sisqtel.net>

Sent: 7/14/2010 9:37:57 AM Subject: RE: 401 Notice of Intent for Cottonwood Creek

Andy, Attached is a revised monitoring plan to include turbidity. Thanks Rhonda

Rhonda Muse Business Resource Associate of Northern California Resource Center PO Box 342 Fort Jones, CA 96032 (530)468-2802 rmuse@sisgtel.net

Office Hours: Tue-Thu 9:00-4:00 Mon & Fri by appointment

-----Original Message-----From: Andrew Baker [mailto:ABaker@waterboards.ca.gov] Sent: Thursday, July 08, 2010 4:34 PM To: Rhonda Muse Subject: RE: 401 Notice of Intent for Cottonwood Creek

How about turbidity monitoring or will the creek by dry? Could put a clause turbidity will be monitored visually and action will be taken to correct problems immediately..... >>> Rhonda Muse <<u>RMuse</u>@sisqtel.net> 7/8/2010 4:07 PM >>> Hi Andy, Attached is the page for the monitoring plan. We have already mailed the original notice of intent and the \$77 fee. Would you please add this when it comes through to your desk? Thanks so much!! Let me know if the monitoring plan is sufficient. Rhonda Rhonda Muse **Business Resource** Associate of Northern California Resource Center PO Box 342 Fort Jones, CA 96032 (530)468-2802 rmuse@sisqtel.net Office Hours: Tue-Thu 9:00-4:00 Mon & Fri by appointment -----Original Message-----From: Andrew Baker [mailto:ABaker@waterboards.ca.gov] Sent: Thursday, July 08, 2010 9:14 AM To: Rhonda Muse Cc: 'Larry Alexander' Subject: Re: 401 Notice of Intent for Cottonwood Creek HI Rhonda As previously noted these NOIs need to be mailed to us with a fee (application requirements B.3.), currently \$77. I only looked quick but did not see the monitoring plan (application requirement B.4). >>> Rhonda Muse <RMuse@sisqtel.net> 7/7/2010 11:32 AM >>> Hi Andy, Attached is our notice of intent for the Cottonwood Creek fish passage project. Please let us know if you have further questions. Thanks much Rhonda Rhonda Muse Business Resource

Associate of Northern California Resource Center

PO Box 342

Fort Jones, CA 96032

(530)468-2802

rmuse@sisqtel.net

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,

Office Hours: Tue-Thu 9:00-4:00

Mon & Fri by appointment







Governor

Division of Water Quality 1001 I Street • Sacramento, California 95814 • (916) 341-5455 Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100 FAX (916) 341-5463 • Internet Address: http://www.swrcb.ca.gov

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF

GENERAL WATER QUALITY CERTIFICATION ORDER FOR SMALL HABITAT RESTORATION PROJECTS

I. NOTICE OF INTENT STATUS (see instructions) MARK ONLY ONE ITEM A. 🗆 New Applicator В. 🗌 Change of Information for WDID# II. Owner of Land/Billing Address A. Name **Resource Management** B. Mailing Address PO Box 146 C. City D. County E. State F. Zip 96032 Fort Jones Siskiyou County California I. Phone G. Contact Person H. Title 530-468-2888 Larry Alexander Manager

III. Discharger (if different from owner of the land)

A. Name					
B. Mailing Address					
C. City	D. County		E. State	F. Zip	
G. Contact Person		H. Title			I. Phone

STATE USE ONLY

WDID:	Regional Board Office:	Date NOI Received:
		Check #:

NOTICE OF INTENT

IV. Site Location

3

A. Address No address - on Cottonwood Creek a	pproximately 2 miles north of Hornbro	ook, CA		
B. Nearest Cross Street(s) I-5				
C. County: Siskiyou County	D. Total size of Site (acres): 0.25 acres	E. Assessor's Parcel Number: unknown		
Latitude/longitude (Center of Discha degrees (DD) to four decimals (0.00 DMS: N. Latitude Deg W. Longitude Deg	rge Area) in degrees/minutes/seconds 01 degree) MinSec MinSec	s (DMS) to the nearest ½ second <u>or</u> decimal		
DD: N. Latitude <u>41.9206N</u> W. Longitude <u>122.5658</u>	1 3W'			
Attach a map of at least 1:24000 (1" = 2000') detail of the proposed discharge site (e.g., USGS 7.5 minute topographic map) and pre-project photos.				
F. GPS readings(s) n/a				

V. Discharge Information

Subject		Notes	
A. Name(s) and type(s) of receiving waters:		Receiving water types are:	
river/streambed (Cottonwood Creek tributary to Klamath River)		river/streambed, lake/reservoir, ocean/estuary/bay, riparian area, wetland	
B. Eligibility of receiving water. Provide evidence that the water affected by this discharge is deemed to be outside of federal jurisdiction:		U.S. Army Corps of Engineers jurisdictional disclaimer letter, or	
Army Corps permit applied for		explanation why such a disclaimer is not needed.	
C. Identify all regulatory agencies having jurisdiction over this project. Attach copies of all federal and State license/permit applications or issued copies of licenses/permits from government agencies:		For example: Dept. of Fish and Game Streambed Alteration Agreement, Coastal Commission permit.	
CA Dept of Fish and Game is lead agency, applied for 1600 permit & Army Corps.			
D. Proposed project start date: August 1, 2010	E. Expected date of completion: October 15, 2010		
NOTICE OF INTENT

VI. Project Information

A. Project description:	For example:							
Remove fish passage barrier cons	sisting of an old concrete low water crossir	ng which, overtime, has	Discharge of gravel;					
buckled and settled, creating an e	discharge of fill;							
replaced with a pedestrian/ATV br	placement of woody							
enaineered desian.	debris							
B. Purpose of the entire activity:			For example:					
			Wetland restoration;					
Open up approximately 15 miles of	of additional anadromous habitat within the	e Cottonwood Creek	stream bank re-					
Watershed. Additionally, this proje	ect will keep motorized vehicles out of the	stream.	vegetation; stream					
			bank stabilization					
C. Characterization of discharge	s:		What types of					
Minimal grading of streamhad imp	adjotaly at site after removal of barrier		constituents will be					
Minimal grading of streambed intri	legialery at site after removal of barrier.		discharged?					
Fill and Excavation Discharges	: For each water body type listed below, i	ndicate IN LINEAR FEET	the area of the					
proposed discharge to waters of t	he state, and identify the impacts(s) as pe	rmanent and /or temporar	. For linear					
discharges to drainage features a	nd shorelines, e.g., bank stabilization, stre	eam channel enhancement	t, and wetland/stream					
restoration projects also specify t	e length of the proposed discharge to wa	ters of the state AS FEET.						
Water Body Type	Tem	porary Impact						
	Acres	Linear	Feet					
Wetland								
Riparian								
Stream bed/Stream bank		50 feet (ter	mporary)					
Lake/Reservoir								
Ocean/Estuary/Bay								
Dredging Discharges: Volume	cubic yards) of dredged material to be dis	charged into waters of the	United States.					
		-						

VII. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I certify that the provisions of the permit, including developing and implementing a monitoring program, will be complied with."

Printed Name:

Signature:

Date:

Title:



California Regional Water Quality Control Board North Coast Region

Geoffrey M. Hales, Chairman



Linda S. Adams Agency Secretary www.waterboards.ca.gov/northcoast 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403 Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold Schwarzenegger Governor

July 16, 2010

Mr. Larry Alexander Resource Management PO Box 146 Fort Jones, CA 96032

Dear Mr. Alexancer:

Subject: Receipt of fee for Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) for Cottonwood Creek R-Ranch Fish Passage Project, Siskiyou County, WDID No. 1A10079WNSI

A fee of \$77 for Water Quality Certification/Waste Discharge Requirements was received in our office on July 12, 2010. Please include our WDID No. on all future written communications to our office. Andrew Baker is assigned to review your application If you have any questions, please contact Mr. Baker at (707) 576-2690.

