RECLAMATION

Managing Water in the West

Enhancement of Overwinter Rearing Habitat in McGarvey Creek

Klamath Basin Restoration Program Grant # R10AP20084 Yurok Tribal Fisheries Program

Klamath Project, Oregon
Mid Pacific Region

Finding of No Significant Impact

FONSI No.: KBAO-FONSI-1-005

U.S. Department of the Interior
Bureau of Reclamation

ORIGINAL

APPROVED

May 2011

FINDING OF NO SIGNIFICANT IMPACT

McGarvey Creek Habitat Enhancement Project

INTRODUCTION
The United States Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA), dated May 2011 entitled *Enhancement of Overwinter Rearing Habitat in McGarvey Creek*. This EA describes the environmental effects of providing funding to perform habitat enhancement activities within McGarvey Creek. The EA was prepared to satisfy the procedural requirements of the National Environmental Policy Act (NEPA) (P.L. 91-190, as amended).

PROPOSED ACTION
Reclamation proposes to provide funding to the Yurok Tribal Fisheries Program (YTFP) to implement the activities as described in the Klamath Basin Restoration Program Grant # 10AP20084 entitled *Enhancement of Overwinter Rearing Habitat for Natal and Non-Natal Salmonids in McGarvey Creek, Lower Klamath River* and covered under the subject EA. The Project would consist of the installation of approximately 15 complex wood jams, construction of a 550 foot alcove, and stabilization of approximately 2,000 feet of road.

The purpose of the proposed action is to provide funding to YTFP to conduct stream and floodplain enhancement activities in lower McGarvey Creek. The stream and floodplain enhancements are needed to create complex off-channel rearing habitat for natal and non-natal salmonids. The proposed project activities would aid in meeting the restoration priorities identified for lower McGarvey Creek including the following:

- Increase wood loading of stream and floodplain habitats
- Increase off-channel overwinter rearing habitat
- Remove riparian and floodplain roads that impair or threaten stream and floodplain function

Implementation of the proposed project provides the opportunity to restore low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids, especially Klamath Basin Coho.

SUMMARY OF EFFECTS
The environmental impacts described and analyzed in the EA are not anticipated to have any significant adverse impacts on the human or natural environment. The effects and consequences to environmental categories with the potential to impact the human and natural environment were analyzed in the EA. Evidence of coordination with the appropriate Federal, state, and local agencies and their comments are also included in the EA and its appendices. The Finding of No Significant Impact is based upon the following:

Surface Water Resources – The Proposed Action includes activities which would occur within and adjacent to surface water resources. The potential does exist for temporary increases in turbidity to occur. Any potential impacts to water quality would be limited and temporary in nature. Pursuant to Section 404 of the Clean Water Act, the project qualifies for authorization

under the Army Corps of Engineers – Nationwide Permit Number 27 for "Aquatic Habitat Restoration, Establishment, and Enhancement Activities" (72 Fed. Reg. 11092, March 12, 2007. Additionally, a Yurok Tribe Water Quality Control Plan Section 401 Water Quality Certification was granted with a variety of conditions that must be met during the implementation of the proposed project.

The project would improve floodplain and wetland habitat and function by improving connectivity between the floodplain and stream channel and promoting the geomorphic processes that form and maintain off-channel wetlands and floodplain habitat. Standard best management practices would be employed to minimize short term impacts to streams and floodplains as a result of construction activities. In summary, the project would result in a net benefit to wetland function, connectivity and biological resources.

No impacts to water quantity are expected as a result of the project.

Therefore, the Proposed Action would not result in short-term or long-term significant impacts to surface water or resources dependent on surface water.

Biological Resources – The Proposed Action consists of small scale construction type activities that would occur within both instream and upland habitat. These activities have the potential to result in limited impacts that would be temporary in nature. Based on this information, Endangered Species Act, Section 7 compliance was performed by the Arcata Office. For terrestrial organisms and freshwater fishes, an intra-service consultation was done. The Service determined that the project may affect but is not likely to adversely affect the federally-listed northern spotted owl based on the following factors: (1) The proposed action would not affect suitable northern spotted owl habitat; it would not remove, degrade, or downgrade suitable habitat. As a result, direct mortality or injury of owls is not likely; and (2) The project would adhere to a limited operating period with no operations until after July 9 for sites occurring within or near (0.25 mile) suitable habitat to avoid disturbance to nesting owls or their young, which may result from noise or human activity prior to dispersal of young.

The marbled murrelet was not considered as part of the Section 7 consultation because there is no designated critical habitat within the project vicinity. All critical habitat in Del Norte County, California is located on state and public lands.

The Service also submitted a request letter for consultation with the National Marine Fisheries Service (NMFS) on June 18, 2010, to evaluate project impacts on SONCC Coho salmon. On August 10, 2010, the Service received written concurrence from the NMFS that the project may affect but is not likely to adversely affect federally listed SONCC Coho salmon or their designated critical habitat.

The proposed project is not expected to have an impact on migratory birds protected under the Migratory Bird Treaty Act because vegetation will be inspected prior to removal to determine presence of nesting. If nesting is documented, appropriate distance buffers will be implemented. The project activities would not have any effect on Bald or Golden Eagles based on habitat analysis and documentation from the landowner. The proposed project is being performed in an effort to benefit Coho salmon in the long term by obtaining valuable life history information.

The project, as proposed, would not be expected to result in any short-term or long-term significant impacts to biological resources in the project area or surrounding area.

Cultural Resources – Based on the analysis of implementation of the Proposed Action, Reclamation concludes that the activities involved with the Proposed Action alternative is the type of activity that has the potential to cause effects to historic properties assuming historic properties are present properties pursuant to the regulations at 36 CFR Part 800.3(a)(1). In addition to Reclamation's funding assistance for the proposed action, the Service is also providing funding assistance. The Service has assumed the role of lead federal agency for the purposes of the Section 106 process and has completed the Section 106 process pursuant to their Programmatic Agreement Appendix B. Consistent with Reclamation's agency process, when Reclamation is a cooperating agency, the documentation provided by the lead agency will be submitted to the California SHPO.

As part of the Service's Appendix B application, a cultural resource report was prepared by Dr. Kathleen Sloan of the Yurok Tribe Environmental Program documenting that no cultural resources were identified within the APE. The Service provided a memorandum concluding the Section 106 process based on information in the report by Dr. Sloan. After receiving these materials, Reclamation concludes that the Section 106 process has been completed, pursuant to the Service's determination that no historic properties would be affected by this undertaking.

Therefore, implementation of the Proposed Action would not result in any short-term or long-term significant impacts to cultural resources. However, in the event of inadvertent discovery of cultural resources, Reclamation must be contacted immediately to conduct a post review discovery analysis as outlined in the Section 106 regulations at 36 CFR Part 800.13.

Indian Trust Assets - Reclamation is required to consider the impacts of project activities on Indian Tribal Trust Assets. The proposed project was reviewed by Reclamation's Mid-Pacific Regional Office, Indian Trust Assets Coordinator, Patricia Rivera, on May 27, 2011 and a "no impacts to Indian Tribal Trust Assets" concurrence was received. Therefore, implementation of the Proposed Action would not result in significant impacts to Indian Trust Assets.

Climate Change – The Proposed Action would not result in any significant changes to the composition of the atmosphere and therefore would not result in significant impacts to climate change.

Environmental Justice – The Proposed Action would not disproportionately affect minorities or low-income populations and communities. There would not be significant impacts to human health or environmental effects associated with the Proposed Action.

FINDING

Based on the analysis of the environmental impacts as described in the EA, Reclamation has determined that the proposed federal actions would not significantly affect the quality of the human environment and does not require the preparation of an Environmental Impact Statement. Further, the proposed federal actions are consistent with existing national environmental policies and objectives and do not otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA.

DECISION

It is Reclamation's decision to provide funding for the purpose of enhancing overwinter rearing habitat in McGarvey Creek. Implementation of the proposed action may take place once the appropriate permits have been obtained and mitigation requirements completed as described in this Finding of No Significant Impact and Environmental Assessment. Reclamation believes that the Proposed Action Alternative best meets the purpose and need of the proposal.

FONSI Prepared By: Kristen L. Hiatt Date: June 14, 2011

Recommended: _____ Date: 6/15/2011
Area Office Environmental Specialist

Approved: _____ Date: 6/15/11
Jason Phillips
Area Manager
Klamath Basin Area Office
Bureau of Reclamation

RECLAMATION

Managing Water in the West

Enhancement of Overwinter Rearing Habitat in McGarvey Creek

Klamath Basin Restoration Program Grant # R10AP20084 Yurok Tribal Fisheries Program

Klamath Project
Mid-Pacific Region

Environmental Assessment

EA No.: KBAO-EA-11-005

U.S. Department of the Interior
Bureau of Reclamation

April 2011

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 Yurok Tribe Fisheries Program (YTFP) to enhance overwinter rearing habitat for Coho salmon in McGarvey Creek (see Figure 1), a tributary to the Klamath River.

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 YTFP to conduct stream and floodplain enhancement activities in lower McGarvey Creek. The stream and floodplain enhancements are needed to create complex off-channel rearing habitat for natal and non-natal salmonids. The proposed project activities would aid in meeting the restoration priorities identified for lower McGarvey Creek including the following:

- Increase wood loading of stream and floodplain habitats
- Increase off-channel overwinter rearing habitat
- Remove riparian and floodplain roads that impair or threaten stream and floodplain function

Implementation of the proposed project provides the opportunity to restore low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids, especially Klamath Basin Coho.

1.3 Background

The McGarvey Creek Overwinter Rearing Habitat Enhancement Project is proposed by the YTFP. McGarvey Creek is a tributary to the Lower Klamath River in northwestern California. Project implementation has been funded in part by Reclamation's Klamath Basin Restoration Program with in-kind cost share through the Yurok Tribe and additional funding provided by the United States Fish and Wildlife Service.

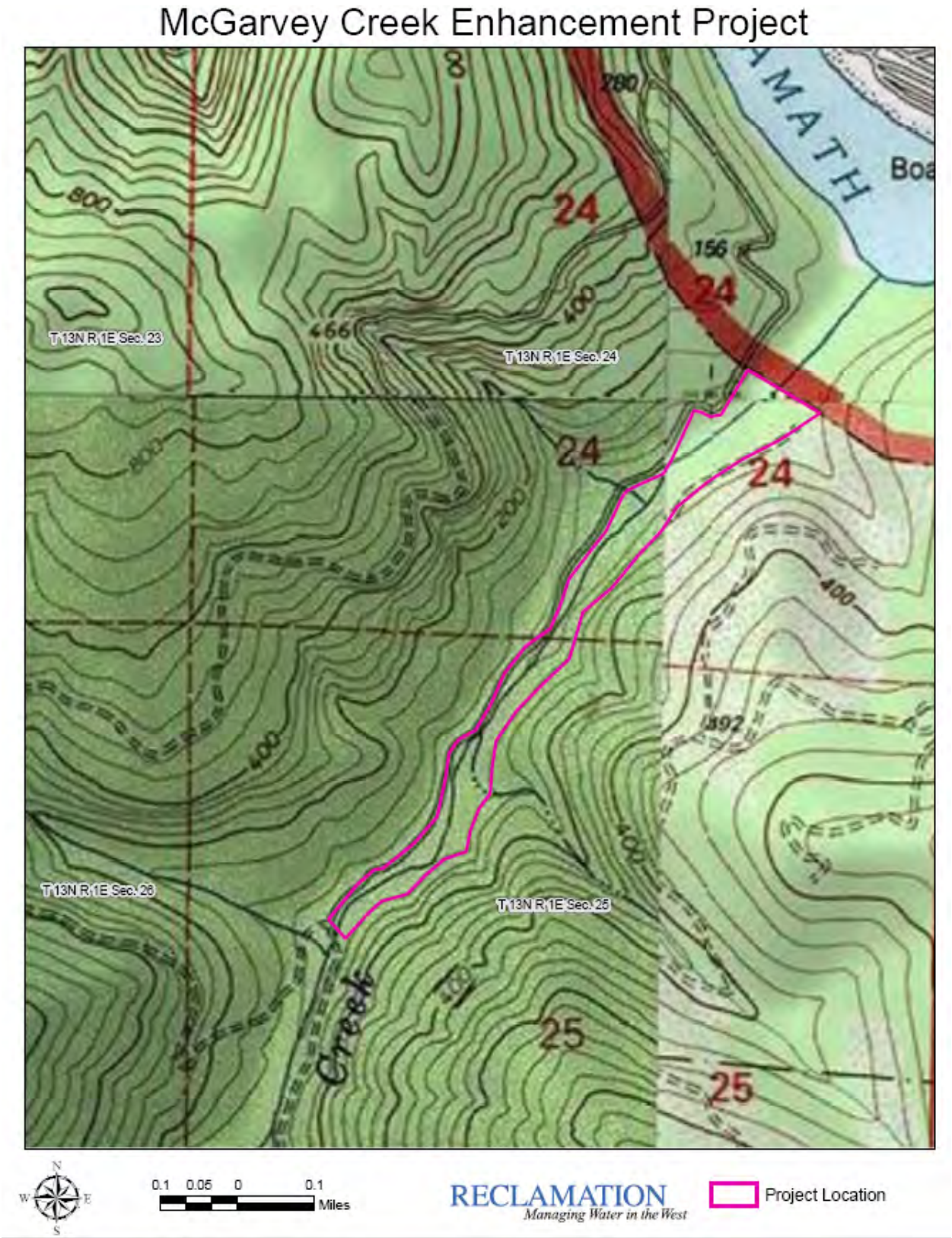

Figure 1. Map showing proposed project location.

Coho salmon in the Klamath Basin, as part of the Southern Oregon/Northern California Coasts Evolutionary Significant Unit (SONCC ESU), 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.

Off-estuary and coastal tributary habitats provide fish refuge from excessive water velocities or poor water quality in the river and offer diverse habitats and forage to fish prior to initiating ocean entry or upriver migration. These areas are especially important to non native juvenile Coho during winter – spring and directly influence fish growth prior to ocean entry (Hillemeier et al. 2010). The McGarvey Creek watershed supports Chinook, Coho, steelhead, and coastal cutthroat; and provides critical rearing habitat for non-natal salmonids, especially choh (YTFP 2009).

Various partners have been working to gain knowledge about Coho use of mainstem Klamath River and non-natal tributary habitats through the Coho Ecology Study which began in 2006. Based on data collected during the Coho Ecology Study and salmonid monitoring efforts in McGarvey Creek; the pattern of juvenile Coho redistributing from mainstem habitats to tributary habitats, to overwinter appears to be a vitally important life history trait for coho of the Klamath Basin (Lestelle 2007; Wallace 2007; Soto et al. 2008; Hillemeier et al. 2010; Silloway 2010).

The proposed action addresses a need to create complex off-channel rearing habitat; deconstruct priority floodplain roads and stream crossings; and install complex wood jams in McGarvey Creek to immediately improve conditions for fish and wildlife. YTFP's restoration program is currently focused on increasing the amount of high quality off-channel habitats available for Klamath Basin salmonids rearing or staging prior to ocean entry or upriver migrations. A restoration plan for McGarvey Creek is currently focusing on deconstructing floodplain road networks and creating and enhancing stream and off-channel habitats to increase salmonid production and overwinter rearing capacity.

Chapter 2 Proposed Action and Alternatives

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide funding to YTFP for the enhancement of overwintering habitat within McGarvey Creek. Taking "no action", however, 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 enhance overwinter rearing habitat in McGarvey Creek. The project would consist of multiple activities necessary to complete the habitat enhancement. The entire footprint of the project covers approximately one mile of McGarvey Creek. The various activities would be performed intermittently within the footprint.

Topographic Survey – The YTFP would conduct pre-project topographic surveys of the channel and establish multiple, permanent cross sections in the project reach in early summer 2011. The surveys would consist of a 2-3 person crew hiking floodplains and the channel of McGarvey Creek to obtain topographic data. An optical total station supported by a tri-pod and various prism poles would be used to collect elevation information from the streambed and floodplains.

Complex Wood Jams (CWJs) - Approximately 15 CWJ's (Figure 2 -3) are proposed to be constructed throughout the project reach. CWJs proposed for this project are a variation of Engineered Log Jams (ELJ) described by Abbe et al. (2003, 2003b, 2005); and would mimic naturally occurring features such as bar apex jams, sluice gate jams, staggered abutment jams, and toppled riparian trees (Figures 4-8). CWJs are constructed using the same geomorphic and engineering principles as EJLs; where mechanically driven logs, riparian trees, stumps, and other landforms are used to create a geometry of interlocking logs and/or whole trees that provides resisting elements necessary for maintaining stability and function under a variety of flows (Figures 7-8). Installation of CWJs may incorporate threaded rebar or chain anchor systems if a high factor of safety is required. Heavy equipment (ie. excavators, dozers, dump and log truck, and front-end loaders) and hand crews would be used for this portion of the project.

Alcove Construction – A 550 foot alcove is proposed for construction. The alcove would be hydrologically connected at the downstream end to McGarvey Creek. The alcove channel would be constructed parallel with the valley sidewall and the M600 road, and have a meandering thalweg and a two-stage configuration (Figure 9). The channel cross-section would be constructed to have an average top width of 15 feet (Figure 9). The thalweg depth below the ground surface would range from 4-7 feet depending on variations in floodplain topography. The alcove channel would have an average slope of approximately 0.003 (0.3%). CWJs would be incorporated into the constructed channel to maintain its form and function, and to provide complex salmonid habitat (Figure 2). Heavy equipment (ie. excavators, dozers, dump and log truck, and front-end loaders) and hand crews would be used for this portion of the project.

Landscape Stabilization – Stabilization of up to approximately 2,000 feet of the M600 road is proposed. Heavy equipment would be used to stabilize the road related fill that currently impairs or threatens stream and floodplain function in lower McGarvey Creek. Unstable road and

landing fill material that currently occupies lower McGarvey Creek floodplains; or has a high potential to deliver sediment directly into the creek would be recontoured and the excess materials would be moved to stable disposal sites (Figure 3). This task would use a combination of excavators, dozers, and off-site dump trucks to excavate and stabilize problematic fill material. Key components of this task include:

1.) Removal of three stream crossings and floodplain road fill.
2.) Excavation and stabilization of un-compacted fill and unstable side-cast material (ie. outside edge of floodplain roads and landings).
3.) Installation of cross-road drains to minimize diversion potential from small springs and seeps. Cross-road drains would be installed at 50 to 200 feet intervals depending on road condition and location of seeps and springs. Cross-road drains would be larger than waterbars and once constructed would be impassable by standard vehicles.
4.) Re-grading of road prisms to disconnect roads and ditches from stream channels, and to create a positive drain on interfluves road benches.
5.) Ripping and de-compacting road prisms to increase infiltration, reduce road prism runoff, and help promote revegetation by native species.
6.) Placing see and mulch on excavation and disposal sites to help prevent erosion.

Temporary Access Road Construction – Crews would use existing access routes whenever possible; however, a few temporary access roads may be constructed to complete project tasks. Temporary access routes would be constructed using an excavator to limit the size of the road footprint. Routes would be designed and constructed in a manner that would minimize or avoid impacts to native vegetation, especially mature trees and conifer samplings.

Reclamation – Upon completion of the construction activities YTFP would perform reclamation activities which include the following:

1.) Access roads would be mulched with seed-free straw to a minimum depth of three inches to prevent erosion.
2.) Two native trees would be planted in the project area for each tree removed during construction.