Sincerely,

Son m Haster

Lori M. Foster Associate Governmental Program Analyst

/lmf/

California Environmental Protection Agency

Cottonwood Creek R-Ranch Fish Passage Improvement MONITORING PLAN

51

Monitoring of the project will include the assurance of successful completion of project implementation and adherence to all design, engineering, and permitting requirements. This project will be maintained over time by the landowner. The project implementation is designed for self sustainability.

Pre and post project photos will be taken. At two, six, and twelve month intervals following project completion, monitoring site visits will occur with photos taken at each visit and observed assessments to insure proper functioning condition of project is occurring.

During implementation the creek will be at extremely low flow stage. Turbidity will be monitored visually and action will be taken to minimize the effects immediately. The implementation design calls for diverting the wetted channel to one side or the other of the channel so the majority of instream work will not be in a wetted area.

There will be a specific individual assigned to quality control, inspection, and oversight, and will be present at project site during all phases of implementation. All mitigation provisions as set forth in the Calif. Dept. of Fish & Game, Water Control Board, and Corps of Engineers permits will be adhered to.





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Geotechnical Investigation Report

Bridge over Cottonwood Creek at R-Ranch Resort, Hornbrook, California

Prepared for:

R-Ranch Resort P.O. Box 146 Fort Jones, CA 96032



350 Hartnell Ave., Suite B Redding, CA 96002 530/221-5424

September 2008 507070

CONSULTING ENGINEERS & GEOLOGISTS, INC.

350 Hartnell Avenue, Suite B • Redding, CA 96002 • 530-221-5424 • FAX 530-221-0135

Reference: 507070

September 8, 2008

R-Ranch Resort Attn: Mr. Larry Alexander P.O. Box 146 Fort Jones, CA 96032

Subject: Geotechnical Investigation Report Proposed Bridge over Cottonwood Creek R-Ranch Resort, Hornbrook, Siskiyou County, California

Dear Mr. Alexander:

The enclosed report documents the results of our geotechnical investigation for the proposed bridge across Cottonwood Creek for access across the creek located at the R-Ranch Resort in Hornbrook, California. In the report we discuss geotechnical site characteristics and provide specific recommendations for site preparation and for design and construction of bridge abutments.

Thank you for the opportunity to assist you with this project. If you have any questions, please feel free to contact me at (530) 221-5424.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

Mark Twede, G.E. Senior Geotechnical Engineer

MT: Enclosure



Reference: 507070

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Geotechnical Investigation Report

Bridge over Cottonwood Creek at R-Ranch Resort Hornbrook, California

Prepared for:

R-Ranch Resort P.O. Box 146 Fort Jones, CA 96032

Prepared by:



Consulting Engineers & Geologists, Inc. 350 Hartnell Ave., Suite B Redding, CA 96002 (530) 221-5424

September 2008

QA/QC:____

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A. Subsurface Logs

Acronyms

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J.

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pcf	pounds per cubic foot
psf	pounds per square foot
tsf	tons per square foot
SHN	SHN Engineers & Geologists, Inc.
CBC	California Building Code

1.0 Introduction

This report documents the results of SHN's geotechnical investigations conducted between February to September, 2008, at the proposed bridge location across Cottonwood Creek, to provide access to additional acreage at the R-Ranch Resort, Hornbrook, Siskiyou County, California. The site location is shown in Figure 1.

SHN understands that a single lane bridge structure will be constructed across Cottonwood Creek, to replace an existing concrete pavement that has become impassible due to deterioration and damage. The proposed bridge location will be in the same location as the damaged concrete crossing, as shown on the map in Figure 2. The span length of the bridge is anticipated to be approximately 90 feet. Our geotechnical investigation was limited to shallow test pits at the abutment locations on each side of the creek. We understand the abutments will be founded upon spread footings with wing walls. The bridge deck may act as a restraint against overturning of the abutments.

This report is intended to provide the owner with findings, conclusions, and recommendations related to geotechnical aspects of project design and construction. The recommendations contained in this report are subject to the limitations presented herein. Attention is directed to the Additional Services and Limitations sections of this report.

2.0 Geologic Setting

2.1 Regional Geology

The project site lies within the Cascade Range physiographic province (Bailey, 1966). The Cascade Range extends from northern California north through Oregon and Washington, and consists of a chain of ancestral volcanic centers that began to erupt during Eocene time when the Farallon plate was actively subducting beneath the North American plate. As a result, the Cascade Range is comprised of volcanic deposits associated with ancestral volcanism, and sedimentary deposits associated with depositional basins that were located adjacent to the ancient volcanic centers.

2.2 Local Geology

The site is underlain by alluvial deposits over sedimentary rock belonging to the Hornbrook Formation. The Hornbrook Formation consists of lithified marine sediments of Upper Cretaceous age (Wagner and Saucedo, 1987).

2.3 Seismic Setting

Northern California is a seismically active area that has been subjected to numerous historical earthquakes. Most of the significant (>M5.0) historical earthquakes within Northern California have occurred farther than 40 miles from the project site. Within about the last 200 years, the most significant historical earthquake to affect the project area was a MW 6.0 (moment magnitude) that occurred on September 21, 1993, with an epicenter approximately 39 miles northeast of the project site, near Klamath Falls, Oregon.





No faults are known to pass through the project site (Jennings, 1994). A number of regional and local faults traverse the project region. The nearest active faults are associated with the Cedar Mountain Fault Zone, located approximately 25 miles east of the site.

3.0 Field Investigations and Laboratory Testing

SHN conducted a geotechnical investigation to evaluate subsurface soil conditions and to provide foundation and abutment design criteria for the proposed bridge structure. Our field geotechnical investigation was limited to a site reconnaissance and subsurface exploration through excavation of a test pit on each side of the creek.

The field investigation was conducted on February 25 and June 5, 2008. The creek flow was too high to cross to the east side of the creek during our first field visit. The exploratory test pits were advanced to a maximum depth of 7 feet below the ground surface, where essential refusal on bedrock occurred. The test pits were logged in general accordance with the Unified Soil Classification System. The test pits were advanced using a Case 580 backhoe equipped with an 18-inch bucket. The test pit locations are shown in Figure 2. Detailed soil descriptions are presented on the test pit logs within Appendix A.

After the test pits were logged, they were backfilled with the excavated soil; however, the backfill was not compacted to the requirements for engineered fill.

Selected soil samples were collected from the test pits. Undisturbed samples were not possible due to the gravel and cobble particles in the soil. Laboratory tests were not conducted because the soil material was granular, and foundations will be founded upon the underlying bedrock material.

4.0 Site Conditions

4.1 Surface Conditions

Bedrock is exposed at the bottom of Cottonwood Creek beneath the water surface based on probing across the creek. The banks of the creek are sloped at an approximate 3H:1V to 4H:1V slope gradient. The test pits were excavated at the top of the creek banks adjacent to the bridge approaches. Beyond the top of the stream banks, the ground is relatively flat for an extended distance. Vegetation consists of grasses, trees, and brush.

4.2 Subsurface Rock and Soil

The subsurface materials observed within the test pits consisted of alluvial deposits of sand, silt, cobbles, and gravel overlying the Hornbrook Formation bedrock. The alluvium was generally loose to medium dense, and contained a large range of particle sizes (well graded) from fine sand to cobbles. The Hornbrook Formation was moderately fractured, slightly weathered, soft siltstone. Soft is defined as easily broken by light blows with a hammer. At approximately 18 inches below the top of the Hornbrook Formation, the siltstone became harder and very difficult to excavate with the backhoe.

The thickness of alluvium over the bedrock was 5.5 to 6 feet at the location of the test pits.

4.3 Groundwater

Perched water within the alluvium (on top of the siltstone bedrock) should be anticipated during and following periods of precipitation or during periods of higher water flow volumes within the creek. Groundwater was observed within the test pits seeping into the test pits, perched above the bedrock. The groundwater level is anticipated to match the water elevation in the stream channel immediately adjacent to the creek.

4.4 Expansive Soil

The silty granular materials observed during excavation of the test holes have a low plasticity and are judged to be non-expansive, and the risk of adverse effects to the project due to expansive soil is very low.

4.5 2007 CBC Soil Site Class

For structural design of the bridge structure for seismic loads, a soil site class of "B" may be used in accordance with Section 1613.5.2 of the 2007 California Building Code (CBC). The site class was based on the apparent hardness of the shallow bedrock material encountered during our field investigation. The mapped spectral accelerations (Site Class B) for short periods (S_s) and at 1-second period (S_1) ground motion are 0.59 and 0.25, respectively.

5.0 Conclusions

Based on the results of our field investigations, it is our opinion the project site can be developed as proposed, provided our recommendations are followed, and that noted conditions and risks are acknowledged.

The primary geotechnical site considerations are the presence of loose alluvial materials on the banks of the creek that have a low bearing capacity and low resistance to erosion. Recommendations are provided below for deepened foundation criteria to support the bridge abutments upon the relatively shallow bedrock beneath the alluvial soil.

Due to the variability of soils deposits and the inherent limitations of current engineering and construction practices, some post-construction vertical settlement is inevitable. We estimate that with the project constructed in accordance with the following recommendations, total post construction settlement is not likely to exceed ½ inch for structures founded upon the siltstone of the Hornbrook Formation. Post-construction differential settlement is estimated to be less than one-half of the estimated total settlements over a distance of 40 feet. Settlement should occur shortly following loading of the foundations.

6.0 Recommendations

6.1 Site Preparation and Grading Recommendations

All grading and earthwork should be performed in accordance with the Siskiyou County Grading Ordinance. We understand that fill placement is not proposed for the project, except behind the abutments at the road approaches. The following recommendations are presented to prepare the site for the planned site improvements.

We recommend stripping all organic soil, loose soil and debris from areas to receive structural fill or proposed improvements, extending 3 feet outside of proposed fill areas. After stripping deleterious materials and disposal outside of the project area, excavate as required to accommodate design grades.

Material generated from excavation of the abutments should not be placed loosely on slopes. We recommend that excavated material should be removed from the project area, or used as structural fill materials.

Structural fill material should consist of a granular mixture of sand and gravel, with less than 20 percent fines material (finer than the No. 200 sieve). The fill material should be non-plastic, or be classified as low plasticity material (Liquid Limit less than 35, Plasticity Index less than 12), containing no organic material or debris, and no individual particles over 4 inches across. Gravelly material should be well graded to include a variety of particle sizes, to minimize relatively large void spaces into which fine-grained soils can migrate. The on-site granular soils that we encountered in our subsurface investigation would qualify for use as structural fill, except for some over-sized cobbles, which should be sorted out prior to use as structural fill.

Structural fill should be placed to design grades and compacted to a minimum of 90 percent of the maximum relative dry density as determined by the current ASTM D1557 test method. We recommend that granular fill be moisture conditioned to within 2 percent above or below the optimum moisture content, prior to compaction. Fill material should be placed in thin lifts not exceeding 8 inches in loose thickness.

For placement of fill on sloping ground, a keyway must first be excavated to create a level working area for fill placement with a width at least equal to the width of the soil compactor. The keyway should be observed by a geotechnical engineer prior to placement of fill materials. The existing ground must be benched as the fill is brought up in layers with a maximum thickness of 8 inches. Fill placement must be observed and tested for compaction during construction. Fill slopes should be graded no steeper than 2H:1V.

6.2 Spread Foundations

We recommend that the proposed spread foundations be extended down through the alluvial soil and be founded entirely within native, undisturbed rock of the Hornbrook Formation. The base of the foundations should be embedded a minimum of 18 inches below the top of the Hornbrook Formation, which is easily identified by a characteristic shale in contrast to subrounded gravel and sand. The embedment depth may be less than 18 inches, but no less than 12 inches, if backhoe refusal occurs during construction. All foundation excavations should be made level, with the exception of vertical steps. The footing excavations should be cleaned of loose soil and debris prior to construction of the footings.

We recommend that foundations be designed so they do not exceed an allowable bearing pressure of 8,000 pounds per square foot (psf) for dead load plus live loads. The allowable bearing pressure includes a factor of safety of 3, and is a net value; therefore, the weight of the foundation extending below the subgrade level may be neglected when computing dead loads. The allowable bearing value may be increased by one-third to account for the short-term effects of wind and/or seismic loading.

Resistance to lateral loads may be provided by frictional resistance between the bottom of concrete foundations and the underlying bedrock, and by passive soil pressure against the sides of the foundations. A sliding friction coefficient of 0.40 may be used for the footing/soil contact. Frictional resistance may be calculated in conjunction with an allowable lateral passive pressure represented by an equivalent fluid weighing 300 pounds per cubic foot (pcf) for lateral loadings, such as earth pressure, wind, or earthquake loads. Lateral passive pressure can be calculated where footings bear laterally against competent undisturbed native soils or rock, or structural fill. The provided lateral resistance parameters are ultimate values; therefore, a suitable factor of safety should be applied to these values for design purposes.

Based on the conditions encountered during excavation of the test pits, it will be necessary to shore or lay back the sidewalls of the footing excavation within the alluvial soil until the concrete is poured.

6.3 Earth Retention at Abutments

Retaining walls retaining the native alluvial material should be designed to resist a minimum lateral pressure represented by an equivalent fluid weighing 38 pcf (pounds per cubic foot) for cantilevered walls (capable of tilting), and 60 pcf if they are non-cantilevered walls (structurally restrained from tilting), provided the walls are backdrained as recommended below.

The abutment wall foundations should be embedded into competent, undisturbed native rock as discussed in the previous section. We understand that the wing walls will be elevated and cantilevered from the bridge abutment wall structure.

Lateral forces may be resisted by the passive pressure exerted on the side of the abutment footings and by friction along the base. The passive pressure can be taken as that pressure exerted by an equivalent fluid weighing 350 pounds per cubic foot (pcf), and the sliding friction coefficient may be taken as 0.4. The footings for the walls should be embedded a minimum of 18 inches into native, undisturbed rock or soil. The potential scour depth should be neglected for long-term lateral resistance calculations.

The design soil pressures presented above are dependent upon positive drainage being provided behind the retaining walls, to avert potential hydrostatic pressure build-up. We suggest that a backdrain system be placed behind the wall, with a drainpipe or weep holes at the bottom of the wall, and with the drainrock extending up to within two feet of finished grade. This backdrain system should be encased in geotextile (filter) fabric, and should have a gravity drainage outlet. Drainage outlets should be screened to prevent entry of animals.

For drainrock material used in the backdrain, use free draining, durable, granular material, 100 percent passing the 1-1/2 inch sieve, and not over ten percent passing the No. 4 sieve.

For backdrain filter fabric, use 6-ounce per square yard minimum weight, non-woven, geotextile fabric by a reputable manufacturer, specifically designed for the purpose of allowing water passage while retaining soil materials.

Perforated pipe should be durable for the depth of burial, and at least three inches in minimum diameter. Holes or slots should be matched to surrounding permeable material such that the finer particles do not enter the pipe during or subsequent to installation.

Weep holes, if used, should be spaced at a maximum of 10 feet between holes, and have a minimum open diameter of 3 inches.

Geocomposite drainage mats, with a drainage net attached to geotextile fabric, may be used as an alternative to the geotextile encased gravel. Only granular backfill material with a fines content (passing No. 200 Sieve) less than 3 percent, should be used up against the geocomposite drainage materials to avoid clogging of the geocomposite.

Backfill consisting of relatively "impermeable" soil, at least 1.5 feet thick, should be placed above the permeable backdrain to limit infiltration of surface water. This "impermeable" backfill may consist of compacted native silty soil.

Care must be exercised when backfilling behind the retaining walls to avoid overloading the retaining structures with compaction loads.

The surface should be sloped such that runoff is not allowed to pond above the backdrain system. All surface runoff conveyance systems should be isolated from the backdrain systems, and provided with positive gravity flow discharge.