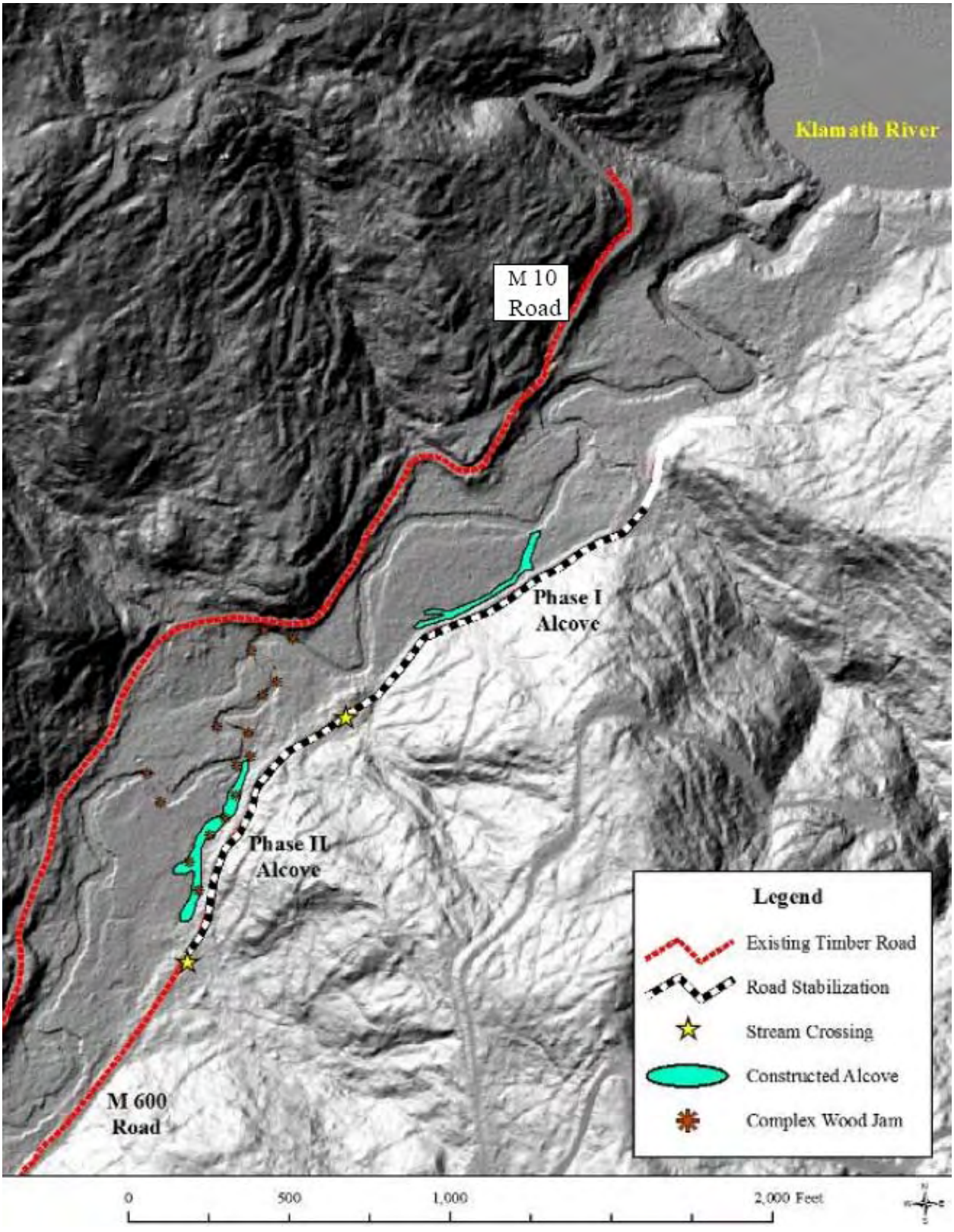

Figure 2. Project location map depicting Phase II (Reclamation funded) restoration activities proposed for lower McGarvey Creek, Lower Klamath River Sub-basin, California.

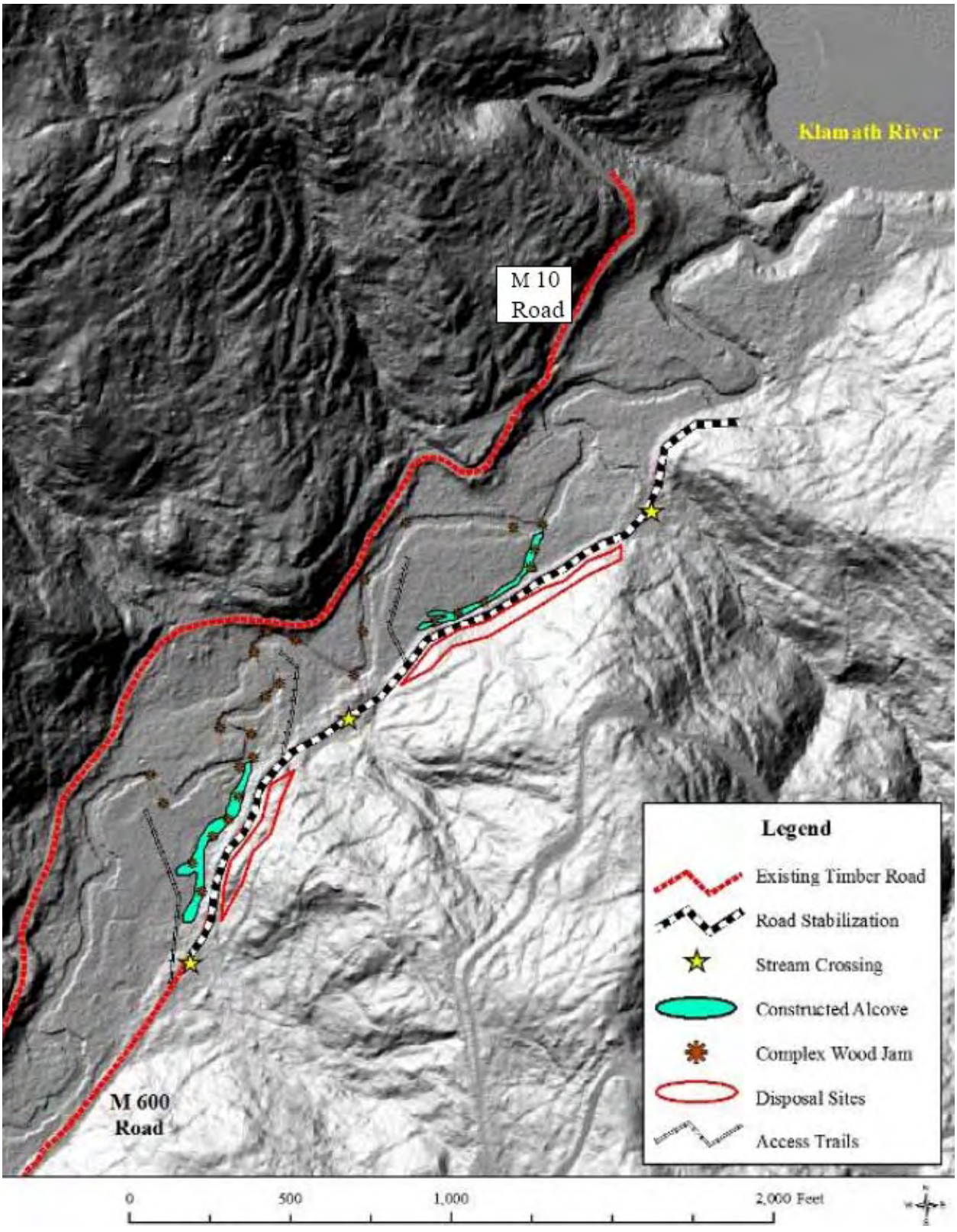

Figure 3. Project location map depicting all aspects of restoration activities, disposal sites, and access trails proposed for lower McGarvey Creek, Lower Klamath River Sub-basin, California.

Figure 4. Photographs looking upstream (Top and Bottom Left) and downstream (Bottom Right) at an existing bar apex jam located in Hunter Creek, Lower Klamath River (spring 2010).

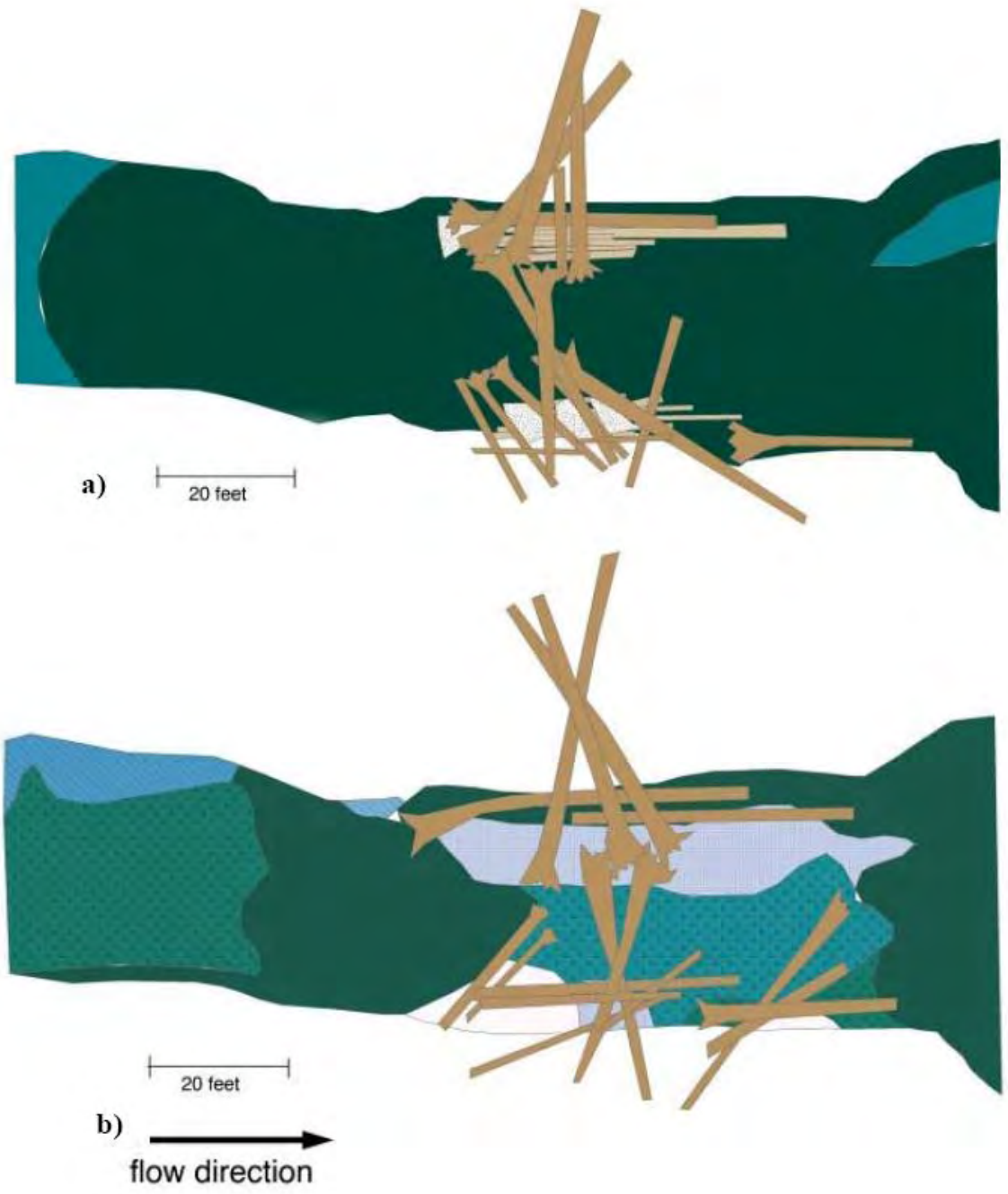

Figure 5. Plan view maps depicting the architecture and streambed facies at a sluice gate jam constructed by Fiori GeoSciences in East Fork Mill Creek, Smith River (Top); and following winter flows that included two bankfull flow events (>650 cfs).

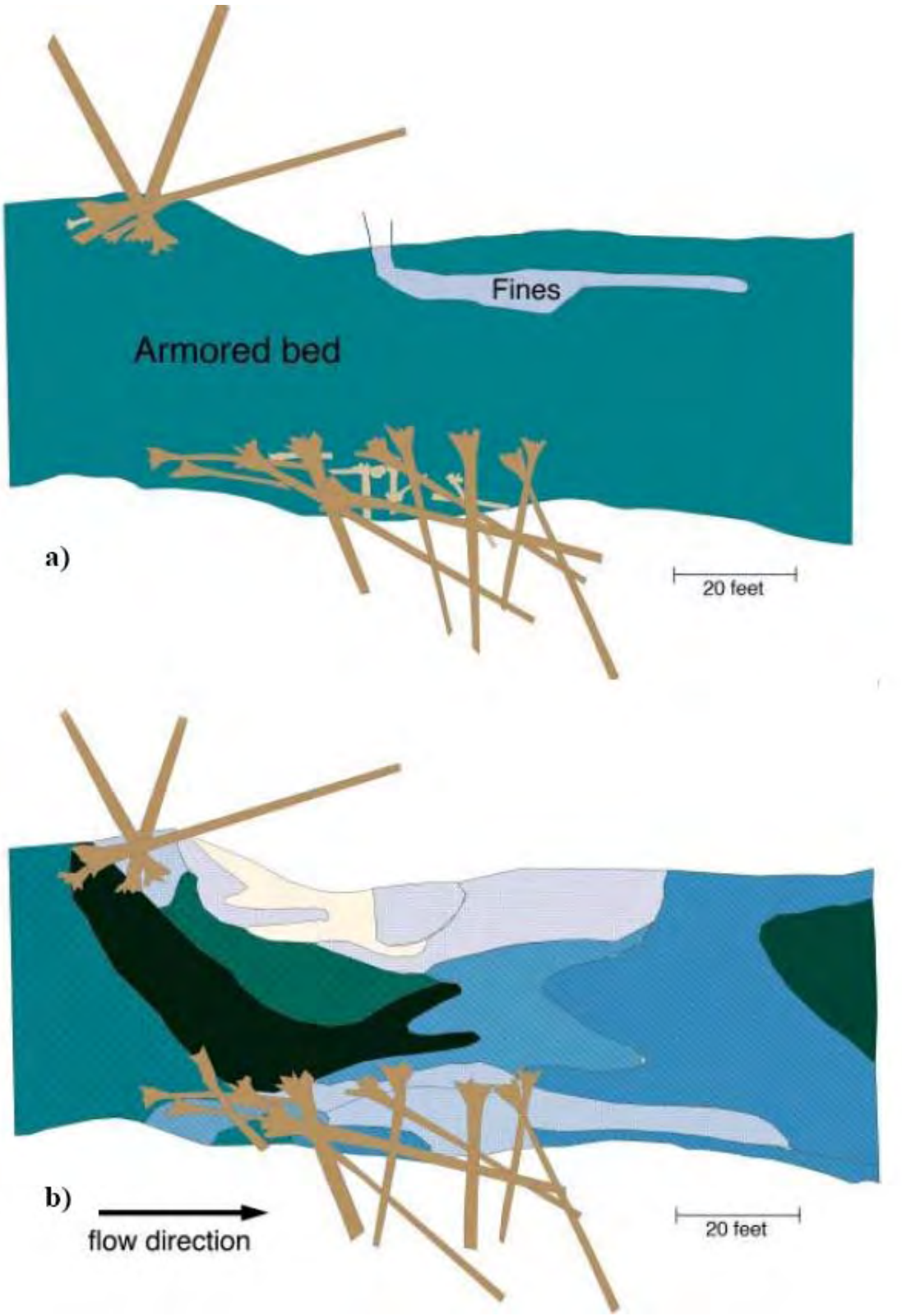

Figure 6. Plan view maps depicting the architecture and streambed facies at a staggered abutment jam constructed by Fiori GeoSciences in East Fork Mill Creek, Smith River (Top); and following winter flows that included two bankfull flow events (>650 cfs).

Figure 7. Reach in McGarvey Creek prior to wood loading (Left), and following complex wood jam construction (right), Lower Klamath River (2008).

Figure 8. Reach in McGarvey Creek during complex wood jam construction (Top), and post construction during winter flows (Bottom), Lower Klamath River (2009).

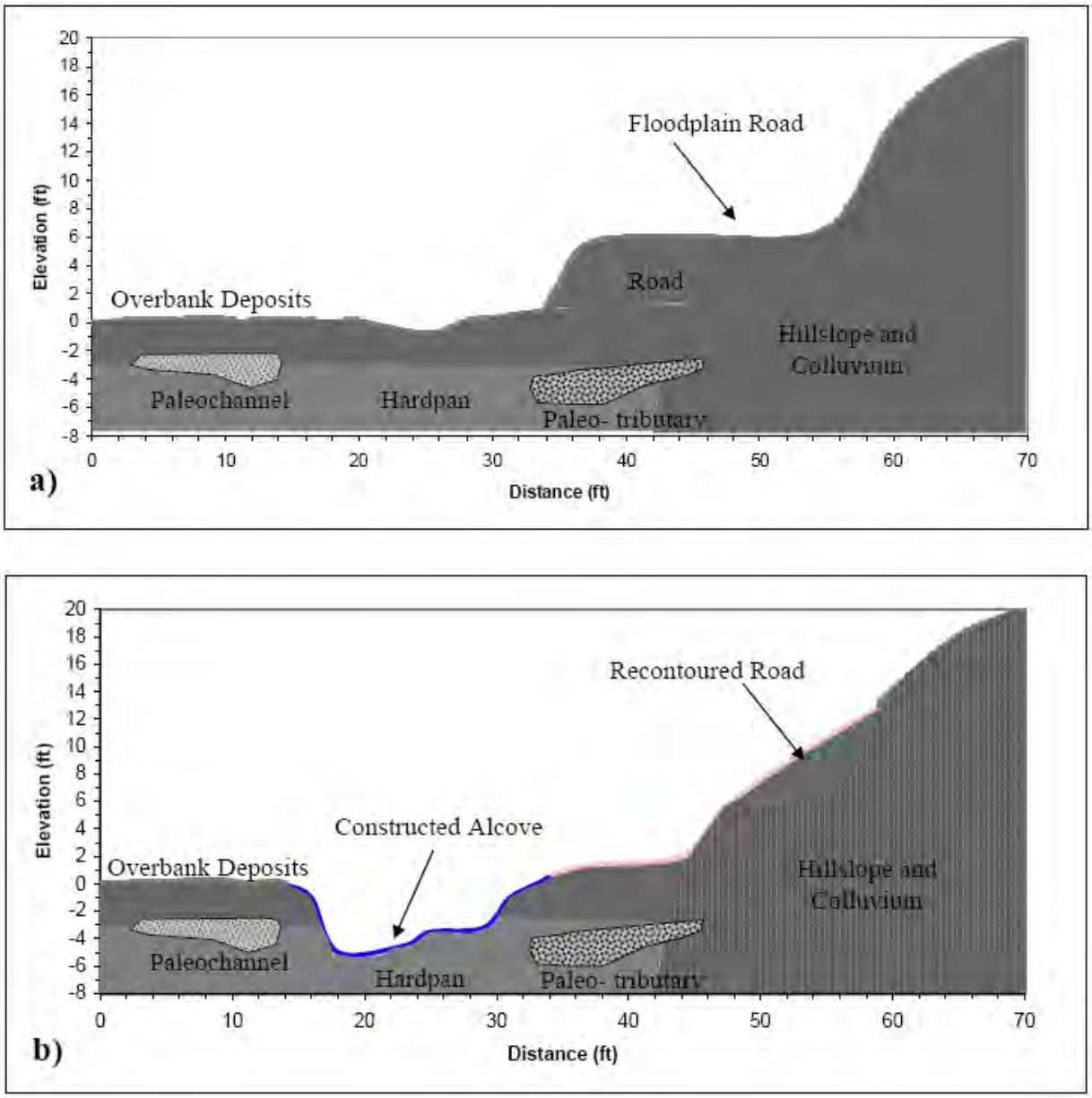

Figure 9. Conceptual (a) pre- and post- implementation (b) cross-sections for the upper 510 feet of constructed alcove channel and floodplain road removal.