7.0 Additional Services

7.1 Plan and Specification Review

We have assumed, in preparing our recommendations, that we will be retained to review those portions of the plans and specifications that pertain to earthwork and foundations. The purpose of this review is to confirm that our earthwork and foundation recommendations have been properly interpreted and implemented during design. If we are not provided this opportunity for review of the plans and specifications, our recommendations could be misinterpreted.

7.2 Construction Phase Monitoring

In order to assess construction conformance with the intent of our recommendations, it is important that a representative of our firm:

- Monitor foundation excavations; and
- Monitor placement of structural fill, if applicable.

This construction phase monitoring is important because it provides the owner and SHN the opportunity to verify anticipated site conditions, and recommend appropriate changes in design or construction procedures if site conditions exposed during construction vary from those described in this report. They also allow SHN to recommend appropriate changes in design or construction procedures if construction methods adversely affect the competence of onsite soils to support the structural improvements.

8.0 Limitations

This report has been prepared for the specific application to the design and construction of the proposed bridge as discussed herein. SHN prepared the findings, conclusions, and recommendations presented herein in accordance with generally accepted geotechnical engineering practices at the time and location that this report was prepared. No other warranty, express or implied, is made.

Soil and rock materials are typically not homogeneous in type, strength, and other geotechnical properties, and can vary between points of observation and exploration. In addition, groundwater and soil moisture conditions can vary seasonally and for other reasons. SHN does not and cannot have complete knowledge of the subsurface conditions underlying a site. The conclusions and recommendations presented in this report are based upon the findings at the points of exploration, interpolation and extrapolation of information between and beyond the points of observation, and are subject to confirmation of the conditions revealed by construction. The recommendations provided in this report are based on the assumption that an adequate program of tests and observations will be conducted by our firm during the construction phase in order to evaluate compliance with our recommendations.

Findings of this report are valid as of the date of issuance; however, changes in condition of a property can and will occur with the passage of time. Furthermore, changes in applicable or appropriate standards occur whether they result from legislation or advancement in technology. Accordingly, findings of this report may be invalidated wholly or partially by changes outside of SHN's control. This report is subject to SHN's review and remains valid for a period of two years, unless SHN issues a written opinion of its continued applicability thereafter. If the scope of the proposed construction, including the proposed loads, grades, or structural locations, changes from that described in this report, our recommendations should also be reviewed.

The scope of SHN's geotechnical services did not include any assessment for the presence or absence of any hazardous/toxic substances in the soil, ground water, surface water, or atmosphere, or the presence of any environmentally sensitive habitats or culturally significant areas.

9.0 References

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Archaeological Resource Report FOR Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California

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Summary/Abstract:

This is an Archaeological resource report for the proposed removal of a concrete low water crossing which has created a fish passage barrier in Cottonwood Creek. This project is receiving federal funds for the project located on private land, known as the R Ranch, in Siskiyou County.

The California Northeast Information Center at Chico returned information that no sites had been recorded at the location, indicating no known sites.

No pre-historic or historic sites were located during the field survey.

Introduction:

This archaeological assessment was undertaken to comply with the California Environmental Policy Act (CEQA) standards as well as section 106 of the National Historic Preservation Act (NHPA) 1966. Local Native American Tribes were contacted in regards to the proposed action.

The Northern California Resource Center, a non-profit sponsor of the Upper Mid Klamath Watershed Council, is proposing to remove a low water crossing which has created a fish passage barrier in Cottonwood Creek, historically one of the highest producing salmon streams contributing to the Klamath River. A recreational bridge replacement is proposed for replacement of the fish barrier, which would be above the creek, and not present a fish barrier.

The Upper Mid Klamath Watershed Council's Board of Directors' Watershed Plan identifies this project as a "high priority project". The project is located on Cottonwood Creek, a critical tributary to the Klamath River, and will alleviate the current situation in which Coho, Chinook and Steelhead are prevented from migrating past this point to areas upstream in which additional habitat improvements have been established including: sediment reduction, and fish screening of diversions on private and public lands.

This fish barrier project is one of the last needed actions in order to open up approximately 15 miles of additional anadromous spawning area within the Cottonwood Creek Watershed.

Location

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The project is located on Cottonwood Creek on the R-Ranch in Hornbrook, California. R-Ranch is a private-ownership, gated ranch and recreational community on 5, 119 acres. It is approximately two miles north of Hornbrook, California, T47N, R2E, in Section 17, Hornbrook USGS Quadrangle. From the town of Hornbrook, Calif., take Interstate 5 north to next exit and turn right to Cottonwood Creek and the R-Ranch Recreation area to project site

The immediate project area is primarily recreational use and private residences. Upstream of the project the land use is primarily agriculture and timber management on private and public lands.

The maps included with this report are an aerial project location map, topographic map, and a historic GLO Plat map surveyed in 1875.

The survey was general in nature. Jim Rock with Rock Consulting is the Principal Investigator, Kathleen Tyler assisted with the survey for the extent of the project. Qualifications included with this report. Surveyors have several years of Archaeological survey experience. The project area and surrounding vicinity, which has the potential of being affected, was surveyed. The extent of the project is on private land. A complete survey was initiated on April 9, 2009 with a follow up visit on March 17, 2010. The exception to coverage was in the creek bed itself. During the second visit, March 17, 2020, the bottom could be seen from the bank.

This was a surface survey. No surface survey can guarantee to have located subsurface archaeological materials if they are present. If prehistoric or historic material is discovered in the course of future development, work at the site should be suspended until the finds are evaluated by a qualified archaeologist and, in the case of prehistoric material; the appropriate Indian tribes are consulted.

Setting:

Natural:

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In the project area, native vegetation is mostly riparian woodland, confined to a narrow strip (~20 feet) along the creek corridor. Apparently, there is adequate water to support the terrestrial broadleaf deciduous plant community along its narrow margins. The species found along the corridor need to cope with the long, dry summers hence the narrow margin of riparian plants along the creek. Beyond the riparian area, which is upslope and dry, most of the native vegetation consists of perennial bunch grasses and forbs, with some semblance to a chaparral zone. However, historically this area has been highly disturbed from mining, roads, and the railroad just a few hundred feet away on the east side of the creek. Currently the area is infested with several exotic species and the noxious weeds Himalayan blackberries and yellow starthistle. On the west side of the creek a camping ground, with maintained lawns and camping areas, is devoid of natural vegetation.

The main project area in regards to the *Soil Survey of Siskiyou County* (USDA 1981) is termed **Riverwash**. This map unit is on a flood plain, which is flooded almost every year. The **Riverwash** map unit is described as "unstabilized and stratified sandy, silty, clayey, stony, cobbly and gravelly sediment, which is reworked by water most every year".

Other observations made concerning the environmental setting, was the considerable amount of deer and avian sign. Various songbirds were seen around the project area, utilizing the narrow riparian zone. Rabbit sign as well as coyote sign were noticed as well as lizards and a water snake.

Cultural:

Prehistoric:

This project is located within the accepted traditional territory of the Shasta. The Shasta language was of the Hokan language family, accepted as the oldest language group in California. This language family is part of a more remote Hokan linguistic phylum, which also includes the Karuk, Chimariko, Palainihan, Yana, Pomo, Esselen, Salinan, Chumash, and Yuman. The scattered distribution of various Hokan language families around California suggests the possibility of local development of a Shasta language in relative linguistic isolation since the middle or early Holocene Period. It is plausible to suggest that the linguistic ancestors of the Shasta people continuously occupied this region for many years.

Since the territory where the Shasta lived provided all of their food needs, they developed a subsistence economy based on hunting, fishing, and gathering patterns. Seasonal base camps were located at key resource areas and were visited once a year depending on the availability of the targeted subsistence resource. Upon completion of the food gathering cycle, the Shasta returned to their permanent villages with their food stores to spend the winters. Structures in winter villages might include rectangular multi-family dwellings, assembly houses, communal men's sweathouses, smaller communal sweathouses, and menstrual huts for the women.

The Shasta Indians utilized a large array of animal food sources such as deer, elk, antelope, big horn sheep, bear, rodents, turtles, crayfish, insects, mussels, eels, salmon, other fish, small mammals, and various birds. The Shasta similarly had a wide variety of plants, which occupied a substantial part of their living resources. In general, the seasons dictated their food procurement activities. Over hundreds of years of co-existence with the local flora and fauna, the Shasta developed a sophisticated knowledge of their environment that would sustain them until contact with the Euro-Americans. Most of the project area could have been passed through as they followed their prehistoric pattern of hunting and gathering.

House pits, middens, fire rings, hearths, and burial locations (the Shasta sometimes buried their deceased by placing rocks over them) are features typical of Shasta sites. The "rain rocks" or "baby rocks, a form of cupule rock art, have been found along the Klamath River, of which Cottonwood Creek is a tributary. Sometimes food was stored by piling rocks over baskets or placing them in talus pits, otherwise food was stored in baskets or caches near the shelters. Other artifacts found in the later period (Pacific) were Gunther barbed projectile points made out of obsidian, jasper, and CCS (cryptocrystalline silicates). Grinding stones (metates) were used for the processing of roots and other plants. The hopper/mortars were used for processing acorns.

The Shasta people seem to have been notably active in inter-ethic trading, according to Shirley Silver, Shasta made obsidian large ceremonial blades were traded for items that were not readily available in Shasta territory. Salt was also a trading commodity that the Shasta seemed to have an abundance of for trade. For instance, the Shasta received beads, deer hides, and woodpecker scalps from the Wintu tribe for obsidian and *Dentalia*. The Karuk, Hupa, and Yurok tribes traded acorns, pepperwood gourds, baskets, canoes smoked fish, *Dentalia, Haliotis*, and salt, for pine nuts, juniper seeds, deer skins, woodpecker scalps and obsidian blades from the Shasta.

Ethnographic description of the Shasta people are found in the early twentieth century accounts of culture, as recorded by anthropologists with the assistance of surviving Shasta elders. Earlier accounts by European-American travelers and settlers supplemented this information. Primary sources include Powers (1877), Dixon (1905 and 1907), Curtis (1924), Kroeber (1925), Voegelin (1941), and Holt (1946). Shirley Silver published the best general synthesis of the Shasta culture in 1978.

Euro American:

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The Hudson Bay Company sent trappers into this area in 1826 shortly after Peter Skene Ogden's Snake Country Brigade" entered this territory.

Gold was located west of Cottonwood Creek, which is currently west of I-5. With the influx of miners, settlers and pioneers travel to and from Oregon along the California-Oregon Stage Route Stop, passing through the area on the east side of Cottonwood Creek and continuing over the Klamath River at the bridge crossing at Klamathon. In 1886, a railroad station at the town of Hornbrook was created. The Horn family operated the "Horn Ranch", built a hotel close to the new built railroad tracks in 1886, to accommodate train crews and passengers. Cottonwood Creek was located behind the property, and instead of calling this location "Horn Creek", they decided it sounded better to call it Hornbrook.

For approximately forty years, Hornbrook was the hub for a multitude of "helper engines" needed on the Siskiyou grades to the north and Snowden Hill to the south. Hornbrook was a very lively town; most of its businesses were open 24 hours. During this active time, Oregon was a dry state, so a thriving liquor business was also part of the scene.

Hornbrook expired and became just a shell, after the Natron project was finished in 1926. The Natron project replaced the laborious rail over the Siskiyou Mountains.

Klamathon a logging town in the later part of the 19th century, was its neighbor up river along the Klamath River.

In the *Recorded Observations and Memories of George Wright* by Mark Lawrence 1992, "There was gold in the mountains west of Hornbrook, and many people made mining and prospecting their business. Some of the early settlers told me that an Indian village was located where Hornbrook now is. It is no wonder that the Indian lived there, because there were plenty of deer nearby, and Cottonwood Creek was alive with fish".

In reference to Cottonwood Creek Bernice Pinkham writes, "There was a time when it was not overgrown, but was a lovely stream to look at. In the winter, children often skated on it, in the spring they fished, and in the summer, they played and swam in it....One spring while all the streams were bursting with floodwaters, the upper bridge was washed down stream, and it did not stop until some of tit was rammed through the floor of the bridge downtown. The course of the stream changed some at that time, and willows seemed to spring up everywhere, changing its profile".

Previous Surveys

The Northeast Center of the California Historical Resources Information System (CHRIS) was contacted regarding the this project. Information on previous archaeological survey results and any known recorded sites were requested. (IC Report # D10-8) (Copy enclosed).

Research Issues

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The archaeological research issues considered were as follows:

- 1. The reconstruction of past life ways which includes investigation of past human subsistence and ecology, settlement patterns, social systems, and religion ideology.
- 2. The delineation of cultural processes, the study of basic underlying cultural regularities and processes that drive past human societies.

Studies of settlement systems consider the nature of prehistoric historic land use and its role in determining site function and location. The ethnographic reference to the location as a "village" or a "settlement" may reveal a great deal about the length of occupation and the social groups that used the site.

The presence of materials derived from other areas and artifact styles and types shared over a broad geographic area provides inferences regarding trade, exchanges, dependence, and social interactions. It is also important to understand the nature of trade relationships, such as ad hoc trade versus formal exchange networks, and to investigate the role of these interactions in local adaptations to the natural and social landscape.

Research Design

The methodologies used in this archaeological survey, completed by Resource Management, were in compliance with the California Environmental Quality Act (CEQA) standards as well as Section 106 of the National Historic Preservation Act (NHPA) of 1966.

James T. Rock, private consultant working with Resource Management contacted the Northeast Center of the California Historical Resources Information System (CHRIS) regarding the proposed concrete low water crossing removal project. Information on previous archaeological survey results and any known recorded sites were requested. The response to these requests resulted in a negative to any known historic or prehistoric site in the project area.

The recommendation from the CHRIS center was to contact the local Native American representatives in regards to any traditional cultural properties within the project boundary. It was also a recommendation to check historic GLO plat maps for aid in identification of unrecorded historic cultural resources. (Response Enclosed). These recommendations were followed.

Literature research was conducted using various sources, which include consultation with the Siskiyou County Museum staff, reference books and websites on the history of the Hornbrook area (See reference page). Historic GLO plat map (Copy Enclosed) and the Soil Survey Map of the area were reviewed.

The methodical approach utilized for this survey was with a cultural material perspective. Research conducted in the open areas lends itself well in the investigation of prehistoric and historic land use.

If the Shasta people followed a seasonal round of resource exploitation, then this should be reflected in their material remains.

- 1. If the area was utilized for plant collecting, then plant harvesting and/or processing artifacts should be present.
- 2. If the area utilized for hunting or fishing, then the processing and storage artifacts and debitage could be present in the area.
- 3. If the area was used historically for mining, farming, ranching or other land development, then evidence of fencing, water, or animal control could be evident. Other associated artifacts could also be present. These might include structures, building foundations, other remains, or associated refuse.
- 4. If the area was used historically for mining, then they could be evidence of tailings, implements, ditches, or settling ponds. Other associated artifacts or features could also be present. These might include structures, building foundations, other remains, or associated debris.

To implement an evaluation of prehistoric or historic resources that might be located within the project boundary a field survey was conducted to identify any site that might be impacted by the project. The field survey was conducted on April 9, 2009 and March 17, 2010. Conducting a complete coverage survey, except for the creek bottom, this was viewed in March. Most of the The survey was only on properties where permission was established.

The Registered Professional Archaeologist for this project was James T. Rock of Rock Consulting and former Klamath National Forest Archaeologist. (Qualifications enclosed)

Kathleen Tyler CDF Archaeological Training Certificate course # 74, June 2001, recertified 2006, Washington State Office of Archaeology and Historic Preservation Cultural Resource Training Completion October 2004, and Master's degree candidate in Archaeology, assisted Jim Rock, as did Allenya Manning Archaeological Technician in completing the field survey and research for Resource Management, Fort Jones, California.

Report of Findings

No prehistoric sites were located. The project area property most likely was passed over by prehistoric people in their hunting and gathering patterns. Some of the native flora, which is

limited and interrupted due to roads, current residences, parking areas and previous farming, could have been a traditional use plant area, given the location next to a creek and the soil of the valley.