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
- 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
- Recreation
- Land Use
- 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

McGarvey Creek is a small, low gradient coastal stream draining 8.9 square miles of moderately steep, forested lands in the Lower Klamath River. McGarvey Creek begins at an elevation of 5 feet at its confluence with the Klamath and extends 4.9 miles to its headwaters, located at an elevation of 600 feet. West Fork McGarvey Creek, the principle tributary in the drainage, totals 2.2 miles in length. Virtually all of McGarvey Creek is owned by Green Diamond Resource Company (GDRC) and is managed for commercial timber production. The lower section of McGarvey Creek is sinuous, flowing through a broad floodplain as it nears the Klamath. Upper McGarvey Creek is moderately steep and confined and is dominated by "B" type channels and contains natural and anthropogenic barriers to anadromous species (Rosgen 1994). The stream substrate of the drainage consists of highly embedded gravel and cobble with approximately 30% of the streambed consisting of silt or sand substrates.

McGarvey Creek's hydrology consists of the Mainstem, West Fork and some small, unnamed tributaries. These two major forks of McGarvey are low gradient (£3%) with the exception of one 2,235 ft section of the West Fork. The McGarvey Creek watershed receives high annual rainfall. Annual rainfall in the Lower Klamath sub-basin frequently averages 100 inches per year. The Yurok Tribe Environmental Program (YTEP) began operating a stream gage upstream of the outmigrant trap site in December 2001. McGarvey stream discharge data shows that streamflow is strongly related to rainfall, especially during winter when the groundwater table is elevated. Streamflow during winter months varies with rainfall, and the highest streamflow measurement taken by YTEP in McGarvey Creek is 270 cfs, although higher estimates have been made based on gage height and a rating curve generated by existing flow measurements.

3.4.2 Environmental Consequences

No Action

Under the No Action alternative, Reclamation would not release grant funding to the Yurok Tribe for the purpose of enhancing overwintering habitat within McGarvey Creek. As a result, the restoration of low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids would not occur. However, the Yurok Tribe could still see 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 the Yurok Tribe for the for the purpose of enhancing overwintering habitat within McGarvey Creek.

The Proposed Action includes activities that would occur within the surface water resource of McGarvey Creek including installation of the CWJs and portions of alcove construction. During construction of the alcove, coffer dams and high volume pumps would be used when necessary to trap sediment and reduce handling of saturated overburden, turbid water would be discharged to natural filtration areas away from the active channel. Landscape stabilization also has the potential to contribute to surface water impacts associated with the proposed project. However, the landscape stabilization aspect of the project would ultimately provide long-term benefits to surface water resources.

Potential water quality impacts including temporary increases in turbidity would be temporary in nature and only persist during construction activities. Pursuant to Section 404 of the Clean Water Act, the project qualifies for authorization under the Army Corps of Engineers – Nationwide Permit Number 27 for "Aquatic Habitat Restoration, Establishment, and Enhancement Activities" (72 Fed. Reg. 11092, March 12, 2007. A Yurok Tribe Water Quality Control Plan Section 401 Water Quality Certification was granted with a variety of conditions that must be met during the implementation of the proposed project (See Appendix 1). Any other required permits shall be obtained by the grantee prior to implementation of project activities.

The project would improve floodplain and wetland habitat and function by improving connectivity between the floodplain and stream channel and promoting the geomorphic processes that form and maintain off-channel wetlands and floodplain habitat. Standard best management practices would be employed to minimize short term impacts to streams and floodplains as a result of construction activities. In summary, the project would result in a net benefit to wetland function, connectivity and biological resources.

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

McGarvey Creek supports populations of coho salmon, steelhead trout, cutthroat trout, chinook salmon, coastrange sculpin (*Cottus aleuticus),* prickly sculpin (*Cottus asper*), Klamath smallscale sucker (*Catostomus rimiculus),* speckled dace (*Rhynichthys osculus),* three spine stickleback (*Gasterosteus aculeatus),* Pacific lamprey (*Lampetra tridentata),* and brook lamprey (*Lampetra lethophaga*).

Vegetation of the McGarvey Creek watershed was historically comprised of old growth conifers forest, predominantly coastal redwood (*Sequoia sempervirens*), Sitka spruce (*Picea sitchensis*) and Douglas fir (*Psuedotsuga menziesii*) with cedar (*Cedrus* spp.) and western hemlock (*Tsuga heterophylla*). Presently, riparian habitats of McGarvey Creek are dominated by red alder (*Alnus rubra*), big leaf maple *(Acer macrophyllum*), vine maple (*Acer circinatum*) tan oak (*Lithocarpus densiflora*), madrone (*Arbutus menzesii*), California laurel (*Umbellularia californica*), and willow (*Salix* spp.).

A species list was downloaded from the United States Fish and Wildlife Service, Arcata Office website on May 26, 2011 pursuant to section 7(c) of the Endangered Species Act of 1973 (see Appendix 2). The list is dated May 26, 2011 and is the current listing of species that may occur within the Fern Canyon 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 the Yurok Tribe for the purpose of enhancing overwintering habitat within McGarvey Creek. As a result, the restoration of low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids would not occur. However, the Yurok Tribe could still see 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 Yurok Tribe for the for the purpose of enhancing overwintering habitat within McGarvey Creek.

The Proposed Action area is located within McGarvey Creek, a freshwater habitat surrounded by mixed conifer forest. Potential impacts associated with the Proposed Action could occur both within the stream and in upland habitats.

A portion of the funding associated with the proposed project is being provided by the U.S. Fish and Wildlife Service (Service). Endangered Species Act, Section 7 compliance was performed by the Arcata Office through an intra-service consultation. The Service determined that the project may affect but is not likely to adversely affect the federally-listed northern spotted owl based on the following factors: (1) The proposed action would not affect suitable northern spotted owl habitat; it would not remove, degrade, or downgrade suitable habitat. As a result, direct mortality or injury of owls is not likely; and (2) The project would adhere to a limited operating period with no operations until after July 9 for sites occurring within or near (0.25 mile) suitable habitat to avoid disturbance to nesting owls or their young, which may result from noise or human activity prior to dispersal of young.

The marbled murrelet was not considered in the Service's consultation because there is no suitable or designated critical habitat within a mile of the project site. All critical habitat (in Del Norte County, California) is on state and public lands.

The Service also submitted a request letter for consultation with the National Marine Fisheries Service (NMFS) on June 18, 2010, to evaluate project impacts on SONCC Coho salmon. On August 10, 2010, the Service received written concurrence from the NMFS that the project may affect but is not likely to adversely affect federall listed SONCC Coho salmon or their designated critical habitat.

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 the nearest nest is approximately 7-8 miles from the project location. 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 enhancing key 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 the species. Urbanization, water withdrawal, agriculture, forestry, chemical use, hatcheries, angling, and streamside restoration are all currently occurring and are expected to continue to occur in the action area. 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.

The area of the proposed project is the aboriginal territory of the coastal Yurok. The Yurok, living west of the Siskiyou Mountains, primarily utilized areas adjacent the Klamath River and

tributaries adjacent the Pacific Ocean, occupying permanent villages along the lower 45 miles of the Klamath River and California's Pacific Northwest coast south of modern day Crescent City and Trinidad (Pilling 1978). Subsistence focused on marine resources which supported a relatively complex socially stratified society and political framework. Given that settlements were generally permanent, the expectation is that evidence of those settlements would appear in relative abundance at specific locations along the Klamath River. Generally, settlement areas tended to be focused at the tributary of two estuaries or where natural resource abundance was high. Ethnographically, Phillings (1978) identifies at least two permanent settlements near the mouth of McGarvey Creek. Cultural resources identification efforts conducted in conjunction with the current action along McGarvey Creek have yielded no evidence of cultural resources eligible for inclusion in the National Register.

3.7.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to the Yurok Tribe for the purpose enhancing overwintering habitat within McGarvey 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 along McGarvey Creek. The Yurok Tribe 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 Yurok Tribe for the for the purpose of enhancing overwintering habitat within McGarvey 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. In addition to Reclamation's funding assistance for the proposed action, the Service is also providing funding assistance. The Service has assumed the role of lead federal agency for the purposes of the Section 106 process and has completed the Section 106 process pursuant to their Programmatic Agreement Appendix B. Consistent with Reclamation's agency process, when Reclamation is a

cooperating agency, the documentation provided by the lead agency will be submitted to the California SHPO.

As part of the Service's Appendix B application, a cultural resource report was prepared by Dr. Kathleen Sloan of the Yurok Tribe Environmental Program documenting that no cultural resources were identified within the APE. The Service provided a memorandum concluding the Section 106 process based on information in the report by Dr. Sloan. After receiving these materials, Reclamation concludes that the Section 106 process has been completed. Pursuant to the Service's determination that no historic properties would be affected by this undertaking, 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 Indian Trust Assets

3.8.1 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.

3.8.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to the Yurok Tribe for the purpose of enhancing overwintering habitat within McGarvey Creek. As a result, the restoration of low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids would not occur. However, the Yurok Tribe could still see 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 Yurok Tribe for the for the purpose enhancing overwintering habitat within McGarvey Creek. In an email dated May 27, 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.

3.9 Climate Change

3.9.1 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). Oregon's water resources have the potential to be significantly changed as a result of climate change (GCCIG 2008). Snow pack reductions are already being observed and spring runoff is coming earlier, leaving lower flows in summer months which affect agriculture, among other resources (GCCIG 2008).

3.9.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to the Yurok Tribe for the purpose of enhancing overwintering habitat within McGarvey Creek. As a result, the restoration of low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids would not occur. However, the Yurok Tribe could still see 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 Yurok Tribe for the for the purpose enhancing overwintering habitat within McGarvey 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.

3.10 Environmental Justice

3.10.1 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.

3.10.2 Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not release grant funding to the Yurok Tribe for the purpose of enhancing overwintering habitat within McGarvey Creek. As a result, the restoration of low gradient and off-channel habitats that have the potential to provide a significant amount of complex, diverse, and productive rearing habitat for natal and non-natal salmonids would not occur. However, the Yurok Tribe could still see 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 Yurok Tribe for the for the purpose of enhancing overwintering habitat within McGarvey Creek. The proposed action would not result in a disproportionately impact 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.

3.11 Summary of Environmental Effects

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

Table 1. Summary of Environmental – Enhancement of Overwinter Rearing Habitat in McGarvey Creek.

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. May Affect Not Likely to Adversely Affect northern spotted owl.
Climate Change	No effect.
Cultural Resources	No effect.
Indian Trust Assets	No effect.
Environmental Justice	No effect.

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.

4.1.2 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.

4.2 Interdisciplinary Team

Throughout the preparation of the EA, an interdisciplinary team was employed. The team consisted of Natural Resource Specialists, Biologists, Archaeologists, the grantee, and the landowner. The team participated in various aspects of the document preparation, including but not limited to information gathering, data analysis, and resource section preparation.

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
Adam Nickels, 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
Sarah Beesley, Fish Biologist, Yurok Tribe – Resource Information
Greg Gray, Wildlife and Fish Biologist, United States Fish and Wildlife Service – Compliance Documentation and Resource Information

References

Abbe, T.B., A.P. Brooks, and D.R. Montgomery. 2003. Wood in River Rehabilitation and Management. In Gregory, S., K. Boyer, and A. Gurnell, editors. The Ecology and Management of Wood in World Rivers. American Fisheries Socity Symposium 37, October 23-27 200. Oregon State University, Corvallis, Oregon.

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Lestelle, L. 2007. Coho salmon (*Oncorhynchus kisutch*) life history patterns in the Pacific Northwest and California. Final report prepared for the U.S. Bureau of Reclamation, Klamath Area Office, Klamath Falls, Oregon.

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Silloway, S. 2010. Del Norte 101 Klamath Grade Raise wetland project surveys in Del Norte County – DRAFT. Yurok Tribal Fisheries Program, Klamath, California.

Soto, T., A. Corum, H. Voight, D. Hillemeier, and L. Lastelle. 2008. The role of the Klamath River mainstem corridor in the life history and performance of Juvenile Coho Salmon (*Oncorhynchus kisutch*). Phase I report submitted to U.S. Bureau of Reclamation, Klamath Area Office, Klamath Falls, Oregon.

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: http://www.oregon.gov/ENERGY/GBLWRM/docs/CCIGReport08Web.pdf?ga=t

Wallace, M. 2007. Personal Communication. California Department of Fish and Game, Arcata, California.

Yurok Tribal Fisheries Program. 2009. A Complete Life History Monitoring of Salmonids in McGarvey Creek, Lower Klamath River Sub-basin, 2006-2009. Yurok Tribal Fisheries Program, Klamath, California.

Appendix 1

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

January 28, 2011

Document number: 414920913-122547

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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

Type		Scientific Name	Common Name	Category	Critical Habitat
Invertebrates					
	*	*Haliotis cracherodii*	black abalone	E	N
Fish					
	*	*Acipenser medirostris*	green sturgeon	T	Y
		Eucyclogobius newberryi	tidewater goby	E	Y
	*	*Oncorhynchus kisutch*	S. OR/N. CA coho salmon	T	Y
	*	*Oncorhynchus tshawytscha*	CA coastal chinook salmon	T	Y
Birds					
		Brachyramphus marmoratus	marbled murrelet	T	Y
		Charadrius alexandrinus nivosus	western snowy plover	T	Y
		Coccyzus americanus	Western yellow-billed cuckoo	C	N
		Phoebastris albatrus	short-tailed albatross	E	N
		Strix occidentalis caurina	northern spotted owl	T	Y
		Synthliboramphus hypoleucus	Xantus's murrelet	C	N
Mammals					
	*	*Balaenoptera borealis*	sei whale	E	N
	*	*Balaenoptera musculus*	blue whale	E	N
	*	*Balaenoptera physalus*	fin whale	E	N
		Martes pennanti	fisher, West Coast DPS	C	N
	*	*Megaptera novaengliae*	humpback whale	E	N
	*	*Physeter macrocephalus*	sperm whale	E	N

Hiatt, Kristen L

From: Nickels, Adam M
Sent: Tuesday, February 22, 2011 11:59 AM
To: Hiatt, Kristen L
Cc: Korson, Charles S (Chuck); Barnes, Amy J; Bruce, Brandee E; Dunay, Amy L; Fogerty, John A; Goodsell, Joanne E; Overly, Stephen A; Perry, Laureen (Laurie) M
Subject: RE: Compliance for KBRP Project w/ USFWS

Project No. 11-KBAO-086

Kristen

After reviewing the associated documentation Reclamation concurs that we are a cooperating agency in this action. We accept Fish and Wildlife Service's documentation as completion of the Section 106 process for this undertaking. Reclamation's undertaking involves providing funding assistance the Klamath Basin Restoration Program that will be used to implement the proposed actions outlined in the documentation you provided. These actions are considered to be the type of action that has the potential to cause effects to historic properties. Consistent with our agency process when Reclamation is a cooperating agency, we will submit the documentation provided by the Fish and Wildlife Service to the California SHPO explaining to them that Reclamation is a cooperating agency and Fish and Wildlife Service is the lead Federal Agency for compliance with Section 106. We will note in our notice to the SHPO that if they have any questions or concerns regarding findings outlined in the Fish and Wildlife Service documentation, that please direct those concerns to the Fish and Wildlife Service. Any unanticipated discoveries should be directed to Fish and Wildlife Service with Reclamation cultural resources staff CC'd on findings. Since fish and Wildlife Service has competed the Section 106 process pursuant to their Programmatic Agreement Appendix B, Reclamation has no further comment regarding Section 106 process. Please not that the SHPO will be notified of the project and made aware that Fish and Wildlife Service has taken the lead for Section 106 compliance.

This email memo is intended to convey that Reclamation has no further obligation in the Section 106 process for this undertaking. Please provide a copy of any additional information including NEPA documents when they are made available. Thank you for the opportunity to comment on this action.

Sincerely,

Adam M. Nickels - Archaeologist - M.S.
Phone: 916.978.5053 - Fax: 916978.5055 - www.usbr.gov

[redacted]-Mid-Pacific Regional Office MP-153 2800 Cottage Way - Sacramento, California 95825

From: Hiatt, Kristen L
Sent: Sunday, February 20, 2011 4:19 PM
To: Nickels, Adam M
Subject: Compliance for KBRP Project w/ USFWS

Adam,

Please find attached several documents relating to a Klamath Basin Restoration Program Grant #R10AP20084 entitled Enhancement of Overwinter Habitat for Natal and non-Natal salmonids in McGarvey Creek. Reclamation is providing grant funding to the Yurok Fisheries Program (Sarah Beesley). The project is also being funded by the USFWS. As such, the USFWS performed the NHPA compliance process for the project. Please review and advise on NHPA and Section 106 compliance from a Reclamation standpoint.

Please let me know if you have any questions or require additional information.

Regards,

Kristen L. Hiatt
Environmental 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

Hiatt, Kristen L

From: Rivera, Patricia L
Sent: Friday, May 27, 2011 11:20 AM
To: Hiatt, Kristen L
Subject: RE: 20110526 Yurok McGarvey Creek Indian Trust Assets Request Form.pdf - Adobe Acrobat Professional

Kristen,

I reviewed the proposed action to provide KBRA funding to enhance overwinter rearing habitat in McGarvey Creek. The project would consist of multiple activities necessary to complete the habitat enhancement. Topographic Survey – The YTFP would conduct pre-project topographic surveys of the channel and establish multiple, permanent the project reach in early summer 2011. The surveys would consist of a 2-3 person crew hiking floodplains and the channel of McGarvey Creek to obtain topographic data. An optical total station supported by a tri-pod and various prism poles would be used to collect elevation information from the streambed and floodplains.
Complex Wood Jams (CWJs) - Approximately 15 CWJ's are proposed to be constructed throughout the project reach. CWJs proposed for this project are a variation of Engineered Log Jams (ELJ) described by Abbe et al. (2003, 2003b, 2005); and would mimic naturally occurring features such as bar apex jams, sluice gate jams, staggered abutment jams, and toppled riparian trees. CWJs are constructed using the same geomorphic and engineering principles as EJLs; where mechanically driven logs, riparian trees, interlocking logs and/or whole trees that provides resisting elements necessary for maintaining stability and function under a variety of flows. Installation of CWJs may incorporate threaded rebar or chain anchor systems if a high factor of safety is required.
Heavy equipment (ie. excavators, dozers, dump and log truck, and front-end loaders) and hand crews would be used for this portion of the project.

Alcove Construction – A 550 foot alcove is proposed for construction. The alcove would be hydrologically connected at the downstream end to McGarvey Creek. The alcove channel would be constructed parallel with the valley sidewall and the M600 road and have a meandering thalweg and a two-stage configuration. The channel cross-section would be constructed to have an average top width of 15 feet. The thalweg depth below the ground surface would range from 4-7 feet depending on variations in floodplain topography. The alcove channel would have an average slope of approximately 0.003 (0.3%). CWJs would be incorporated into the constructed channel to maintain its form and function, and to provide complex salmonid habitat. Heavy equipment (ie. excavators, dozers, dump and log truck, and front-end loaders) and hand crews would be used for this portion of the project. Landscape Stabilization – Stabilization of up to approximately 2,000 feet of the M600 road is proposed. Heavy equipment would be used to stabilize the road related fill that currently impairs or threatens stream and floodplain function in lower McGarvey Creek. Unstable road and landing fill material that currently occupies lower McGarvey Creek floodplains; or has a high potential to deliver sediment directly into the creek would be recontoured and the excess materials would be moved to stable disposal sites . This task would use a combination of excavators, dozers, and off-site dump trucks to excavate and stabilize problematic fill material. Key components of this task include:
1.) Removal of three stream crossings and floodplain road fill.
2.) Excavation and stabilization of un-compacted fill and unstable side-cast material (ie. outside edge of floodplain roads and landings).
3.) Installation of cross-road drains to minimize diversion potential from small springs and seeps. Cross-road drains would be installed at 50 to 200 feet intervals depending on road condition and location of seeps and springs. Cross-road drains would be larger than waterbars and once constructed. Re-grading of road prisms to disconnect roads and ditches from stream channels, and to create a positive drain on interfluves road benches.
5.) Ripping and de-compacting road prisms to increase infiltration, reduce road prism runoff, and help promote revegetation by native species.
6.) Placing see and mulch on excavation and disposal sites to help prevent erosion.

Temporary Access Road Construction – Crews would use existing access routes whenever possible; however, a few temporary access roads may be constructed to complete project tasks. Temporary access routes would be constructed using an excavator to limit the size of the road footprint. Routes would be designed and constructed in a manner that would minimize or avoid impacts to native vegetation, especially mature trees and conifer samplings.

Reclamation – Upon completion of the construction activities YTFP would perform reclamation activities which include the following:

1.) Access roads would be mulched with seed-free straw to a minimum depth of three inches to prevent erosion.
2.) Two native trees would be planted in the project area for each tree removed during construction.

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

Patricia

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish and Wildlife Office
1655 Heindon Road
Arcata, CA 95521-5582
Phone: (707) 822-7201 Fax: (707) 822-8411

September 10, 2010

Memorandum

To: Nancy J. Finley, Field Supervisor /s/ for Nancy Finley

From: Greg Gray, Fish and Wildlife Biologist GG

Subject: Fulfillment of Federal Regulatory Requirements for the "McGarvey Creek Stream and Off-channel Restoration Project", Del Norte County, California.

The Service ensured that the following federal regulatory requirements were met for the "McGarvey Creek Stream and Off-channel Restoration Project" (Partners for Fish and Wildlife Program, FY 2010): National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, Sections 401 and 404 of the Clean Water Act, and contaminants review. An explanation of each requirement is included below.

National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190, as amended): The project met the guidelines of a categorical exclusion as provided in the Department of Interior Manual 516 DM2, and 6 within Appendix 1, Section 1.4(B)(3) (FR:61(11)2375-2382, January 16, 1997), therefore no Environmental Assessment or Environmental Impact Statement was written for the project. A signed NEPA Compliance Checklist is included in the project file.

As part of the NEPA determination, the Service evaluated the project's consistency with Executive Order (EO) 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands). An explanation of the Service's consistency determination is summarized below:

Floodplain Management: Section 1 of the EO 11988 directs federal agencies to "take action to reduce the risk of flood loss, to minimize impact of floods on human safety, health, welfare, and to restore and preserve the natural beneficial values served by floodplains in carrying out its responsibilities." Project activities will have a net benefit to floodplain processes and function, resulting in improved floodplain connectivity to the stream channel; long-term bank and channel stability; improved geomorphic processes (e.g. sediment and gravel routing and retention, floodplain morphology); and improvements in floodplain hydrology and water storage. These processes will in turn improve habitat complexity and availability for salmonids, amphibians, and other aquatic species. The project will not cause increased flooding to the area or adjacent properties. Standard Best Management Practices will be employed to minimize short term impacts to streams and floodplains as a result of construction activities. In summary, the project is consistent with EO 11988 and will have net positive benefits to floodplain form and function.

Protection of Wetlands: Section 1 of EO directs federal agencies to "provide leadership and take action to minimize the destruction, loss or degradation of wetlands in carrying out the agencies responsibilities." The project will improve floodplain and wetland habitat and function by improving connectivity between the floodplain and stream channel and promoting the geomorphic processes that form and maintain off-channel wetlands and floodplain habitat. Standard Best Management Practices will be employed to minimize short term impacts to streams and floodplains as a result of construction activities. In summary, the project will result in a net benefit to wetland function, connectivity and biological resources.

Section 106, National Historic Preservation Act (NHPA) of 1966 (P.L. 89-655, as amended): Pursuant to part 800.3(a)(1) of 36 CFR part 800, June 17, 1999, the Service has determined that this undertaking does not have the potential to cause effects to historic properties. The project was reported to the State Historic Preservation Officer (SHPO) as required by a Programmatic Agreement dated June 6, 1997 between the Service and the SHPO in California. No further action was necessary.

Section 7, Endangered Species Act of 1973 (P.L. 93-205, as amended): The Service submitted a request letter for consultation with the National Marine Fisheries Service (NMFS) on June 18, 2010, to evaluate project impacts on federally-listed SONCC Coho salmon. On August 10, 2010, the Service received written concurrence from NMFS that the project may affect but is not likely to adversely affect SONCC Coho salmon or their designated critical habitat. The consultation letters are included in the project file.

The Service has determined that the project may affect but is not likely to adversely affect the federally-listed Northern spotted owl based on the following factors: (1) The proposed action will not affect suitable northern spotted owl habitat; it will not remove, degrade, or downgrade suitable habitat. As a result, direct mortality or injury of owls is not likely; and (2) The project will adhere to a limited operating period with no operations until after July 9 for sites occurring within or near (0.25 mile) suitable habitat to avoid disturbance to nesting owls or their young, which may result from noise or human activity prior to dispersal of young.

Section 404 of the Clean Water Act (CWA) of 1948 (P.L. 845, as amended): Pursuant to Section 404 of the Clean Water Act, the project qualified for authorization under the Army Corps of Engineers – Nationwide Permit Number 27 for "Aquatic Habitat Restoration, Establishment, and Enhancement Activities" (72 Fed. Reg. 11092, Mar. 12, 2007). Therefore, no further action was necessary.

Preliminary Contaminant Survey Screening Report: A Preliminary Contaminant Survey Screening Report and memo was written for the project and included in the file. No environmental contaminants or hazardous materials were found within the project area. A record search was conducted to determine if underground storage tanks or other types of toxic waste sites were located within the project area and none were found.

NEPA COMPLIANCE CHECKLIST

State: CA **Federal Financial Assistance Grant/Agreement/Amendment Number:** 81331AJ142
Grant/Project Name: McGarvey Creek Stream and Off-channel Restoration - Phases 1 and 2

This proposal ☑ is; ☐ is not completely covered by categorical exclusion 1.4(B)3 **in 516 DM 2, Appendix** 1 **; and/or 516 DM 6, Appendix** 1 **.**
(check (✓) one)

(Review proposed activities. An appropriate categorical exclusion must be identified before completing the remainder of the Checklist. If a categorical exclusion cannot be identified, or the proposal cannot meet the qualifying criteria in the categorical exclusion, or an extraordinary circumstance applies (see below), an EA must be prepared.)

Extraordinary Circumstances:
Will This Proposal *(check (✓) yes or no for each item below)*:

Yes	No		
☐	☑	1.	Have significant adverse effects on public health or safety.
☐	☑	2.	Have significant adverse effects on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas under Federal ownership or jurisdiction.
☐	☑	3.	Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].
☐	☑	4.	Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.
☐	☑	5.	Have a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.
☐	☑	6.	Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.
☐	☑	7.	Have significant adverse effects on properties listed or eligible for listing on the National Register of Historic Places as determined by either the bureau or office, the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, or a consulting party under 36 CFR 800.
☐	☑	8.	Have significant adverse effects on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant adverse effects on designated Critical Habitat for these species.
☐	☑	9.	Have the possibility of violating a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.
☐	☑	10.	Have the possibility for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).
☐	☑	11.	Have the possibility to limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).
☐	☑	12.	Have the possibility to significantly contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).

(If any of the above extraordinary circumstances receive a "Yes" check (✓), an EA must be prepared.)
☑ Yes ☐ No This grant/project includes additional information supporting the Checklist.

Concurrences/Approvals:
Fish & Wildlife Biologist: _____ Date: 8/23/10

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the grant/agreement/amendment:

☐ **is a categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. No further NEPA documentation will therefore be made.**
☐ **is not completely covered by the categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. An EA must be prepared.**

Service signature approval:

Fish & Wildlife Office Supervisor: Paul Schlafly Acting Date: 9/10/2010
Staff Specialist, Division of Federal Assistance: _____ Date: _____
(or authorized Service representative with financial assistance signature authority)

OMB Control Number 1018-0110
Expiration Date 06/30/2007

NOTICE

In accordance with the Paperwork Reduction Act (44 U.S.C. 3501et seq.), please be advised that:

1. The gathering of information from potential grant recipients is authorized by The National Environmental Policy Act (NEPA, 42 U.S.C. 4321-4347). NEPA requires that a number of items be considered prior to any activity under a grant.
2. The submission of requested information is required for entities competing for federal assistance grants . This completed checklist is a record that these NEPA issues were considered prior to commencing grant activity.
3. You are not required to respond to a collection of information unless it displays a currently valid OMB control number.
4. This information collection has been approved by OMB and assigned clearance number 1018-0110.
5. The requested information may be subject to disclosure under provisions of the Freedom of Information Act (5 U.S.C. 552).

The public reporting burden for the information collected on this form is 30 minutes. This burden estimate includes time for reviewing instructions, gathering data, and completing and reviewing form. Comments on this form should be mailed to the Information Collection Officer, Mail Stop 222, Arlington Square, U.S. Fish and Wildlife Service, Washington, DC 20240. Thank you.

United States Department of the Interior

FISH AND WILDLIFE SERVICE, REGION 1
Cultural Resources Team
20555 SW Gerda Lane
Sherwood, Oregon 97140
503-625-4377 (fax 503-625-4887)

IN REPLY REFER TO:

16 July 2010

To: Greg Gray
Program: Conservation Partnerships
Funding: Partners for Fish and Wildlife

From: Virginia Parks, Cultural Resources Team
On behalf of Anan Raymond, Regional Historic Preservation Officer

Subject: **Section 106 compliance: McGarvey Instream Wood Loading and Floodplain Restoration – Phases 1 and 2**

Thank you for submitting a request for cultural resource compliance (RCRC) form for the project listed above, received in our office on **24 June 2010.**

Based on the documentation provided by your office, it is our understanding that the U.S. Fish and Wildlife Service (FWS) is providing funding through the Partners program to assist the Yurok Tribe Fisheries Program in placement of large woody debris, excavation of two floodplain side channels, decommissioning of floodplain road, and conifer planting along the riparian corridor of McGarvey Creek on land owned by Green Diamond Resource Company in Del Norte County, CA (T13N, R1E, S24, Klamath Glen, Ah Pah Ridge USGS 7.5' quads) (Figure 1, 2, 3).

The information provided by you included a report entitled, "Yurok Tribe Fisheries Program Restoration of Coastal Stream & Floodplain Habitats of McGarvey Creek, Klamath River Project Cultural Resources Inventory," prepared by Kathleen Sloan, Ph.D., of the Yurok Tribe Environmental Program, May 2010 (Appendix 1). The archaeological survey was conducted specifically to address the cultural resources requirements of Section 106 of the National Historic Preservation Act (NHPA).

.

Based on the location and nature of the activities, the project falls under Appendix B of the FWS Programmatic Agreement with the California State Historic Preservation Office (SHPO). Appendix B projects are those "requiring consultation with the Regional Archaeologist/Historic Preservation Specialist and otherwise excluded from case-by-case review and consultation with the SHPO but will be subject to a cultural resource identification effort."

Qualified staff from the Yurok Tribe Environmental Program conducted field survey of the Area of Potential Effects (APE) in May 2010 under the supervision of Sloan. Meandering pedestrian transects at 2 meter intervals covered 100% of the APE. No cultural resources were identified in the APE (Sloan 2010:17). Sloan recommends that the project proceed with a determination of "No Historic Properties Affected," and that the Yurok Protocol for Inadvertent Discovery should be followed at all times during project implementation (Sloan 2010:18).

We have reviewed Sloan's report and concur that a "No Historic Properties Affected"

determination is warranted. No further cultural resource identification effort is necessary for the project. However, the existence of cultural resources cannot be predicted with certainty. Consequently, we agree with Sloan that the stipulation to implement the approved inadvertent discovery protocol should be followed. Please be aware that cultural resources are protected by all applicable federal and state laws. In the event that cultural resources are discovered during project implementation, any ground disturbing activity should be halted and the FWS Regional Archaeologist should be notified at the above address. If the planned activities change, please let us know.

Please note that the project will be reported to the State Historic Preservation Office in the FWS annual report at the end of the fiscal year under the terms of the PA.

If you have any questions, please don't hesitate to call us at 503-625-4377.

Thank you for considering cultural resources.

References

Sloan, Kathleen, Ph.D
2010 Yurok Tribe Fisheries Program Restoration of Coastal Stream & Floodplain Habitats of McGarvey Creek, Klamath River Project Cultural Resources Inventory. Prepared for the Yurok Tribal Fisheries Program, Klamath, California.

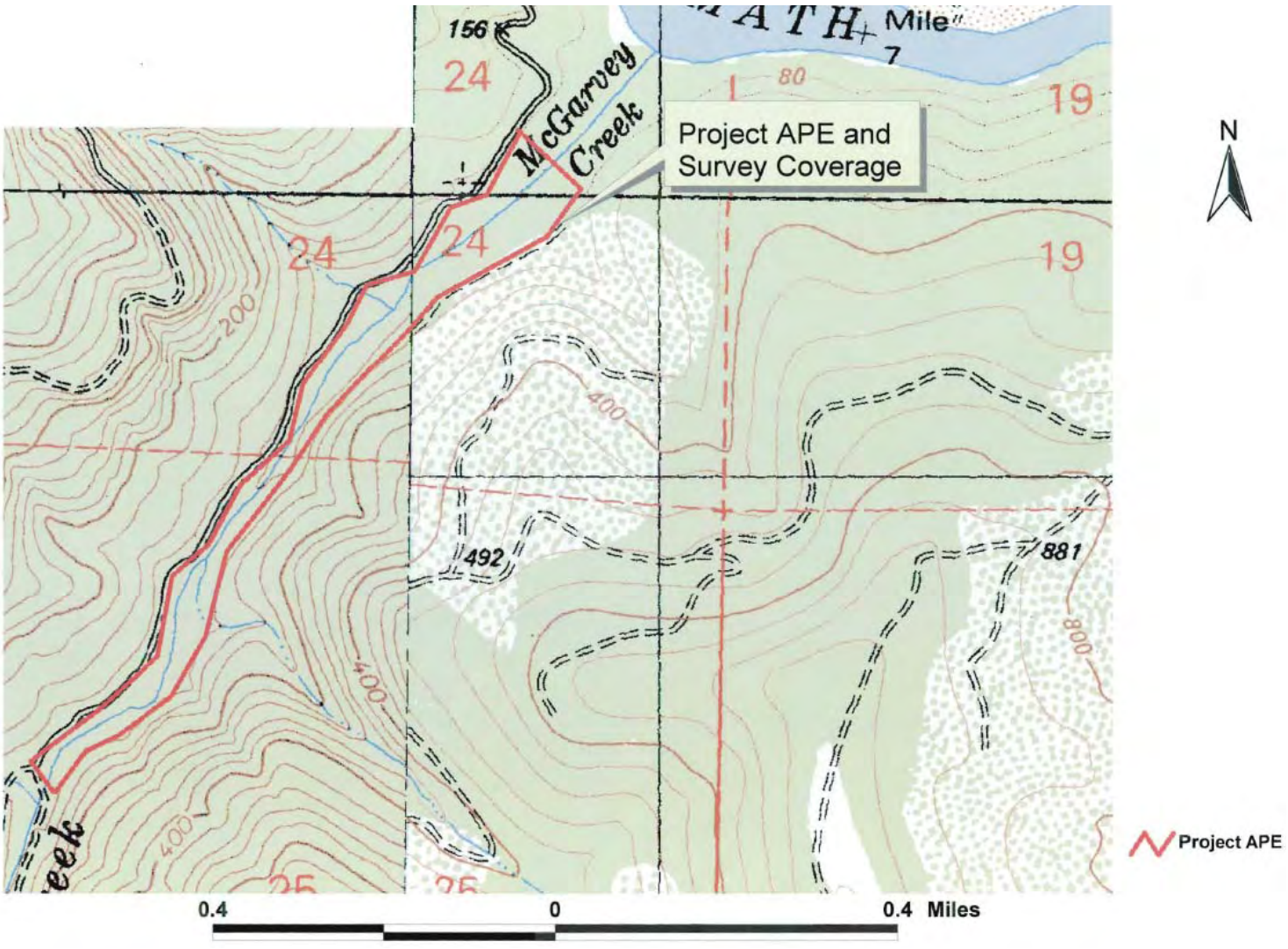
Attachments:

Figure 1. APE and survey area map
Figure 2. Aerial map
Figure 3. Photographs of project area
Appendix 1. Archaeological survey report prepared by K. Sloan

Figure 1. Area of Potential Effects and survey coverage (from Sloan 2010).

Project Name:	**McGarvey Instream Wood Loading and Floodplain Restoration – Phases 1 and 2**

Location Information:				Township	Range	Section	Project Acres
County **Del Norte**	*FWS Unit* **Arcata FWO**			**13N**	**1E**	**24, 25**	*Total* **4**
State **California**	*USGS Topo* **Klamath Glen, Ah Pah Ridge, Fern Canyon**						
Appendix Item B 5	*Program Funding*	Partners **Partners**	*Field Contact* **Gray, G**				*APE* **4**



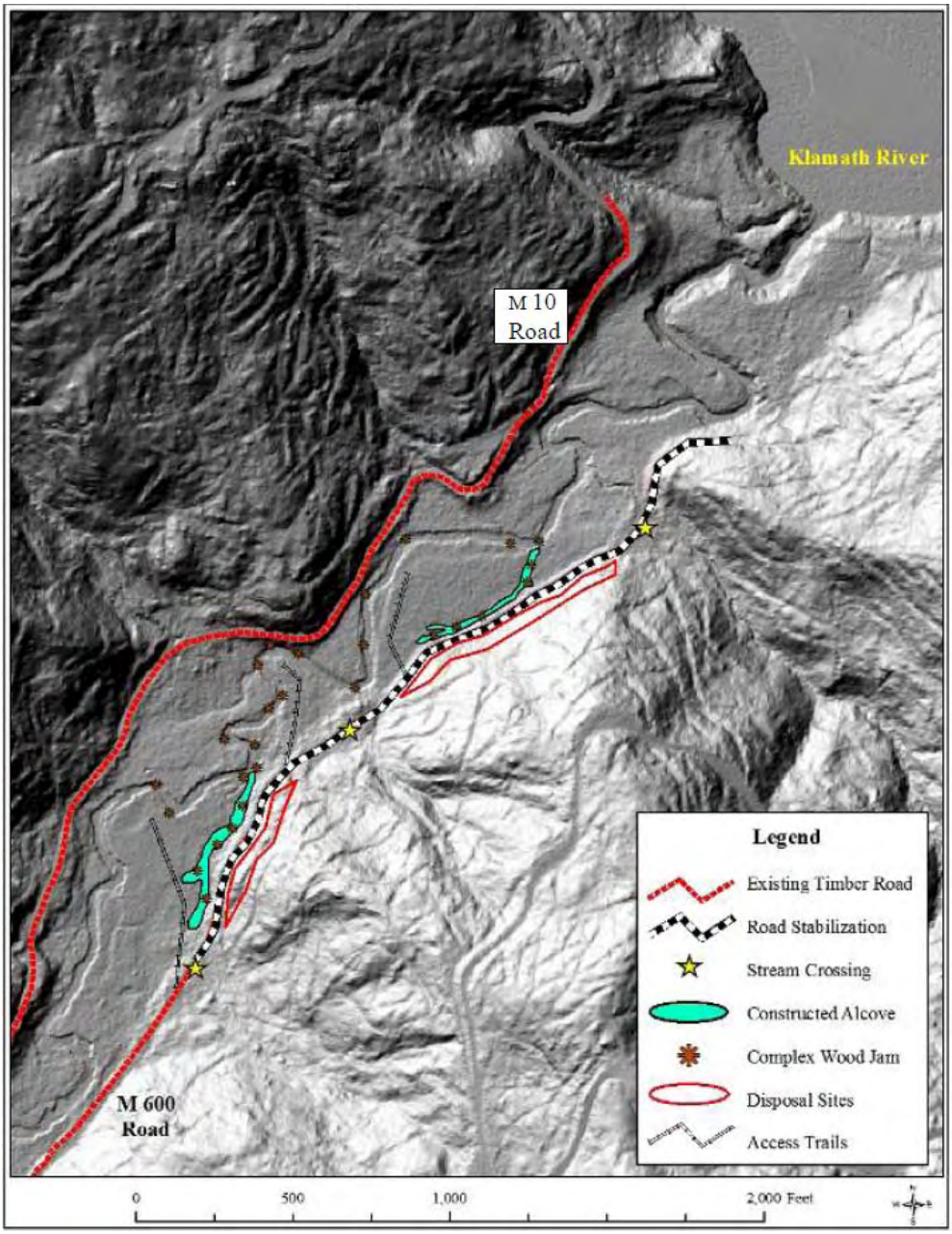
Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.