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The GLO plat map requested from BLM of Township 47 North, Range 6 West, and Mt. Diablo Meridian was reviewed. This map show (enclosed) GLO plat map dated December 17, 1875. The map shows where the historic California and Oregon Stage Route was located. This Stage route was located on the east side of Cottonwood Creek. The old route appears to be were the current railroad line is located; both are out of the project influence.

Discussion/Interpretation

Maps and the historical record indicate this area was mined and occupied historical. However, over the course of time and use of the land for agriculture, recreation, frequent flooding, modern railroad use, road building, and residence building the integrity of any historical or prehistoric site has been destroyed. No evidence of prehistoric occupation was located, but it was likely prehistoric people used the area.

Management Considerations

It is determined the proposed project will have no impact upon significant pre-historic or historic cultural resources.

Recommendations

The proposed removal of the low water crossing and fish barrier and installation of a replacement bridge on Cottonwood Creek should proceed.

Native American Consultation

A letter of notification was sent February 3, 2010 to the Quartz Valley Indian Reservation and to Mary Carpelan Shasta Nation Cultural Representative requesting information on any known cultural sites within the project boundary. The letter detailed the project boundary and planned activities.

Only one response was received, March15, 2010 from the Quartz Valley Indian Reservation (copy enclosed), stating to their knowledge there were no cultural sites in the area of the project or adjacent to it.

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Soil Survey of Siskiyou County, California (Central Part) (1983) United States Department of Agriculture, Soil Conservation Service

Web Sources:

Southern Oregon Digital Archives, Southern Oregon University, Ashland Oregon <u>http://soda.sou.edu/</u>
Maps:



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Cottonwood Creek Fish Passage Improvement Project USGS Hornbrook 7.5' Quad T47N R6W Section 17



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Aerial View Map Cottonwood Creek Walking Bridge Replacement Project USGS Hornbrook 7.5' Quad Less than 1 acre (T47N R6W Section 17)



GLO Plat map 1'876 red indicates approximate project location Cottonwood Creek Walking Bridge Replacement Project(T47N R6W Section 17)



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RESPONSES:

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Northeast Center of the California Historical Resources Information System	BUTTE GLENN LASSEN MODOC PLUMAS SHASTA	SIERRA SISKIYOU SUTTER TEHAMA TRINITY	Building 25, Soite 204 Chico, California 95929-0377 Phone (530) 898-6256 Fax (530) 898-4413 ueinfocntr@csuchico edu
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February 5, 2010

Rock Consulting 418 South Oregon Street Yreka CA 96097 ATTN: Mr. James T. Rock

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Invoice sent to: Resource Management PO Box 342 Fort Jones CA 96032 ATTN: Mr. Larry Alexander

> I.C. File # D10-8 Priority Records Search

RE: Cottonwood Creek Walking Bridge T47N, R6W, Section 17 USGS Hernbrook 7.5' and 15' quads Less than One Acre, estimated from project map (Siskiyou County)

Dear Mr. Rock

In response to your request, a priority records search for the projects cited above was conducted by examining the official maps and records for archaeological sites in Siskiyou County. Please note that this record search includes the requested 1/4-mile radius surrounding the project area

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RESULTS:

<u>Prehistoric Resources:</u> According to our records, no prehistoric sites have been recorded in the project area or its 1/4-mile vicinity. The project is located in a boundary region utilized by Shasta and Karuk populations. Unrecorded prehistoric cultural resources may be located in the project area.

<u>Historic Resources:</u> According to our records, no historic sites have been recorded in the project area or its 1/4-mile vicinity. Unrecorded historic cultural resources may be located in the project area.

The USGS Hornbrook (1955) 15' quad map indicates that Southern Pacific Railroad, Cottonwood Creek.. Hornbrook, a Quarantine Station, B.R. Alden Historical Marker, Hutton Creek, roads, and structures are located in the project vicinity.

<u>Previous Archaeological Investigations:</u> According to our records, the project area has been previously surveyed for cultural resources. The surveys are plotted in green on the NEIC-generated map enclosed and copies of the survey reports, listed below are included with this letter.

Arrington, Cindy, and Bryon Bass (SWCA)

2006 Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California. IC Report 7362

Brown, William (Qwest Communications)

2001 Survey Report for Dunsmuir to Hilt California on Behalf of Qwest Communications. IC Report 3923

Literature Search: The official records and maps for archaeological sites and surveys in Siskiyou County were reviewed. Also reviewed: <u>National Register of Historic Places</u> -<u>Listed properties and Determined Eligible Properties</u> (1988, Computer Listings 1966 through 7-00 by National Park Service), <u>California Register of Historical Resources</u> (2009), <u>California Points of Historical Interest</u> (1992), <u>California Inventory of</u> <u>Historic Resources</u> (1976), <u>California Historical Landmarks</u> (1996), <u>Directory of</u> <u>Properties in the Historic Property Data Files for Siskiyou County</u> (2009), <u>Handbook</u> <u>of North American Indians, Vol. 8, California</u> (1970), and <u>Historic Spots in California</u> (1966).

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RECOMMENDATIONS:

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We recommend that you contact the appropriate local Native American representatives for information regarding traditional cultural properties that may be located within project boundaries for which we have no records. Additionally, you may want to consult historic GLO plat maps in order to aid in the identification of unrecorded historic sites, which may be located within project boundaries.

The charge for this record search is \$339.00 (1.5 hours of Priority Information Center time @ \$225.00 per hour, and 10 photocopies @ \$0.15 per copy). An invoice will follow from the CSUC Research Foundation for billing purposes. Thank you for your concern in preserving California's cultural heritage, and please feel free to contact us if you have any questions or need any further information or assistance.

Sincerely,

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Mim. Roeder, M.A. Research Associate

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Quartz Valley Indian Reservation Tribal EPA Department 13824 Quartz Valley RD Fort Jones, CA 96032



ATTN: Kathleen Tyler Resource Management P.O. Box 146 Fort Jones, CA 96032

March 15, 2010

Re: Proposed footbridge replacement on "R" Ranch property

To Whom It May Concern:

Thanks for your notification regarding the proposed footbridge replacement on "R" Ranch property, just north of Hornbrook, CA. Legal description is T 47N, R 6W, NW1/4 of the SE1/4 of Section 17 MDM County of Siskiyou.

At this time we have no knowledge of any cultural sites within or adjacent to the project area. However, the project area is in Tribal ancestral territory and we are very interested of any archeolog cal findings.

Thank you,

Tonya Lindsey Tribal EPA Assistant Quartz Valley Indian Reservation Tribal EPA Department 13824 Quartz Valley Rd Fort Jones, CA 96032

Statement of Qualifications

James T. Rock, RPA 418 South Oregon Street Yreka, California 96097

Educations:

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- B.A. in Political Science, Sociology, and History
- M.S. in Sociology
- M.A. in Anthropology

Honors and Awards:

- Phi Alpha Theta (National Honors in History) 1966
- NSF Fellowship Summer Institute in Anthropology (University of Colorado)
- Teaching Assistantship (University of Wisconsin at Milwaukee)
- Teaching Assistantship (University of Arizona)
- Instructor, Graduate Field School in Archaeology (University of Arizona)
- Society of Professional Archaeology (SOPA) Since 1976
- President, Siskiyou County Historical Society
- Registered Professional Archaeologist (Conversion from SOPA in 1999)
- Chair, Historic District and Landmark Commission (City of Yreka)

Work Experience:

Fieldwork:

- Archaeological Excavation and Survey in States of: Kansas, Wisconsin, Illinois, New Mexico, Arizona, California, Oregon, and Washington; also in Mexico.
- Private Contractor----Rock Consulting

Teaching:

- Wisconsin State University, Whitewater
- University of Wisconsin, Milwaukee
- University of Arizona
- University of Nevada at Reno
- Visiting Scholar in Residence a the University of Nevada, Las Vegas
- Pacific Northwest Region, U.S. Forest Service (USDA)
- Pacific Southwest Region, U.S. Forest Service (USDA)
- State of Washington Department of National Resources and Department of Transportation.