Figure 2. Sketch plan of the proposed activities.

FY2010
U.S. Fish & Wildlife Service
Project Location

PROJECT NAME: **McGarvey Instream Wood Loading and Floodplain Restoration – Phases 1 and**

LOCATION INFORMATION:						PROJECT ACRES
County **Del Norte**	*FWS Unit* **Arcata FWO**	*Township*	*Range*	*Section*		*Total* **4**
State **California**	*USGS Topo* **Klamath Glen, Ah Pah Ridge, Fern Canyon**	**13N**	**1E**	**24, 25**		
Program **Conservation**	*Field Contact* **Gray, G**					*APE* **4**
Funding **Partners**						



Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.

Figure 3. Photos of project area.

PROJECT NAME:	**McGarvey Instream Wood Loading and Floodplain Restoration – Phases 1 and**

LOCATION INFORMATION:						PROJECT ACRES
County **Del Norte**	*FWS Unit* **Arcata FWO**	*Township*	*Range*	*Section*		*Total*
State **California**	*USGS Topo* **Klamath Glen, Ah Pah Ridge, Fern Canyon**	**13N**	**1E**	**24, 25**		**4**
Program **Conservation**	*Field Contact* **Gray, G**					*APE*
Funding **Partners**						**4**

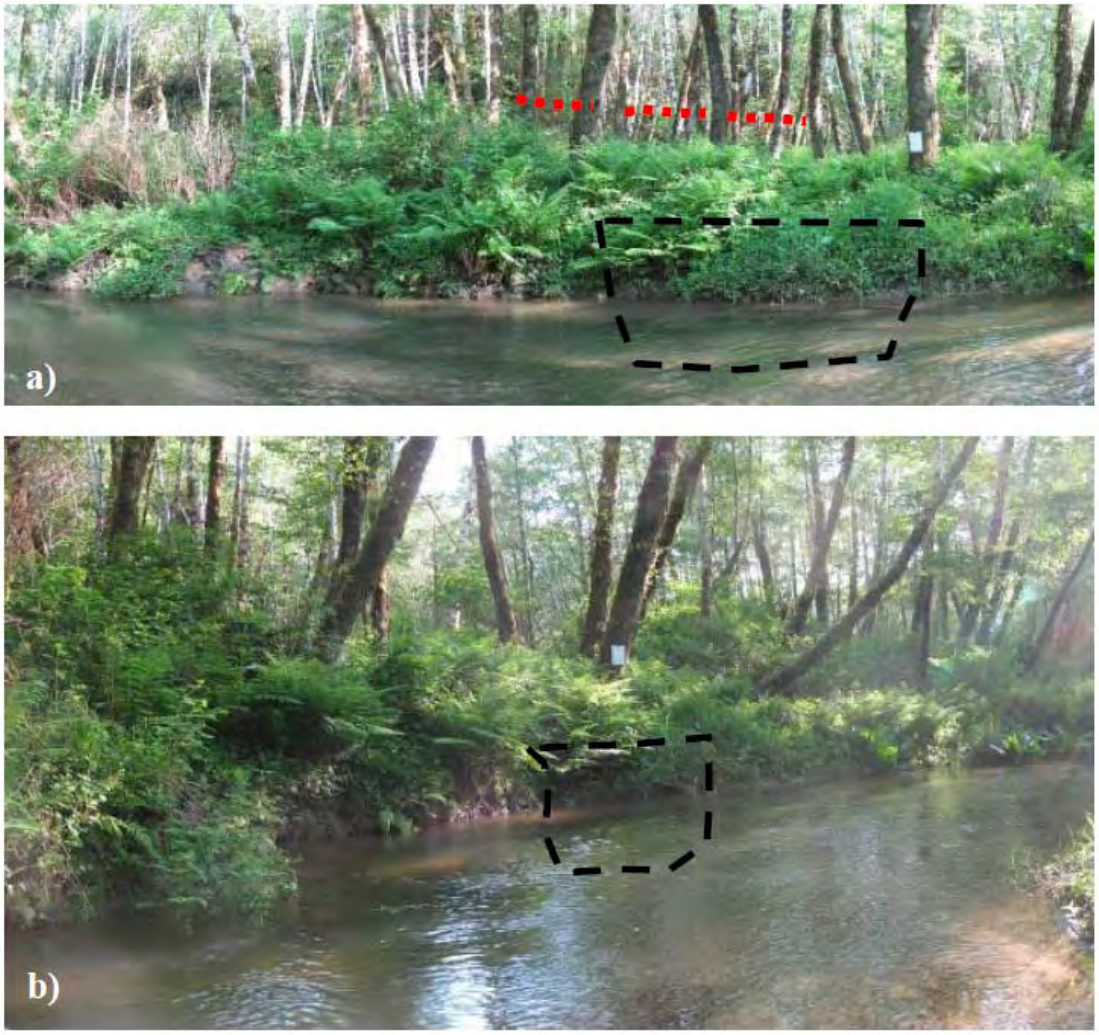


Figure 5. Proposed constructed alcove channel confluence with main stem McGarvey Creek, (a) oblique view and (b) upstream view. Black line delineates proposed location of Phase I alcove channel outlet. Red line in background of 5a) indicates the location of the M600 road along valley sidewall. Bank height is about 3.1 feet above water line, stream depth approximately 1.5 feet. Stream discharge was reported as 7.9 cfs at the stream gage located 2200 feet upstream. Map board hanging in Alder is 1.5 ft.x 1.0 ft for scale. Photos 10 May 2009.

Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.

Yurok Tribe Cultural Resources Management Permit Application

FOR OFFICIAL USE ONLY
Date Received: _____
Staff Received: _____
Copy Sent To: _____ Tribal Heritage Preservation Officer (THPO)
_____ Native American Graves Protection and Repatriation Act (NAGPRA) Coordinator
7/29/10 _____ Tribal Archaeologist
_____ Permit Applicant

Instructions: Complete and return this application form and necessary supporting documentation to the Yurok Tribal Office in Klamath. All information requested must be completed before the application will be considered. Use separate pages if more space is needed to complete a section and attach.

1. Name of Applicant (Yurok Tribal Department, Corporation, Lead Agency, Individual, or Other Entity)

Yurok Tribal Fisheries Program

2. Mailing Address

PO Box 1027 Klamath, CA 95548

3. Telephone Number

(707)954-0376

4. Email Address

sbeesley@yuroktribe.nsn.us

5. Fax Number

(707)482-0310

6. Location of Proposed Work:

a. Description of lands involved using the best available location information (complete all boxes possible).

i. Latitude and Longitude	ii. UTM Coordinates	iii. PLSS (township, range, and section)	iv. APN (parcel) Number	v. Assignment/ allotment	vi. Physical Address
41.503, -123.995		T13N, R1E, S24			

b. Attach a map and other relevant supporting documentation identifying the location of proposed work, defined as the Area of Potential Effect, which should include all areas proposed for use in the project, such as staging, implementation, cleanup, or otherwise included in the Proposed Work described below. Location should preferably be mapped on a 1:24,000, 7.5-Minute Series U.S. Geological Survey (USGS) Topographic Quadrangle map. Additional supporting Documentation that may be attached could include photos, parcel maps, site plans, surveys, and engineer drawings.

7. Nature of Proposed Work:

a. Please check all that apply:

■ trenching	■ road construction	■ boring	■ drilling	■ plowing
■ excavation	■ road grading	■ digging	■ tunneling	■ topsoil stripping
■ auguring	■ backfilling	■ blasting	■ land leveling	■ install utility pole
■ quarrying	■ ground clearing	■ grading	■ vegetation removal	■ other (explain below)

b. Please describe in detail the proposed work, particularly as related to ground-disturbing activities, including the depth and width of each activity as checked in 7a.

Please see attached Scope of Work and Map
+ Cultural Resources Inventory Report

8. Date of Proposed Work:

From: 10/31/2012 (M D Y) To: 10/31/2012 (M D Y)

9. Time of Proposed Work: 700 AM to 600 ~~AM~~ PM

10. Permit Applicant Contact Information:

a. Name: Sarah Beesley, Yurok Tribal Fisheries
b. Title: Fisheries Biologist
c. Organization: Yurok Tribe
d. Telephone number(s): (707) 954 0376
e. Email Address: Sbeesley@yuroktribe.nsn
f. Mailing Address: PO Box 1027 Klamath CA 95548

10. Landowner(s) Contact Information:

a. Name(s): Green Diamond Resource Company, Jeremy Wright
b. Telephone number(s): (707) 668 4471
c. Email Address(es): jwright@greendiamond.com
d. Mailing Address(es): PO Box 68 Korbel CA 95550

Please complete the following additional project contact information as applicable:

12. Project Manager:

a. Name:

b. Title: Please refer to BOX 10

c. Organization:

d. Telephone number(s):

e. Email Address:

f. Mailing Address:

13. Project Contractor:

a. Name:

b. Title:

c. Organization:

d. Telephone number(s):

e. Email Address:

f. Mailing Address:

14. Project Inspector:

a. Name:

b. Title:

c. Organization:

d. Telephone number(s):

e. Email Address:

f. Mailing Address:

15. Project Subcontractor:

a. Name:

b. Title:

c. Organization:

d. Telephone number(s):

e. Email Address:

f. Mailing Address:

15. Does this proposed project involve Federal funds, proposed to occur on federal lands, or could otherwise be defined as an "undertaking" according to Section 301 (7) of the National Historic Preservation Act of 1966 as amended through 2006?
Check applicable: ■ Yes ■ No Please refer to the Cultural Resources Inventory Report
16. To your knowledge, is the proposed project in an area that likely contains cultural resources?
Check applicable: ■ Yes ■ No Please refer to Cultural Resources Inventory Report

Certification

I, Sarah Beesley - Yurok Fisheries **certify that I have read the Cultural Resources**
(Permit Applicant)

Protection Ordinance, understand work may not begin until the proposed project is permitted, and agree to the terms and conditions that may be applied to the permit, and have the full consent of all pertaining landowners to conduct the proposed work. SB
(Initial)

I certify and declare under penalty of perjury that I have read and understand all items on this application and have had the opportunity to consult legal counsel in regard to this Permit. I further declare under penalty of perjury that all information contained herein is true and correct to the best of my knowledge and belief and agree to submit to the jurisdiction of the Yurok Tribal Court for all actions arising out of, or related to, the project associated with this Permit. SB
(Initial)

Sarah Beesley **Signature of Permit Applicant**	6/4/10 **Date**

Please deliver this Application to the Yurok Tribal Office in Klamath, CA
P.O. Box 1027
Klamath, CA 95548
(707) 482-1377 – Fax
Attention: Yurok Tribal Heritage Preservation Officer

Yurok Tribe Cultural Resources Management Permit Application

FOR OFFICIAL USE ONLY

Application Staff Review and Recommendations (Staff has 15 calendar days to review unless requiring input from Culture and/or NAGPRA Committees, then Staff has 15 calendar days from Committee decision date):

Application Reviewed (provide signature)	Reviewing Tribal Staff	Recommendations (attach additional sheets as necessary)
Robert B McConnell 6-22-10	Tribal Heritage Preservation Officer (THPO)	None
Buffy McQuillen 6-22-10	Native American Graves Protection and Repatriation Act (NAGPRA) Coordinator	none.
Kathleen Sloan 7-27-10	Tribal Archaeologist	N/A

If all reviewing Tribal staff determine that the proposed project will have no impact to cultural resources and provide no recommendations that suggest conditions and/or mitigation measures then the Tribal Chair may authorize the Permit Application without Council Consent.

Council Action (if applicable):

Permit Application	Council Agenda Number	Date of Council Session	With Conditions (if yes, explain below)
☐ Approved ☐ Denied			☐ Yes ☐ No

Permit Conditions: _____

_____

_____

Signature of Tribal Chair	Date
Thomas P. O'Rourke Sr.	7-28-10

YUROK TRIBE FISHERIES PROGRAM
RESTORATION OF COASTAL STREAM & FLOODPLAIN HABITATS OF MCGARVEY CREEK, KLAMATH RIVER PROJECT
CULTURAL RESOURES INVENTORY

Prepared for:

Yurok Tribal Fisheries Program
15900 Hwy 101 N.
Klamath, CA 95548

Project Funded by:
US Fish and Wildlife Service

Prepared by:

Kathleen Sloan, Ph.D.
Yurok Tribe Environmental Program
15900 Hwy 101 N.
Klamath, CA 95548
(707) 482-1822

May 2010

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CONFIDENTIALITY STATEMENT

Archaeological and traditional property locations are considered confidential and public access to such information is restricted by law (Section 304 of the National Historic Preservation Act; Section 9(a) of the Archaeological Resources Protection Act; Executive Order 13007; Section 6254.10 of the California State Government Code).

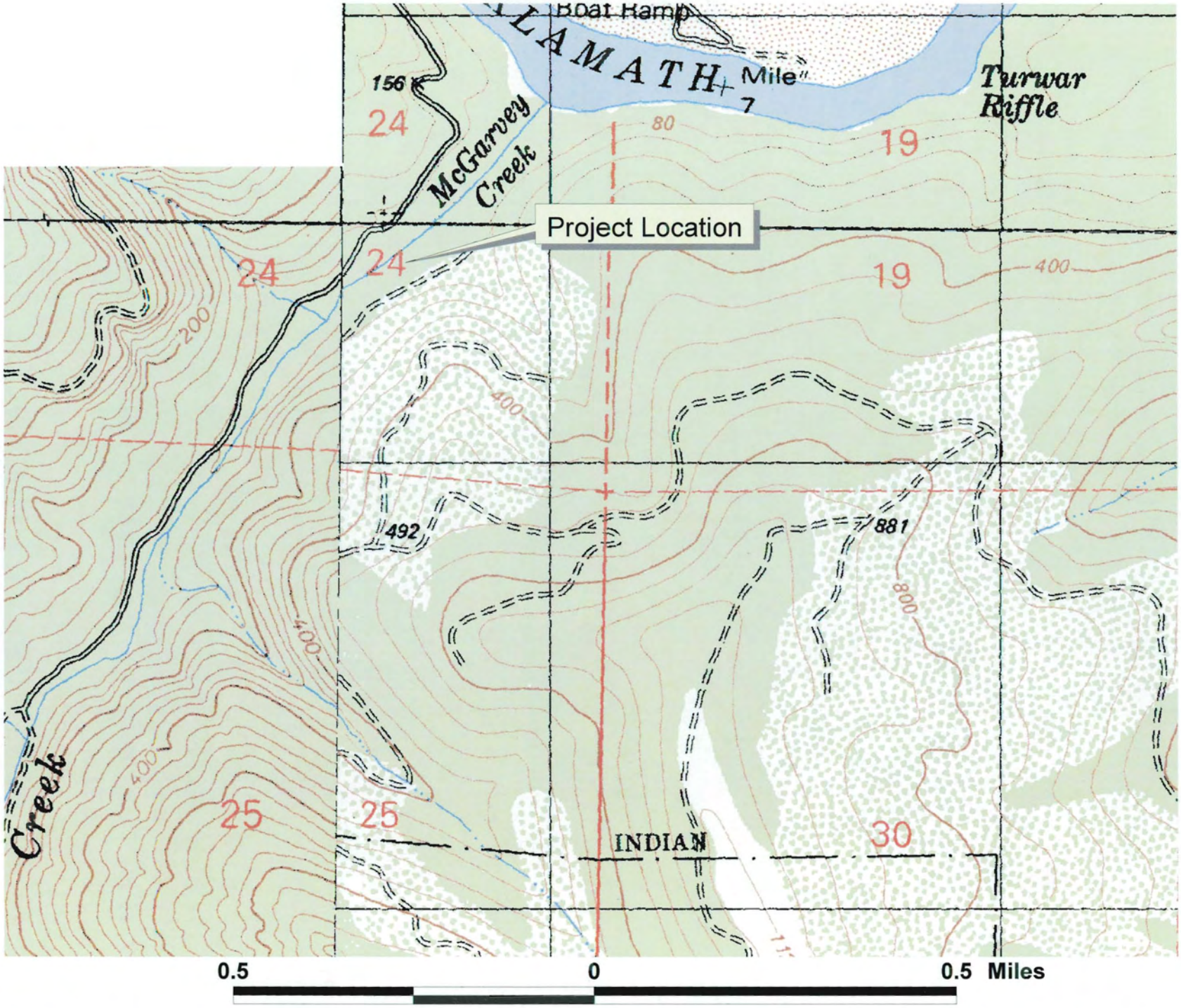

Figure 1: T 13 N, R 1 E, Section 24 of the USGS 7.5' Klamath Glen, Ah Pah Ridge, Del Norte County, CA quadrangles; and T 13 N, R 1 E, Sections 24 & 25 of the USGS 7.5' Fern Canyon, Humboldt County quadrangle showing Project Location

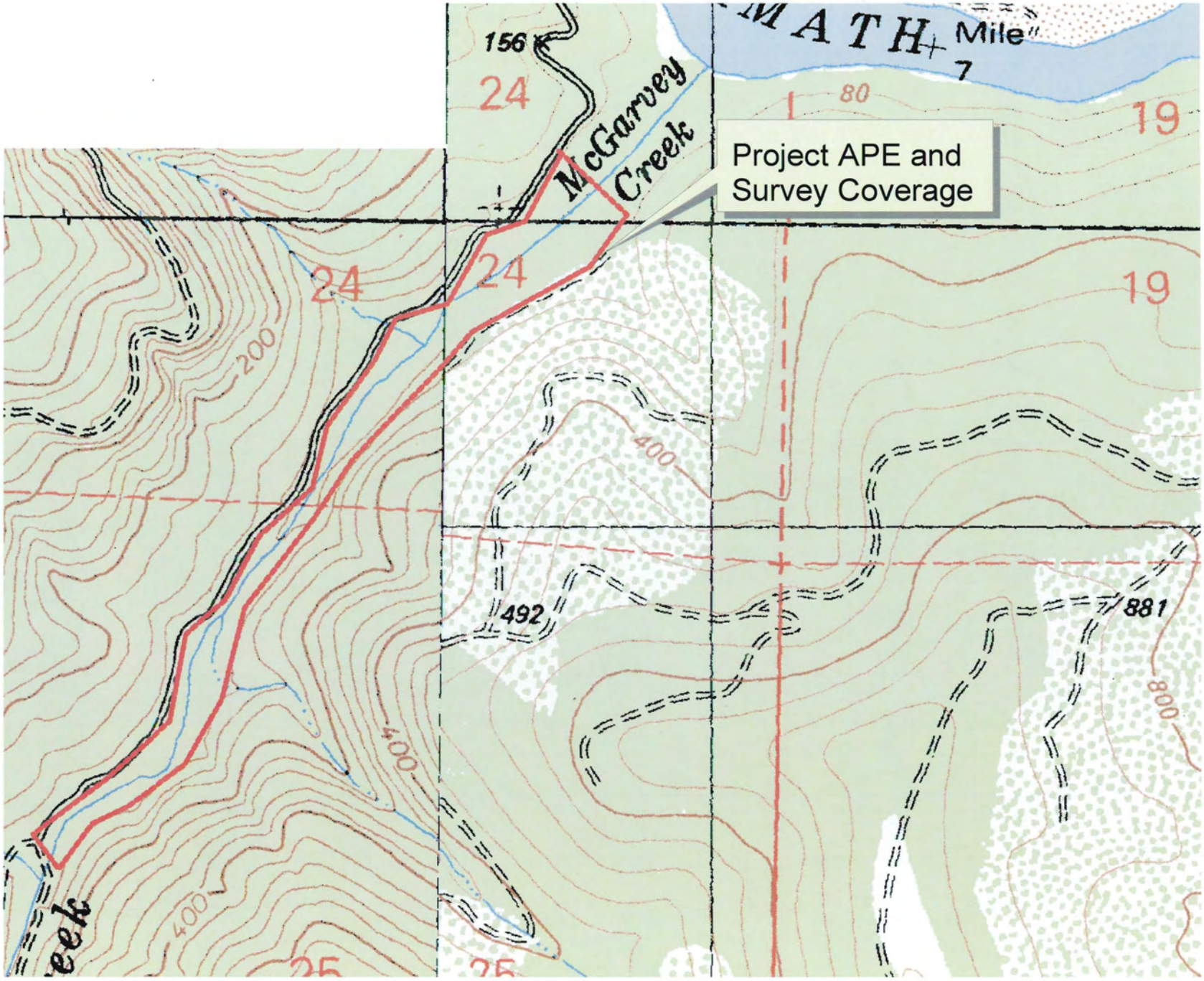

Figure 2: T 13 N, R 1 E, Section 24 of the USGS 7.5' Klamath Glen, Ah Pah Ridge, Del Norte County, CA quadrangles; and T 13 N, R 1 E, Sections 24 & 25 of the USGS 7.5' Fern Canyon, Humboldt County quadrangle showing Project APE and Survey coverage.

UNDERTAKING INFORMATION

This report has been prepared for the purposes of completing NHPA compliance for the following project proposed by the Yurok Tribal Fisheries Program and funded by the U.S. Fish & Wildlife Service (USFWS):

The Yurok Tribal Fisheries Program Restoration of Coastal Stream and Floodplain Habitats of McGarvey Creek, Klamath River Project (Project).

Study methods included a formal records search conducted by the North Coastal Information Center located in Klamath, CA, archival and literature searches at the Yurok Tribal Archives, the Humboldt and Del Norte County Historical Societies and Humboldt State University Library, a pedestrian archeological and cultural resources field survey of the project area, consultation with the Yurok Tribal Heritage Preservation Office and Yurok Culture Committee, and the preparation of this final report summarizing findings and presenting recommendations on the potential eligibility of any identified historic properties for nomination to the National Register of Historic Places.

The proposed Project constitutes as a "federal undertaking" under the definitions of NHPA and as such required a full Section 106 review prior to the letting of any federal contracts for the project. The Yurok Tribe Environmental Program conducted a pedestrian field survey meeting 36CFR800 standards for the identification of any cultural and historical resources within the Project Area of Potential Effect (APE) in May 2010. The Principal Investigator for the field survey and this cultural resources study was Kathleen Sloan, Ph.D. a Secretary of Interior qualified archeologist.

The proposed Project is located entirely on lands owned and managed by the Green Diamond Resources Company and is within the boundaries of the Yurok Reservation. This report, study methods, findings & recommendations are subject to review and approval by the Lead Agency, US Fish & Wildlife Service (USFWS). A final Determination of Effect for the Project will be made by the USFWS and will require Concurrence from the Yurok Tribal Heritage Preservation Office (YTHPO).

PROJECT LOCATION:

McGarvey Creek is a tributary to the Klamath River and is within the ancestral lands of the Yurok Tribe and within the external boundaries of the Yurok Reservation. The Project area is situated entirely within lands owned and managed by Green Diamond Resources Company. McGarvey Creek enters the south side of the Klamath River approximately 6.4 river miles upstream of the Pacific Ocean. The project area includes fluvial habitats from just upstream of Den Creek to the confluence with the Klamath River (Figure 1). The downstream boundary is located in T13N, R1E, S24 (Latitude 41.503º; Longitude -123.995º) and the upstream boundary is located in T13N, R1E, S25 (Latitude 41.491; Longitude -124.008). All of the project work will be conducted within the Yurok Indian Reservation (YIR) (See Figure 1).

The legal description of the Project APE is provided below:

T 13 N, R 1 E, Section 24 of the USGS 7.5' Klamath Glen and Ah Pah Ridge, Del Norte County, CA quadrangles; and

T 13 N, R 1 E, Sections 24 & 25 of the USGS 7.5' Fern Canyon, Humboldt County, CA quadrangle.

PROJECT DESCRIPTION:

McGarvey Creek flows into the Klamath River 6.4 river miles upstream of the Pacific Ocean and supports runs of chinook, coho, steelhead, and coastal cutthroat; and provides critical rearing habitat for non-natal salmonids, especially ESA listed Klamath Basin coho populations. Historic logging and road building activities resulted in the extraction of virtually all conifers from riparian corridors; removal of a majority of the channel-stored wood and naturally formed wood jams; and simplification of fluvial habitats. This project allows YTFP to address these limiting factors by conducting stream and floodplain enhancement activities in lower McGarvey Creek. Project objectives include deconstructing priority floodplain roads and stream crossings; creating complex off-channel rearing habitat for natal and non-natal salmonids; and installing complex wood jams to increase geomorphic function in this priority Lower Klamath tributary. McGarvey Creek is located in the Klamath Glen HSA, which was given the highest priority rating in the California Department of Fish and Game's (CDFG) 2004 Recovery Strategy for California Coho Salmon. This project will address the following priority coho recovery tasks: KR-KG-03; KR-KG-08; KR-KG-13; KR-KG-15; KR-KG-17; KR-KG-23. Project objectives are also consistent with recovery and monitoring objectives outlined in the National Marine Fisheries Service's 2007 Magnuson-Stevens Reauthorization Act Klamath River Coho Salmon Recovery Plan and CDFG's 1996 Steelhead Restoration and Management Plan for California.

YTFP anticipates constructing multiple complex wood jams (CWJs) throughout the project reach, enhancing off-channel habitats (i.e. alcoves), and rehabilitating floodplain roads (i.e. M 600) (Figures 1-2). Prior to implementation (spring 2010), YTFP will conduct topographic surveys of the channel and establish multiple, permanent cross sections in the project reach. Surveys will consist of a 2-3 person crew hiking floodplains and the channel of McGarvey Creek to obtain topographic data. YTFP will survey in a manner that minimizes and avoids impacts to soil, terrestrial and aquatic habitats, fish and wildlife, and vegetation.

In late summer 2010, YTFP will work with Rocco Fiori (California Licensed Geologist) to conduct stream and floodplain enhancement activities. Heavy equipment (i.e. excavators, dozers, dump and log trucks, and front-end loaders) and hand crews will be used to construct the off-channel alcove, conduct road deconstruction activities, and install CWJs in lower McGarvey Creek. Crews will use existing access routes whenever possible; however, a few temporary access routes may be constructed to complete project tasks. Temporary access routes will be constructed using an excavator to limit the size of the road footprint. Routes will be designed and constructed in a manner that will minimize or avoid impacts to native vegetation, especially mature trees and conifer saplings. Any trees removed during construction activities will be incorporated into the stream or alcove to increase habitat complexity. After construction tasks are complete YTFP will: 1) mulch constructed access routes with seed-free straw to a minimum depth three inches to prevent erosion; and 2) plant two native trees in the project area for each tree removed during construction. Some access routes may not be planted to allow for future access and adaptive management of the area in the future.

ENVIRONMENTAL SETTING:

McGarvey Creek flows into the Klamath River 6.4 river miles upstream of the Pacific Ocean. The Project area extends from just above the confluence with the Klamath River approximately 2,000 feet upstream at an elevation ranging from 40-80 feet amsl. Historic logging and road building activities resulted in the extraction of virtually all conifers from riparian corridors; removal of a majority of the channel-stored wood and naturally formed wood jams; and simplification of fluvial habitats. The entire Project APE has been heavily impacted by road building and logging activities on adjacent lands.

The dominant vegetation communities in the Project vicinity are Redwood Forest and Riparian. The Project vicinity is vegetated with a mix of regenerated stands of Redwood with fir and alder. The under story includes dense patches of salmon berry, huckleberry, blackberry, maiden hair fern, sword fern, wild iris, Oregon grape, wild parsnip, wild celery, and coltsfoot, rhododendron, and a variety of plant species common to coastal redwood forests. A wide array of rainforest and wetland plants occur throughout including many traditional Yurok foods and medicines edible mushrooms, ferns, herbs, berries and medicinal plants. The Project area adjacent to the active stream channel is dominated by blackberry, alder and some willows, typical vegetation in riparian areas that have been previously impacted by logging activities throughout the watershed.

Tectonic uplift and down cutting by stream channels over time has created high-relief topography throughout the region. Depending on the location within the watershed, soils are both colluvial and alluvial overlain with a dense humic layer. The Project area is within and adjacent to the active stream channel and contains primarily fluvial deposits of fine sediments, gravel and cobbles.

The Project area is located in a biotic community dominated by the coastal climate prone to significant rain events in winter months. The local climate is governed by the strong maritime influence exerted by the Pacific Ocean. Inland areas are influenced by higher temperatures and lower elevation areas are influenced by coastal fog and cooler temperatures in the summer months. As such, temperatures fluctuate between 50 and 70 degrees Fahrenheit, winters tend to be mild and rainy, and summers tend to be foggy and cool.

CONTEXTS:

Archeological Context:

The following is a summary of the cultural chronology that has commonly been developed by the archeological community for the northwestern California area. It represents an attempt to identify the discreet assemblages associated with specific adaptive strategies over time.

Borax Lake Pattern: This pattern has been attributed to the Early Period ranging from 8,000 to 3,000 years before present (Y.B.P.) and has been determined through radio carbon and obsidian hydration dating methods (Hildebrandt and Hayes 1983, 1984, 1993, Fitzgerald and Hildebrandt 2001). The assemblage associated to this period includes large wide stem project points (Borax Lake series); primarily made from locally available chert, hand stones and milling slabs, and ovoid and domed scrapers (Hildebrandt and Hayes 1983, Fitzgerald and Hildebrandt 2001). Obsidian is rare in these assemblages. These assemblages have been documented in both high elevation and low elevation sites in Northern California and are presumed to be associated with adaptive strategies associated with the post-glacial early Holocene period.

Mendocino Pattern: This pattern has been attributed to the Middle Period ranging from 3,000 - 1,100 Y.B.P. (Hildebrandt and Hayes 1993) The assemblage associated with this period includes smaller projectile points (Willits series and Oregon series), unifacial flake tools, increased use of mortars and pestles used for acorn processing, non-utilitarian or ornamental objects. Site patterns for this period are typically low elevation, riverine settlements, presumably focused on the extraction and procurement of riverine resources such as salmon and lamprey. Coastal settlements for this period are evident and extensive middens reflect the use of riverine, coastal and marine resources near the confluence of rivers throughout the region (Hildebrandt and Hayes 1983, 1984, 1993).

Gunther Pattern: This pattern has been attributed to the Late Period ranging from 1,500 Y.B.P. to the time of historic contact and is described as period of increasing social complexity surrounding a growing population adapted to the intensive use of marine, coastal and riverine resources (Loud 1918, Kroeber 1925, Hildebrandt and Hayes 1983, 1984, Hildebrandt and Roscoe 2003). Extensive trade networks between permanent villages and beyond traditional territories during this period have been documented archeologically and ethnographically, as illustrated by the use of dentalium, shell beads, obsidian, and later historic Euro-American trade goods such as glass beads and metal (Loud 1918, Kroeber 1925, Hughes 1978, Levulett and Hildebrandt 1987). The archeological assemblage for this period includes permanent villages with ceremonial structures and redwood plank houses, the increased use of mortars, pestles, bone and stone fishing tools, and the use of obsidian for ceremonial wealth blades and smaller projectile points associated with the use of the bow and arrow, and finely crafted bone and shell ornaments (Kroeber 1925, Hughes 1978, Levulett and Hildebrandt 1987).

Yurok Cultural Context:

Yurok people utilized a large and diverse cultural landscape that extended along the northern California coast and inland up the Klamath River and surrounding mountains. The traditional names for the Yurok people living on the upper region of the Klamath River, lower region of the Klamath River, and the coast within Yurok Ancestral Territory are the Petch-ik-lah, Pohlik-la, and Nr'r'nr people, respectively. However, they have come to be known as the Yurok, which is the Karuk name meaning "downriver." The ancestral territory of the Yurok people is comprised of a narrow strip along the Pacific Ocean stretching north from the village on the Little River (Me'tsko or Srepor) in Humboldt County to the mouth of Damnation Creek in Del Norte County. In addition to the Yurok coastal lands, Yurok ancestral territory extends inland along the Klamath River from the mouth of the river at Requa (Re'kwoi) to the confluence of Slate Creek and the Klamath River (Constitution of the Yurok Tribe Art. 1, Sec. 1). Within this ancestral territory there are approximately seventy known villages, which are situated along the banks of the Klamath or along the ocean streams and lagoons (Kroeber 1925:8, Waterman 1920, Pilling 1978). Many of these villages were permanent settlements, particularly the villages where ceremonial dances were held while others were only temporarily inhabited. Each village had its own geographical boundaries, as well as its own leaders who governed various sites and activities within the village. These sites included fishing and hunting spots, permanent home sites, seasonal sites, gathering areas, training grounds, and spiritual power sites (Lindgren 1991).

Although there were villages all along the river and coast, a village of great importance would have several other villages in close proximity in a concentrated area. An example of this is at the confluence of the Klamath and Trinity Rivers where there were three villages, which in the 1850s had a population of about 200 (Bearss 1982:1). The largest of these three villages was We'itspus, meaning "confluence." This village was of extreme importance because it held a World Renewal Ceremony, also known as the White Deerskin Dance. This is one of several important ceremonial dances in the Yurok religion because its purpose is to renew or maintain the health of the world. The location of the village of We'itspus is on the north bank of the Klamath River and directly across from We'itspus, on the other side of the river was the village of Rlrgr. The third village in this close proximity was located across the Trinity River from Rlrgr and that village was known as Pek-tul.

Similarly in the middle course of the river is the village of Pecwan, located just downstream of Pecwan Creek from where the creek flows into the Klamath River. This is a village of great importance and wealth because Pecwan was a location for another major ceremony, the Jump Dance, which continues to be performed there today. The other villages in close proximity to Pecwan moving downstream on the northern bank are Qo'tep, Woxtek, and Woxhkero.

The final example of a concentration of villages is at the mouth of the Klamath River. On the northern slope of the hill ascending above the mouth is the largest Yurok settlement of Re'kwoi. In 1852, Re'kwoi had 116 residents and is another location for a Jump Dance (Bearss 1982:2). Just across the river on the southern side is the village of Welkwa. This village is the site of the annual Salmon Ceremony, which is performed to remove the effect of the taboo on the run of spring salmon (Waterman 1920:228). The last village in close proximity to the village of Re'kwoi is Tse'kwel.

There are many other Yurok villages residing along the Klamath River, which provides a means for transportation. Redwood dugout canoes are used on the River to access the villages lining the riverbanks. The river is also a primary source of sustenance, providing salmon, sturgeon, eels, and steelhead. Salmon, or nepū'i, meaning "that which is eaten" is one of the primary food sources for the Yurok, the other being acorns. Salmon is obtained during the annual runs by erecting a fish weir across the river, which provides salmon for people in surrounding villages. One location where fish weirs are erected include near the village of Kepel. The other primary food source for the Yurok is acorns. Acorn gathering grounds are found throughout the hills surrounding the villages. Acorns are processed into a soup-like mush, which is cooked in large baskets with hot stones.

Although the river was the primary means of transportation, an elaborate trail system was also utilized. Trails were to be treated with respect and travelers were to stay within the trail. Heavily utilized trails or trails deemed important had many resting spots where one may stop and catch their breath. If a traveler stopped somewhere along the trail other than the resting place, they could bring themselves bad luck (Waterman 1920:185).

Redwood canoes were primarily used on the river, however, they were also used in the ocean to gather mussels and hunt sea lions. The Yurok, however, primarily stay away from open water. Other ocean food sources include surf fish and smelt, which are caught from the beach with throw nets. Seaweed, eels, and abalone are also important food sources for Yurok people. The latter is also used for regalia for ceremonial purposes.

The villages on the coast are primarily concentrated around lagoons and ocean streams. A prime example of such a concentration is the many villages that are located around Big Lagoon. Beginning to the north and continuing south along the eastern shore of the lagoon were the villages of Pa'ar, Oslokw, Keihkem, Maats, Pinpa, and Opyuweg, which is sometimes referred to as Ok'eto. Opyuweg means, "where they dance" because this is another village where a Jump Dance was held (Waterman 1920:266).

Several large villages occurred along the coast, usually sited in areas near important coastal resources. Coastal Yurok living south of the mouth of Redwood Creek (Oreq'w) are commonly referred to as Nr'r'nr, which describes a slight difference in dialect extending from Redwood Creek in the north to Tsurai and Me'tsko in the south. The other villages that comprise the Nr'r'nr area, beginning to the north are Oreq'w, Orau, Tsahpekw, Hergwer, Tsotskwi, Pa'ar, Oslokw, Keikem, Ma'ats, Opyuweg, Pinpa, and Sumeg. Two significant villages, Espau and Ossegon, were located north of Oreq'w and south of the Klamath River.

Historical documents record that the Native Americans living along the California north coast had initial contact with Europeans as a result of Spanish expeditions spanning the mid 1500s to the late 1700s (McBeth 1950:2; Bearss 1969). Various Spanish-led expeditions and ships came up to northern California along the coast, followed later by American vessels as early as 1803 and 1805 (McBeth 1950:2: Bearss 1969). By 1828, the Klamath River had been documented and visited by ships from Britain, Spain, Russia and America (McBeth 1950:3; Bearss 1969).

First contact between Europeans and Yurok people on the upper Klamath River was documented to have occurred in 1827 when traders for the Hudson's Bay Company traveled downriver in search of

furs and trade (Murray 1943:21-24; Bearss 1969). First contact within the project vicinity occurred in February 1827, when men from Peter Skene Odgen's party encountered Yurok in the Martins Ferry area. While these are the first documented encounters by non-Indians within the upriver areas of Yurok territory, the Hudson's Bay Company party documented the presence of European trade goods being used and sought by Yurok people, indicating prior interaction through trade or travel by Yurok people (Murray 1943:21-24; Bearss 1969; Pilling 1978:140). In 1828, Jedediah Smith led an American party of beaver trapping men down the Trinity River, to the Klamath and the up the Pacific Coast (Goddard 1904; Bearss 1969).