Publications and Professional:

Written, published, or presented over one hundred articles on Archaeology, History, and the American West.

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Shasta Nation Ms. Mary Carpelan P. O. Box 1054 Yreka, CA 96097

Dear Ms. Carpelan,

This letter is in reference to a proposed footbridge replacement (low water crossing) on "R" Ranch property, which crosses over Cottonwood Creek and connects to a hiking trail, just north of Hornbrook California.

The legal description is T 47N, R 6W, NW 1/4 of the SE 1/4 of Section 17 MDM County of Siskiyou. (See enclosed map).

This is a request for information regarding any unrecorded traditional cultural properties that may be located within the project boundaries for which we have no records and you would like protected. Your written response will be included with the final Archaeological Assessment of this project.

Regards,

Kathleen Tyler

Project Coordinator Resource Management P.O. Box 146 Fort Jones, CA. 96032 (530) 468-2888 Feb. 3, 2010

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Quartz Valley Indian Reservation Evette Lewis 13601 Quartz Valley Road Fort Jones, CA 96032

Dear Evette Lewis

This letter is in reference to a proposed footbridge (low water crossing) replacement on "R" Ranch property, which crosses over Cottonwood Creek and connects to a hiking trail, just north of Hornbrook California.

The legal description is T 47N, R 6W, NW1/4 of the SE ¼ of Section 17 MDM County of Siskiyou. (See enclosed map).

This is a request for information regarding any unrecorded traditional cultural properties that may be located within the project boundaries for which we have no records and you would like protected. Your written response will be included with the final Archaeological Assessment of this project.

Regards,

Kathleen Tyler

Project Coordinator Resource Management P.O. Box 146 Fort Jones, CA. 96032 (530) 468-2888

Quartz Valley Indian Reservation Tribal EPA Department 13824 Quartz Valley RD Fort Jones, CA 96032



ATTN: Kathleen Tyler Resource Management P.O. Box 146 Fort Jones, CA 96032

March 15, 2010

Re: Proposed footbridge replacement on "R" Ranch property

To Whom It May Concern:

Thanks for your notification regarding the proposed footbridge replacement on "R" Ranch property, just north of Hornbrook, CA. Legal description is T 47N, R 6W, NW1/4 of the SE1/4 of Section 17 MDM County of Siskiyou.

At this time we have no knowledge of any cultural sites within or adjacent to the project area. However, the project area is in Tribal ancestral territory and we are very interested of any archeological findings.

Thank you,

Tonya Lindsey Tribal EPA Assistant Quartz Valley Indian Reservation Tribal EPA Department 13824 Quartz Valley Rd Fort Jones, CA 96032

BOTANICAL RESOURCE SURVEY

FOR

Proposed Cottonwood Creek Fish Passage Improvement Project Hornbrook, California



Prepared by:

Resource Management P.O. Box 146 Fort Jones, CA 96032 Phone: (530) 468-2888; FAX (530) 468-4426

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Introduction:

This report was prepared as a summary of the botanical assessment required by NEPA in accordance with EPA guidelines. This project is receiving federal funds for the project located on private land, known as the R Ranch, in Siskiyou County. In addition the evaluation is in sufficient detail to determine its effects on "special status species". This Botanical Assessment/Evaluation (BA/BE) is prepared in accordance with the legal requirements set forth under CEQA guidelines, Section 15380. A "Special Status Species" is any species that meets the definition of "endangered, rare or threatened". The Area of Potential Effect is less than ¼ acre located approximately 1 mile north of Hornbrook on property adjacent to Cottonwood Creek owned and managed by the R Ranch. The botanical assessment and survey was to determine if any rare, threatened, or endangered plants would be affected by the implementation and or activity anticipated by the proposed fish passage construction. Currently the R Ranch, as a recreational area for camping, hiking, and fishing, uses the property.

Resource Management, a private contracting business located in Fort Jones, California, conducted a floristic survey. Kathleen Tyler lead botanist and Allenya Manning, botany technician, conducted a comprensive field visit on April 9, and again on June 23, 2009 at the project location. These times coincided with the blooming period of the specific rare plants identified by the CNPS query, as having a potential of presence at the site The three plants identified by the CNPS query were, *Fritillaria gentneri* (Genter's fritillary) federally listed1B.1, *Lomatium peckianum* (Peck's lomatium) listed as 2.2, and *Lewisia cotyledon var. howellii* (Howell's lewisia) listed as 3.2..

The lead surveyor, Kathleen Tyler (formerly Moody), botanist, has been conducting floristic surveys for rare and sensitive plants in Siskiyou County on both public lands (BLM, USFS, and CDFG) and private lands for over ten years. This surveyor has over fifty units of formal classes related directly to botany and the environment, additionally, workshops specific to keying out and identification of rare plant taxa, totaling over one hundred hours were completed. This surveyor has also located new populations of rare plants and has recorded such sites to the CNDDB (California Natural Diversity Database), on both public and private lands.

The project site is located in Siskiyou County in the Hornbrook 7.5' quadrangle, T47N, R6W, located in NW ¼ of the SE ¼ of Section 17, Mount Diablo Meridian (See map). The Upper Mid Klamath Watershed Council's Board of Director's Watershed Plan identifies the proposed project as a "high priority project". The project is located on Cottonwood Creek, a critical tributary to the Klamath River, and will alleviate the current situation in which Coho, Chinook and Steelhead are prevented from migrating past this point to areas upstream where additional habitat improvements have been established including: sediment reduction, and fish screening of diversions on private and public lands.

Environmental Setting:

In the project area, native vegetation is mostly riparian woodland, confined to a narrow strip (~20 feet) along the creek corridor. Apparently, there is adequate water to support the terrestrial broadleaf deciduous plant community along its narrow margins. The species found along the

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corridor need to cope with the long, dry summers hence the narrow margin of riparian plants along the creek. Beyond the riparian area, which is upslope and dry, most of the native vegetation consists of perennial bunch grasses and forbs, with some semblance to a chaparral zone. However, historically this area has been highly disturbed from mining, roads, and the railroad just a few hundred feet away on the east side of the creek. Currently the area is infested with several exotic species and the noxious weeds Himalayan blackberries and yellow starthistle. On the west side of the creek a camping ground, with maintained lawns and camping areas, is devoid of natural vegetation. The project area falls within the area described floristically in the *Jepson Manual* as the California Floristic Province, more specifically the Cascade Ranges with some influence from the Great Basin vegetation patterns. The main project area in regards to the *Soil Survey of Siskiyou County* (USDA 1981) is termed **Riverwash**. This map unit is on a flood plain, which is flooded almost every year. It consists of unstabilized and stratified sandy, silty, clayey, stony, cobbly and gravelly sediment, which is reworked by water most every year.

Other observations made concerning the environmental setting, was the considerable amount of deer and avian sign. Various songbirds were seen around the project area, utilizing the narrow riparian zone. Rabbit sign as well as coyote sign were noticed as well as lizards and a water snake.

Methodology:

Prefield preparation began with conducting a search of any rare, threatened, endangered, or sensitive plant that had a potential of being found on the subject property. A list of special status plants was generated from CDFG (California Department of Fish and Game), CNPS (California Native Plant Society), CNDDB (California Natural Diversity Database) and the USDA Forest Service Region 5, for relative information in considering the subject property. The quadrangle used in the floristic search was USGS 7 5' quadrangle, Hornbrook NE (734A). Importance was given to visiting the local herbia to review the specimens of the plants on the list as well as a review the photos. According to these searches and recorded sites, a list of special status plants had been identified as having a potential of occurrence within the project area (**Table 2**). Using the nine quad search option on the CNPS website, which queries all adjacent quadrangles for rare plants, generated the same list. Table 2 is based on habitat, elevation, and known occurrences. An evaluation of the habitat needs for the plants on **Table 1** revealed the low probability of occurrence for Howell's lewisia, due to the lack of rock outcrops at the project site.