Yurok people were left relatively to their own until the discovery of gold in the upper Trinity and Klamath Rivers, and along the coast around what became known as "Gold Bluffs" in 1848-49. Gold miners and prospectors inundated the area. Upriver Yurok communities were heavily impacted. Conflicts ensued and ultimately resulted in the displacement and relocation of many Yurok away from some traditional villages along the Klamath River (Bearss 1969; Pilling 1978:140).

In 1851 a "Treaty of Peace and Friendship" was signed between the United States Government and the Klamath River Indians under the direction of U.S. Indian Agent Col. Reddick McKee. The United States Congress did not ratify this treaty. Non-Indian incursions and resultant conflict continued and an Indian Agency and military fort were established on the River to mediate the conflict. The Agency was located on the south bank of the Klamath River, in the area known as *Waukel* (also spelled *Wo'kel* and Waukell) across the River from the military fort, Fort Terwer. In spite of the creation of these government posts, gold prospectors, miners, farmers, and settlers continued to encroach on Indian lands, often resulting in conflicts and violence. On November 16, 1855, the Klamath River Reserve (also known as the Klamath Indian Reservation) was created by Executive Order (pursuant to the Act of March 3, 1853, 10 Stat 226,238). This Order designated the reservation lands from the mouth of the Klamath River, one mile on each side extending approximately 20 miles upriver to Tectah Creek. The Klamath Reserve was established for several tribes because the treaty of 1851 was not ratified and the military was increasingly called to intervene between miners, settlers and Indians. It was the U.S. intent to move the Tolowa and Yurok onto it, but the Tolowa left soon after they were relocated (Bearss 1969).

In 1855, a letter was written to the Commissioner of Indian Affairs by Special Agent Whipple, the first Indian Agent on the Klamath River Reserve. This letter is important because it clearly describes several aspects of Yurok land use and their relationship to the River. In recommending the reservation boundaries extend five miles away from the River, Whipple recognized the Yurok use of the entire watershed associated with the River. He describes the salmon as "the staff of life" for the Yurok Indians. He also describes the Lower Klamath as the best salmon fishing grounds in northern California. Whipple describes large alluvial terraces along the floodplain of the River that were used to gather a wide variety of plants, roots, and berries for food and supplies (Whipple 1855).

Both Fort Terwer and the Indian Agency at Waukel were destroyed in the floods of 1861 and 1862. As a result of the flood damage the U.S. government abandoned these facilities. The Smith River Reservation, occupied primarily by Tolowa, was created in 1862 to supplement the loss of agricultural lands as a result of the floods. In 1865 the Hoopa Valley Indian Reservation was established with the intent of relocating all northwestern California Indians to this reservation (Bearss 1969).

Escalating conflict between Indians and non-Indians over encroachment onto the Klamath Indian Reserve resulted in the gradual displacement of Lower Klamath Indians further upriver during the 1860s and 1870s (Eidsness 1988: 29; Bearss 1969; McBeth 1950:44). In spite of the area being within the boundaries of the Klamath River Reserve, the area was occupied by non-Indians in defiance of the 1855 Executive Order and an 1877 order by the Department of the Interior that explicitly ordered non-Indian settlers off the reservation (McBeth 1950:46; Bearss 1969). Squatters resisted government attempts to remove them from the reservation and even when evicted by United States soldiers under orders in 1879, they quickly returned to the homes and farms they had established on Indian lands (McBeth 1950:53; Bearss 1969).

In 1891, President Harrison issued an order to expand the existing Hoopa Valley Indian Reservation to include lands one mile on either side of the Klamath River from the Pacific Ocean to the Hoopa Valley, thereby including the Klamath Indian Reserve (Bearss 1969). In order to do this, he created the "extension", extending the Klamath River Reserve upriver until it reached the Hoopa Square. The "extension" was established in relation to the Dawes Act as a ploy to open up much of the land that was not claimed as allotments by resident Indians. Thus began the history of checkerboard ownerships of the Yurok portions of the Klamath Reservation and Extension. The result of Harrison's order was essentially the creation of a new reservation by combining two existing ones. The new reservation consisted of the old Klamath River Reserve, the "extension", and the Hoopa Square and was referred to in its entirety as the Hoopa Valley Indian Reservation.

On June 25, 1892, President Harrison singed a bill passed by Congress to open the reservation for non-Indian settlement. The bill declared all surplus lands open to settlers, "reserving to the Indians only such land as they require for village purposes" (McBeth 1950:48; Bearss 1969). The process of assigning Indian allotments within the reservation took two years. After decades of conflict, the Klamath Indian Reservation was legally opened up for non-Indian settlement on May 21, 1894 for homesteading (McBeth 1950:48; Bearss 1969). As a result, many Yurok people were displaced from their traditional villages along the Klamath River. Many Yurok relocated to the Hoopa Valley Indian Reservation and continue to live there today.

After decades of struggle to regain their traditional homelands, the Yurok Tribe was re-organized and granted its own reservation in 1988. As a result of the 1988 Hoopa-Yurok Settlement Act (PL-100-580), the Yurok Indian Reservation was established, comprised of the old Klamath Reserve of 1855 and the "extension" of 1891. The current reservation is comprised of trust land, tribal allotments, fee land, and privately owned land in addition to land owned and managed by federal agencies (United States Forest Service, National Park Service, and Bureau of Indian Affairs).

Under re-organization the Yurok tribe has emerged as the largest tribe in California, with over 4,500 enrolled tribal members, and over 200 tribal government employees. The Yurok Tribe has a growing tribal population and is actively pursuing economic development and resource management both on the reservation and Yurok ancestral lands. The Yurok Tribe has a Natural Resources Department with the largest governmental fisheries program in the state of California. Other programs include the Yurok Tribe Watershed Restoration Program, devoted to restoring fish habitat, the Yurok Tribe Environmental Program, devoted to establishing and monitoring clean air, water, and land, and the protection of environmental and cultural resources, and the Yurok Tribal Heritage Preservation Office. These departments assist the Tribal Council in its work to protect and maintain Yurok values

as articulated in the Preamble Objectives of the Yurok Constitution (Yurok Tribe 1993). The River continues to be the foundation of Yurok culture, economy, and tradition.

BACKGROUND RESEARCH

Background research was conducted prior to field survey in order to identify potential cultural resources, determine cultural resource sensitivity of the project area based on the record of previous studies, archival references, published literature, and consultant information. Preliminary research included a file search at the North Coastal Information Center (NCIC); archival research at the Humboldt County Historical Society, the Humboldt State University Library, the Del Norte County Historical Society and the Yurok Tribal Inventory, review of published accounts of Yurok ethnography and regional history, and consultation with the Yurok Culture Committee and the Yurok THPO. The results of this research are summarized in the following section and are used to inform the research design, survey methods, and the recommendations in subsequent sections of this report.

Archival Search Results:

A formal records search was conducted by the North Coastal Information Center in Klamath, CA. in March 2010 (See Appendix B). NCIC base maps indicating the locations of prior resources studies and previously recorded sites were reviewed. Historic maps, and the Federal and State registers for historic properties were also examined. This information was reviewed by the author, along with archival sources on Yurok history at the Yurok Tribal Archives. These findings were negative.While one previous historical or cultural resources study has been performed within the Project APE (YT-61-98) no cultural or archeological resources were identified in that survey. No cultural or archeological resources have been previously recorded in the Project APE.

Additional archival resources were reviewed in order to determine if previously recorded resources occurred in the Project area. These included the Historic Property Directory, the National Register of Historic Places (NRHP), Determinations of Eligibility for the National Register of Historic Places, Historic Spots in California, California Historical Landmarks, and California Points of Historical Interest, California Register of Historical Places, the California Inventory of Historic Resources, and GLO Land plats. No previously recorded historic resources were identified in the Project APE.

The ethnographic study, Yurok Geography, identified no Yurok traditional villages, trails or ceremonial sites within the Project area (Waterman 1920, Rectangle B). Only the Yurok name for the Creek “ *yo’x’w’tr wroi*’” was identified for this area.

Yurok Tribal Consultation:

YTEP conducted NHPA consultation with the Yurok Culture Committee on April 30, 2010 in the Klamath Tribal Office. Maps and a project description were shared with the Committee and a discussion of the Project, its purpose, its location and possibility of cultural resources took place. The Committee did not identify any known cultural resources in the Project area during this consultation.

RESEARCH DESIGN:

This study was performed in concordance with guidance from the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* and, specifically, the *Secretary for the Interior's Standards for Identification* (48 CFR 44720-23). Study methods included: background research including a formal records search and archival research; consultation with Yurok Tribe representatives about cultural resource places and concerns; development of a research design; and a cultural resources field survey. Findings and recommendations are summarized in this report and are subject to Yurok THPO review and concurrence for compliance with Section 106 of the NHPA.

The survey method developed was designed to identify any historic properties within the APE, attempt to identify any historic properties in the project area, and focus on the potential effects of the proposed project (See Figure 2). A three-phase survey strategy consisting of systematic pedestrian survey of 100% of the APE, consultation with the Yurok Tribe Culture Committee, and archival and literature research.

Cultural resources within the APE could include Yurok traditional trail segments, objects and/or artifacts, resources gathering or processing areas. Historical resources may include features, objects, structures, or artifacts associated with past logging activities in the area.

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FIELD SURVEY

Field Methods:

The cultural resources field survey was conducted by qualified staff from the Yurok Tribe Environmental Program (YTEP) in May 2010. The Principal Investigator Kathleen Sloan, Ph.D. designed the field survey strategy and conducted the pedestrian field survey.

Due to the dense vegetation and deadfall throughout the project APE systematic transects of the APE were not practical. Instead meandering pedestrian transects at 5 meter intervals were used to survey the APE. 100 % of the APE was surveyed using this method.

Efforts were made to identify cultural deposits by observing cut banks, soils profiles along drainages, and exposed surface areas. Special attention was given to exposed profiles along the trail as well as naturally occurring benches or terraces. No subsurface testing was conducted. No cultural materials or artifacts were collected. Field notes recording soils; vegetation and general survey notes were completed each day and are on file in the YTEP office.

FINDINGS:

Archival and Research Findings:

The entire Project area was heavily impacted by logging activities that occurred during historic times. No historic buildings or structures associated with the logging area exist within the Project APE.

Tribal Consultation Findings:

No cultural resources were identified in the Project Area during consultation with the Yurok Culture Committee or Yurok THPO.

Field Survey Findings:

No archeological or cultural resources were identified in the Project APE for this study.

RECOMMENDATIONS:

Based upon the study findings, and the recommended management considerations for the historic isolate identified within the Project APE, it is proposed that the US Fish & Wildlife Service request that the Yurok Tribal Preservation Office concur with the determination of ***No Historic Properties Affected*** per 36 CFR 800 *The Yurok Tribal Fisheries Program Restoration of Coastal Stream and Floodplain Habitats of McGarvey Creek, Klamath River Project.*

This Project is within the Yurok Reservation and is subject to the Yurok Tribe's Cultural Resources Protection Ordinance. The Project requires a Cultural Resources Permit issued by the Yurok Tribe. Questions about the permit and submittal should be directed to the Yurok Tribal Heritage Preservation Office or Office of Self Governance.

The Yurok Protocol for Inadvertent Discovery should be followed at all times during Project implementation (See Appendix C).

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APPENDICES:

A. Project Proposal prepared by Yurok Tribal Fisheries Program
B. Formal Records Search prepared by the North Coastal Information Center
D. Yurok Protocol for Inadvertent Discovery

APPENDIX A

The Yurok Tribal Fisheries Program Restoration of Coastal Stream and Floodplain Habitats of McGarvey Creek, Klamath River Project Proposal

Project Title:
Restoration of Coastal Stream and Floodplain Habitats of McGarvey Creek, Klamath River.

Project Applicant:
Yurok Tribal Fisheries Program
Sarah Beesley, Fisheries Biologist
P.O. Box 339 Klamath CA 95548
Phone: (707) 482 2841 ext. 235
Fax: (707) 482 0310
sbeesley@yuroktribe.nsn.us

Abstract:
McGarvey Creek flows into the Klamath River 6.4 river miles upstream of the Pacific Ocean and supports runs of chinook, coho, steelhead, and coastal cutthroat; and provides critical rearing habitat for non-natal salmonids, especially ESA listed Klamath Basin coho populations. Historic logging and road building activities resulted in the extraction of virtually all conifers from riparian corridors; removal of a majority of the channel-stored wood and naturally formed wood jams; and simplification of fluvial habitats. This project allows YTFP to address these limiting factors by conducting stream and floodplain enhancement activities in lower McGarvey Creek. Project objectives include deconstructing priority floodplain roads and stream crossings; creating complex off-channel rearing habitat for natal and non-natal salmonids; and installing complex wood jams to increase geomorphic function in this priority Lower Klamath tributary.

McGarvey Creek is located in the Klamath Glen HSA, which was given the highest priority rating in the California Department of Fish and Game's (CDFG) 2004 Recovery Strategy for California Coho Salmon. This project will address the following priority coho recovery tasks: KR-KG-03; KR-KG-08; KR-KG-13; KR-KG-15; KR-KG-17; KR-KG-23. Project objectives are also consistent with recovery and monitoring objectives outlined in the National Marine Fisheries Service's 2007 Magnuson-Stevens Reauthorization Act Klamath River Coho Salmon Recovery Plan and CDFG's 1996 Steelhead Restoration and Management Plan for California.

Project Location:
McGarvey Creek enters the south side of the Klamath River approximately 6.4 river miles upstream of the Pacific Ocean. The project area includes fluvial habitats from just upstream of Den Creek to the confluence with the Klamath River (Figure 1). The downstream boundary is located in T13N, R1E, S24 (Latitude 41.503º; Longitude -123.995º) and the upstream boundary is located in T13N, R1E, S25 (Latitude 41.491; Longitude -124.008). All of the project work will be conducted within the Yurok Indian Reservation (YIR) (Figure 1).

Driving Instructions:
Heading south from the town of Klamath on U.S. Highway 101, take the first exit immediately after crossing the Klamath River. Turn right at the stop sign and travel under the highway and upriver approximately 1 mile. Turn right onto the Green Diamond Resource Company (GDRC) road # M10. A GDRC key is required to pass through the gate located at the road turnoff. Follow the # M10 approximately 1.5 miles to the bridge crossing McGarvey Creek. Proposed restoration sites can be accessed by hiking downstream from this site.

Project Duration and Schedule:
May 2010 – Baseline topographic surveys and restoration planning;
July - September 2010 – Habitat enhancement activities and post-project monitoring;
September 2010 – Complete project report detailing enhancement and monitoring tasks;
Winter - Spring 2011 – Project monitoring and planning for future enhancement activities;
Summer 2011 - 2012 – Continue implementing Phase I – III activities in McGarvey Creek.

Lead Agency:
The U.S. Fish and Wildlife Service (Partners for Fish and Wildlife) is the lead agency for the proposed project. They will be responsible for obtaining Section 7 Consultation and federal water quality permits through their grant program's regulatory compliance process. Regulatory compliance and cultural review has been conducted upstream of the project area to implement recent stream enhancement projects occurring from summer 2007 – 2009. Therefore, USFWS will only need to obtain federal compliance for those restoration activities proposed within the YIR (i.e. the off-channel alcove construction and M600 rehabilitation) (Figures 1-2).

Landowner Participation:
Green Diamond Resource Company owns 100% of the project area and has provided an access agreement to conduct the proposed project on their property.

Approach and Scope of Work:
YTFP anticipates constructing multiple complex wood jams (CWJs) throughout the project reach, enhancing off-channel habitats (i.e. alcoves), and rehabilitating floodplain roads (i.e. M 600) (Figures 1-2). Prior to implementation (spring 2010), YTFP will conduct topographic surveys of the channel and establish multiple, permanent cross sections in the project reach. Surveys will consist of a 2-3 person crew hiking floodplains and the channel of McGarvey Creek to obtain topographic data. YTFP will survey in a manner that minimizes and avoids impacts to soil, terrestrial and aquatic habitats, fish and wildlife, and vegetation.

In late summer 2010, YTFP will work with Rocco Fiori (California Licensed Geologist) to conduct stream and floodplain enhancement activities. Heavy equipment (i.e. excavators, dozers, dump and log trucks, and front-end loaders) and hand crews will be used to construct the off-channel alcove, conduct road deconstruction activities, and install CWJs in lower McGarvey Creek. Crews will use existing access routes whenever possible; however, a few temporary access routes may be constructed to complete project tasks. Temporary access routes will be constructed using an excavator to limit the size of the road footprint. Routes will be designed and constructed in a manner that will minimize or avoid impacts to native vegetation, especially mature trees and conifer saplings. Any trees removed during construction activities will be incorporated into the stream or alcove to increase habitat complexity. After construction tasks are complete YTFP will: 1) mulch constructed access routes with seed-free straw to a minimum depth three inches to prevent erosion; and 2) plant two native trees in the project area for each tree removed during construction. Some access routes may not be planted to allow for future access and adaptive management of the area in the future.

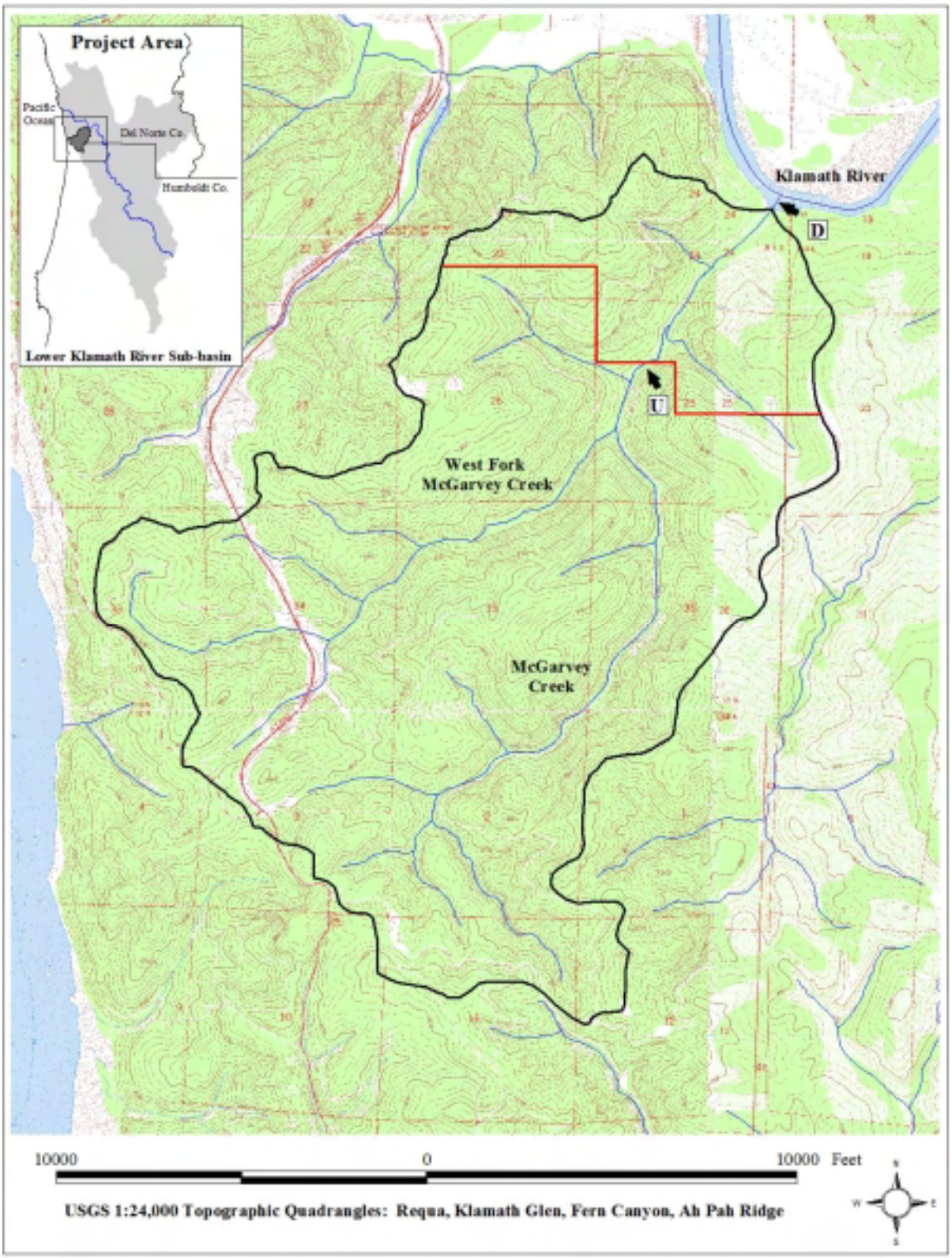


Figure 1. Project Area map for McGarvey Creek, Lower Klamath River Sub-basin, California (Yurok Indian Reservation Boundary depicted through the watershed in red).