An explanation of the California Native Plant Society (CNPS) codes follows. These are important to understand as to the rarity of a given plant in California, and their listing on **Table 2** of this document.

Preliminary Botanical Review:

This following form **Table 1** serves as a track of special status plants that have potential to be in the project area according to the nine quad search conducted on the CNPS website.

An explanation of the California Native Plant Society (CNPS) codes follows. These are important to understand as to the rarity of a given plant in California, and their listing on **Table 1** of this document.

The California Native Plant Society Lists (CNPS)

List 1A	Plants presumed extinct in California.
List1B	Plants rare, threatened, or endangered in California and elsewhere. These plants are rare throughout their range.
List 2	Plants rare, threatened, or endangered in California but more common elsewhere.
List 3	Plants about which we need more information (a review list).
List 4	Plants of limited distribution (a watch list). While not rare, they are uncommon enough to warrant monitoring.
	1 - Seriously endangered in California.

- 2 Fairly endangered in California.
- 3 Not very endangered in California

Table 1:

Completion of this form certifies that pre-field evaluation procedures are in compliance CEQA guidelines <u>Special Status Plants</u> botanical survey protocol is triggered if column 1 is "yes" and if column 2 or 3 (both parts) is "yes".

Vascular Plants:

		1	2		3	
Species <i>Scientific name</i> Common name	Special Status Plant CNPS Status	Do the types of actions proposed in this project have the potential to directly or indirectly impact this species or alter its habitat conditions or significantly negatively affect species/habitat?	Known site exists in proposed project area	Pri or <i>ar</i> pri su pri	roject w/in known suspected range ad there is robability of itable habitat w/in roject area	Survey protocol triggered**
Fritillaria gentneri Gentner's frtillaria	IB.1	YES	No	Y	: known/susp. range : suitable habitat	Yes
Lewisia cotyledon var. howellii Howell's lewisia	3.2	YES	No	N	: known/susp. range : suitable habitat	No
Lomatium peckianum Peck's lomatium	2.2	YES	No	Y	known/susp. range : suitable habitat	Yes

Table 2:

Family	Life form	Blooming	Community	Elevation	CNPS code
<u>Fritillaria</u> <u>gentneri</u> Gentner's Fritillary	perennial bulbiferous herb	Apr-May	•Chaparral •Cismontane woodland/sometimes serpentinite	1005 - 1120 meters	List 1B.1
<u>Lewisia</u> <u>cotyledon</u> <u>var. howellii</u> Howell's lewisia	Perennial herb	Apr-Jul	Broadleaf upland Forest Chaparral •Cismontane woodland •Lower montane coniferous forest/Rocky	150- 1800 meters	List 3.2
<u>Lomatium</u> <u>peckianum</u> Pecki's lomatium	perennial herb	Apr-May (Jun) Months in parentheses are uncommon.	•Chaparral •Cismontane woodland •Lower montane coniferous forest •Pinyon and juniper woodland/ volcanic	700 - 1800 meters	List 2.2

The plants on the above tables could have a potential of having presence at the project, except for Howell's lewisia, there is a lack of rock outcrops at the project location. The generated CNPS list is based on plant community, habitat, similar geologic soil conditions, and close proximity of recorded sites. A comprehensive floristic survey of the area was employed, being mindful of the above listed special status plants. The riparian corridor as well as the upslope area surrounding the project, remnant chaparral habitat, was searched looking specifically for Peck's lomatium and Gentner's fritillary (Federally listed). The project area was searched within the property boundaries and the surrounding area which could be impacted by the construction process. The area was searched twice to accommodate the flowering times of the species on the list. A plant species list was generated from the plants encountered on the survey (Attachment A). Plant identification was completed with personal knowledge of local plants aided with the *Jepson Manual* (Hickman 1996), other botanical references (see references), a dissecting microscope, herbaria samples, and the CalPhotos website.

Survey Results: With emphasis given to the plants on Table 1, other plants not found in the query could be present if the right habitat niche is available. With the knowledge of what plants could be expected, and knowing other rare plants could be found, a comprehensive survey was conducted on April 9, and June 23, 2009. No rare, threatened, endangered, or sensitive plants were located. Some noxious weed species were found, these are identified on the plant list (Attachment A in red). The plant list is small as there is not a diverse amount of flora present. There were no rock outcroppings at the project. Rock outcroppings could have been habitat for Howell's lewisia. No *lewisia* species were found. No *Lomatiums* species were found nor any *Fritillaria* species.

Conclusions:

Historically the area was used for mining, road building, and railroad use. Currently the west side is for recreation activities. These past ground disturbances have introduced the exotic species including the noxious weeds, yellow star thistle and Himalayan blackberry. These weeds have steadily replaced the naturally occurring grasses and forbs. Due to lack of appropriate habitat, yearly flooding, the invasion of noxious weeds, and previous ground disturbance a rare plant would be exceedingly unlikely to occur here.

It is the opinion of this botanist there will be no adverse effects to any rare, endangered, or threatened plant in the implementation of the project.

2009

1/4 Acre Botanical Survey Cottonwood Creek Fish Passage Project Located at on the R Ranch, Hornbrook, CA.

Trees

Genus	Species	Common Name
Quercus	Garryanna	Oregon white oak
Populus	balsamifera ssp. trichocarp	black cottonwood
Juniperus	occidentalis	western juniper (fringes)
Alnus	rhombifolia	white alder
Fraxinus	latifolia	Oregon ash
Pinus	ponderosa	ponderosa pine
Salix	lasiolepis	arroyo willow

Shrubs

Genus	Species	Common Name	
Prunus	subcordata	Klamath plum	
Salix	laevigata	red willow	
Salix	lasiolepis	arroyo willow	
Salix	exigua	Narrow-leaf willow	
Rhus	trilobata	skunk brush	
Rubus	discolor	Himalayan blackberry	
Rosa	sp.	wild rose	

Herbaceous Plants

Genus	Species	Common Name	
Agoseris	retrorsa	spearleaf mountain dandelion	
Brassica	nigra	black mustard (introduced)	
Capsella	bursa-pastoris	shepards purse (introduced)	
Centaurea	solstitialis	yellow star thistle (Noxious Weed)	
Chamomilla	suaveolens	pineapple weed(introduced)	
Cichorium	intybus	chicory (introduced)	
Lamium	amplexicaule	Henbit(introduced)	
Artemisia	douglasiana	California mugwort	
Dipsacus	fullonum	Fuller's teasel (introduced)	
Polygonum	arenastrum	Common knotweed (introduced)	
Conium	maculatum	poison hemlock (introduced)	
Saponaria officinalis	officinalis	bouncing bet (introduced)	
Crepis	ssp.	hawksbeard	

Epilobium	brachycarpum	willow herb	
Erodium	cicutarium	storksbill (introduced)	
Eschscholzia	californica	California poppy	
Gayophytum	diffusum	gayophytum	
Melilotus	officinalis	yellow sweet clover (introduced)	
Plantago	major	broadleaf plantain(introduced)	
Polygonum	erectum	erect knotweed	
Taraxaeum	officinale	common dandelion(introduced)	
Verbascum	thapus	wooly mullein (introduced)	
Veronica	americana	speedwell, brookline	
Vicio	americana	vetch	
Grass and Grass L	ike Plants		
VICIA	unonound		
Grass and Grass L Genus	ike Plants.	Common Name	
Grass and Grass L Genus Achnatherum	ike Plants Species occidentalis	Common Name needle grass	
Grass and Grass L Genus Achnatherum Agropyron	ike Plants Species occidentalis cristatum	Common Name needle grass crested wheat grass	
Grass and Grass L Genus Achnatherum Agropyron Agropyron	ike Plants Species Occidentalis Cristatum trichophorum	Common Name needle grass crested wheat grass intermediate wheat grass	
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Overview Map:

Cottonwood Creek Fish Passage Improvement Project USGS Hornbrook 7.5' Quad T47N R6W Section 17



Торо Мар:





Soil Map:



USGS Hornbrook 7.5' Quad T47N R6W Section 17

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