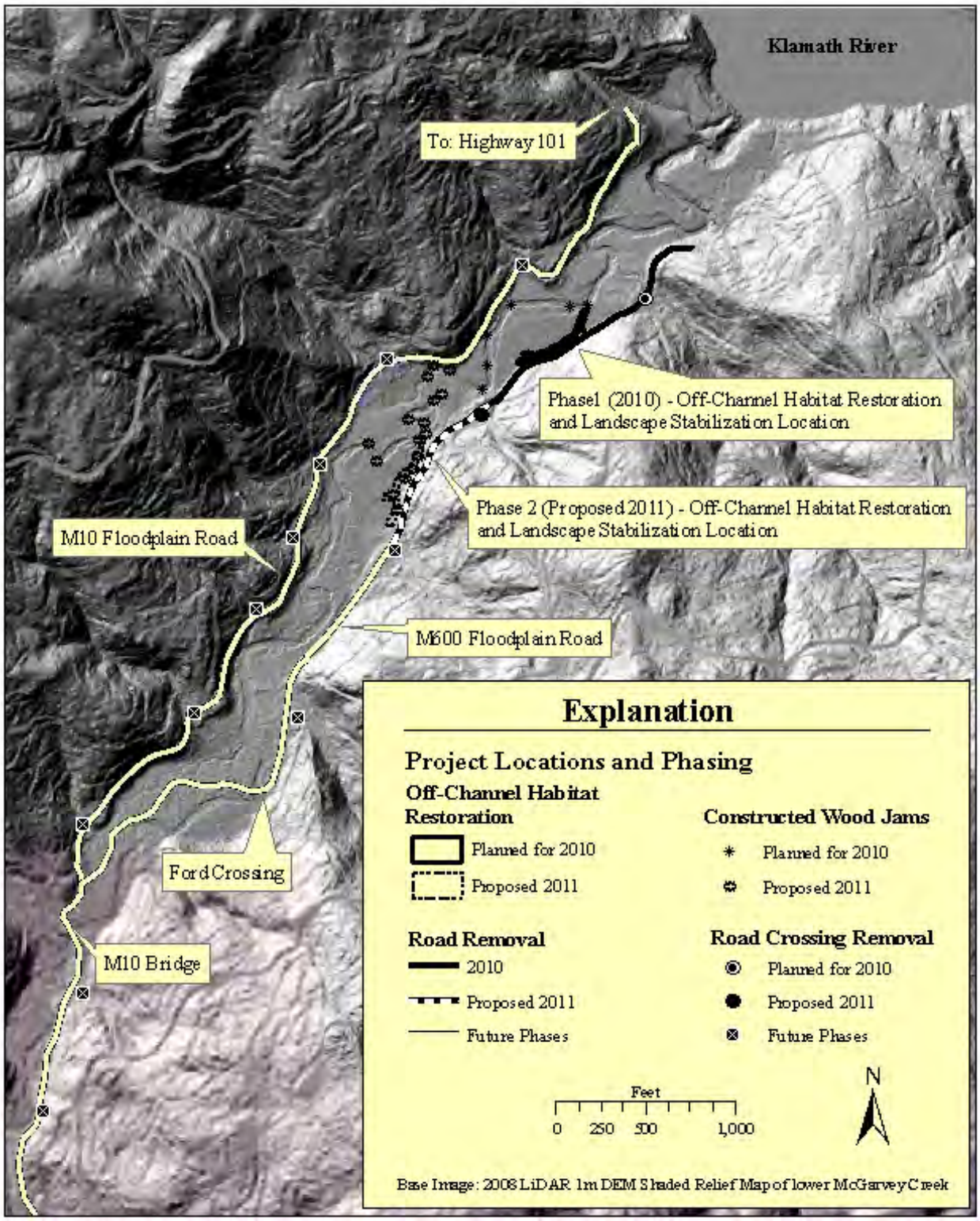


Figure 2. Project location map of proposed restoration activities in lower McGarvey Creek, Lower Klamath River Sub-basin, California.

APPENDIX B

Formal Records Search Prepared by North Coastal Information Center

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

DEL NORTE and HUMBOLDT COUNTIES

North Coastal Information Center
Yurok Tribe
15900 Hwy 101 North
Klamath, California 95548
Phone(707) 482-1822

March 22, 2010

File Number: Sloan 10-06

Kate Sloan, Archaeologist
Yurok Tribe Environmental Department
15900 Hwy 101 N
Klamath, CA 95548

RE: McGarvey Creek Restoration Project, Ah Pah/Fern Canyon/Klamath Glen Quads

Dear Ms. Sloan,

Per your request of March 9, 2010, a Rapid Response records search was conducted for the area that you indicated on the attached map. This record search included review of previous studies conducted in the vicinity of the project, review of any previously recorded site records (archeological and historic), review of historic maps, and review of applicable historic and ethnographic documents.

Previous Studies Conducted in Vicinity

The following reports and accompanying survey areas have been plotted on your attached map in green. Any relevant information is summarized below.

YT 15-94	No sites.
YT 61-332	No sites.
YT 332-03	No sites.

Historic and Cultural Resources

This office does not have records of previously recorded historic resources that have been found in or near your project area.

Literature Review

The following literature and maps were reviewed for possible unrecorded historic resources. Further information was obtained from these sources.

Yurok Geography (Waterman)	*#47. yo'x w tr wroi'. creek*
California Inventory of Historic Resources (OHP)	No sites.
California Historic Property Inventory (OHP)	No sites.
1889 GLO Land Plat Map	No sites.

Recommendations

These recommendations are based only on the information on file in this office. There is always the possibility that additional documents and records exist elsewhere or that unrecorded historic and cultural resources exist within your project area.

We predict that there is a **low to moderate** probability of finding sites or other evidence of human cultural activity in your project area. Please be advised that the locations of historic and cultural resources do not always follow predictive patterns.

Your project area has been 20% surveyed.

Thank you for your efforts to preserve Northwest California historic and cultural resources. Should you have further questions concerning your project or this correspondence please do not hesitate to call us at (707) 482-1822.

Sincerely,

Vicky Bates

Vicky Bates, Coordinator
North Coastal Information Center

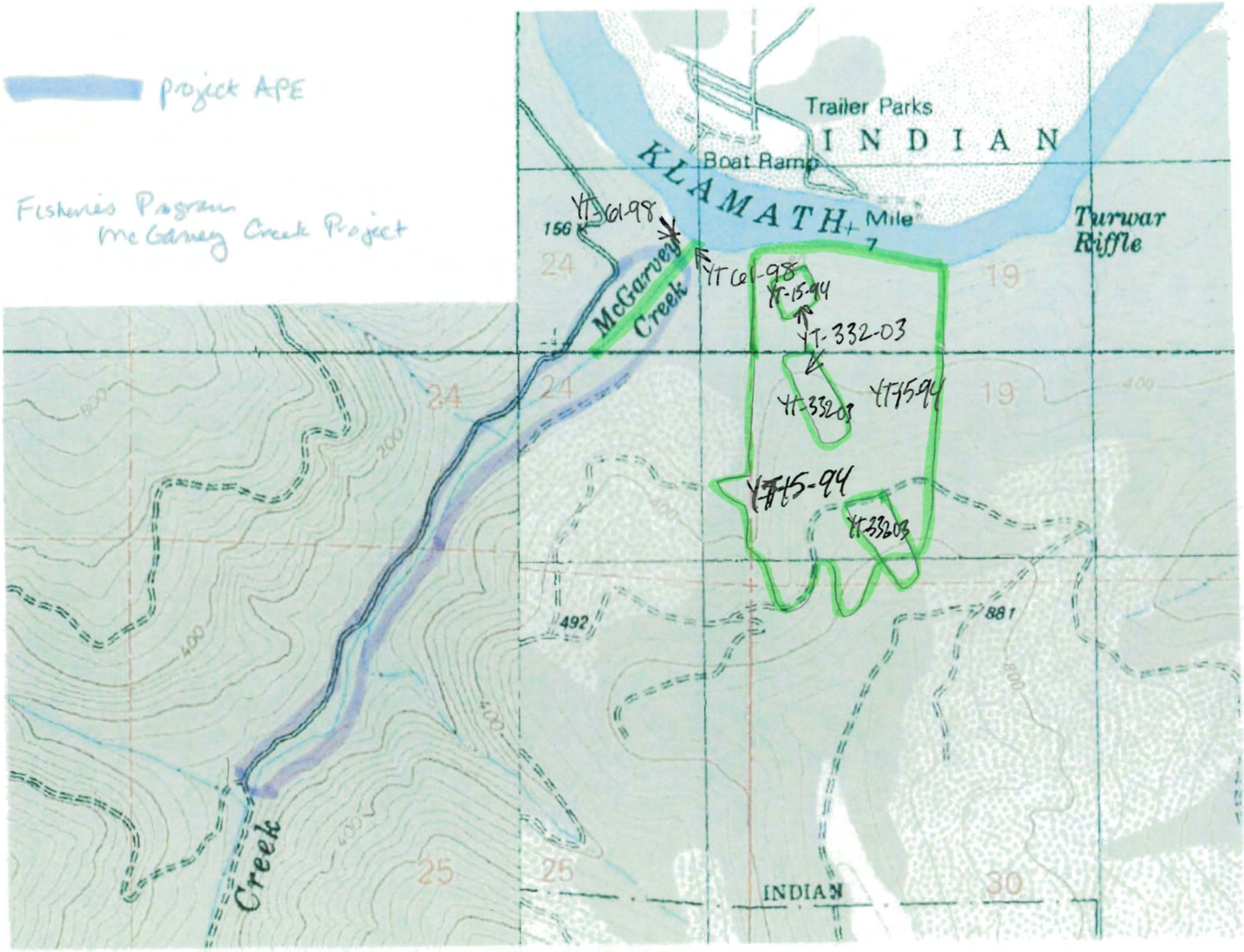
BIBLIOGRAPHY

Waterman, T.T.
1993 Yurok Geography. University of California; Publications in American Archaeology and Ethnology, volume 16, no. 5, pp. 177-315. Trinidad Museum Society (reprint).

Turner, Dennis
1993 Place Names of Humboldt County, California. A Compendium 1542-1992. Eureka Printing Company. Eureka, CA.

Office of Historic Preservation
2003 California Historic Property Inventory. On file at North Coastal Information Center.

Office of Historic Preservation
2003 California Inventory of Historic Resources. On file at North Coastal Information Center.


project APE
Fisheries Program
McGarvey Creek Project
Trailer Parks
INDIAN
KLAMATH
Boat Ramp
Mile
7
Turwar
Riffle
YT-01-98
YT-01-98
YT-15-94
YT-332-03
YT-332-03
YT-15-94
YT-15-94
YT-332-03
McGarvey
Creek
Creek
INDIAN
156
24
19
25
30
492
881
400
800
200

APPENDIX C

Yurok Protocol for Inadvertent Discovery

Yurok Tribe Policy and Procedures for Inadvertent Discovery of Yurok Cultural Items

Traditional Yurok Law requires reburial of cultural items, and known funerary items as soon as possible. The Yurok Tribal Government shall make every attempt to immediately rebury these items upon notification. In instances where it is believed that a violation of tribal law, federal/state law have been committed, the tribal government or another law enforcement agency shall investigate and determine if prosecution is warranted, and seek retribution for the crime(s) committed against Yurok ancestors and sacred sites.

Procedures for notifying the Yurok Tribe of an inadvertent discovery of human remains, associated and/or unassociated funerary items, and cultural items.

Step 1. Upon discovery of human remains, associated and/or unassociated funerary items the individual or representative of an organization, governmental agency shall immediately stop ground-disturbing activities in the immediate area of the discovery.

Step 2. Must establish a reasonable protective barrier (marked by flagging tape) around the cultural site, within which, ground-disturbing activities are temporarily suspended. You shall also take steps to protect the discovered item(s) in a respectful and dignified manner. Removal of the unearthed item is not recommended unless it is it is directly threatened by a destructive force (i.e. heavy equipment).

Step 3. Immediately report the discovery to Yurok Tribe NAGPRA Coordinator or the Yurok Tribal Heritage Preservation Officer (THPO). You must also follow all applicable state and federal laws in the event that human remains are discovered (i.e. County Coroner).

1). NAGPRA Coordinator	***(707) 482-1350 ext. 312 or (707) 954-5355 (cell phone)***
2). Tribal Historic Preservation Officer (THPO)	***(530) 625-4130 ext 1629 or (707) 498-2536 (cell phone)***
4. Executive Director or Deputy Executive Director	***(707) 482-1350***
5. Tribal Chairperson or Council	***(707) 482-1350***

C*E*R*T*I*F*I*C*A*T*I*O*N

This is to certify that this Yurok Tribe Policy and Procedures for Inadvertent Discovery of Yurok Cultural Items was adopted by the Yurok Tribal Council at a regularly scheduled meeting on September 23, 2009, at which a quorum was present and this policy was adopted with a vote of 6 Yes, 0 No, 0 Abstentions. This Policy has not been rescinded or amended in any way.

Dated this 23rd day of September 2009.

Maria Tripp, Chairperson
Yurok Tribal Council

Attest: _____
Cynthia McKernan, Executive Assistant
Yurok Tribe

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802- 4213

AUG 10 2010

In response refer to:
2010/03500

Ms. Nancy J. Finley
Field Supervisor
U.S. Fish and Wildlife Service
1655 Heindon Road
Arcata, California 95521

Dear Ms. Finley:

On June 18, 2010, NOAA's National Marine Fisheries Service (NMFS) received the U.S. Fish and Wildlife Service's (FWS) letter requesting initiation of informal consultation on the Enhancement of Overwinter Rearing Habitat in McGarvey Creek Project (Project), pursuant to section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*), and its implementing regulations (50 CFR Part 402). The Project is being funded by the FWS and will be implemented by the Yurok Tribal Fisheries Program (YTFP) and California Licensed Geologist Rocco Fiori of Fiori Geo-Sciences. The Project will enhance and restore the floodplain of McGarvey Creek by decommissioning floodplain roads, creating off-channel rearing habitats, and installing complex wood jams to increase in-stream habitat complexity. The Project is located in the Town of Klamath, Del Norte County, California and is within lands owned by the Green Diamond Resource Company (GDRC).

The FWS also requested consultation on Essential Fish Habitat (EFH) for species managed under the Pacific Coast Salmon Fishery Management Plan, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, as renewed and modified in 2007.

This letter constitutes completion of informal consultation for Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch;* 70 FR 37160, June 28, 2005). This project's location is within the Lower Klamath River basin, which was excluded from SONCC coho salmon critical habitat designation (64 FR 24049, May 5, 1999); therefore, critical habitat will not be discussed further in this letter. In addition, this letter completes EFH consultation, and serves as consultation under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended.

PROPOSED ACTION

The YTFP proposes to restore and enhance the floodplain of McGarvey Creek in two phases of Project implementation (Phase I and Phase II). The Yurok Tribe proposes to decommission and stabilize floodplain roads and road crossings; install multiple complex wood jam (CWJ) structures; and construction of two backwater alcove channels. Phase I activities are scheduled for summer of 2010 and will focus on the excavation of a 650-foot long alcove channel, installation of three to five CWJs in the newly constructed alcove channel, treatment of 400-feet of the M600 road, and removal of one stream crossing. Phase II activities will be conducted during summer of 2011 and focus on the excavation of a 550-foot long alcove channel, installation of 15 CWJs, stabilization of up to 2,000 feet of the M600 road, and treatment of at least two stream crossings.

Alcove and Backwater Channel Construction

The YTFP proposes to construct two alcove channels: one 650-foot long alcove channel during Phase I (Phase I channel) and another alcove channel during Phase II (Phase II channel). The Phase I channel will be excavated during late summer of 2010. The Phase I channel will be 650 feet in length and will be hydrologically connected to McGarvey Creek at its downstream end. The lower 140 feet of the Phase I channel will be excavated through the floodplain while the remainder of the channel will parallel the sidewall of the valley. Between three and five CWJs will be incorporated into the Phase I channel.

The Phase II channel will be excavated to a length of 550 feet during late summer of 2011. The Phase II channel will be constructed in a similar manner to the Phase I channel and will be hydrologically connected to McGarvey Creek at its downstream end. The Phase II channel will also be enhanced with CWJs and its thalweg will parallel the sidewalls of the valley.

Both the Phase I and Phase II channels will have a meandering thalweg and a cross sectional width of 15 feet as measured from the top of the excavated channel. The excavated channels will have an average stream gradient of 0.3 percent and an excavated channel depth of 4 to 7 feet below the ground's surface. These channel dimensions were based upon natural channel analogs found within the region and were scaled to fit the floodplain of lower McGarvey Creek. Each alcove will require an excavation of approximately 1,000 to 1,500 cubic yards of material resulting in a total of 2,000 to 3,000 cubic yards of excavated materials. Excavated materials will be stored in a stable upslope disposal site.

Complex Wood Jam Structure Installation

The YTFP proposes to install 18 to 20 CWJs within McGarvey Creek including the newly constructed alcove channels. Installation of CWJs will be accomplished by crews using both heavy equipment and hand tools. Engineered CWJs are a variation of those described in Abbe *et al.* (2003) and will mimic naturally occurring features. Mechanically placed logs, trees, stumps, root wads and other naturally occurring materials will be interlocked to create a structure with the stability to maintain its function under a variety of flows. Approximately three to five CWJ structures will be installed during Phase I and another 15 structures will be installed during Phase

II implementation.

Road Decommissioning
To reduce the threat of sedimentation upon McGarvey Creek, approximately 4,854 cubic yards of sediment will be stabilized using a variety of erosion control measures. Fills associated with roads, landings, and stream crossings will be moved to stable locations upslope. Removal and disposal of fills associated with three stream crossings along the M600 road will result in approximately 1,000 cubic yards of sediment controlled by relocating it to a stable location upslope. Sediment control measures and best management practices such as reducing diversion potential by installing cross-road drains (proposed to be larger than water bars to prevent vehicle access); ripping and de-compaction of road surfaces to increase infiltration and reduce runoff from road prisms; and treating exposed bare mineral soils with seed and mulch will assist in controlling and minimizing erosion upon Project completion.

Best Management Practices
The following best management practices (BMPs) will be utilized to reduce impacts to SONCC coho salmon to insignificant levels:

1. In-stream construction activities will be limited to the dry season, which is defined as July 15 through October 15. An extension to November 15 may be possible if no significant rain occurs.
2. All equipment cleaning, refueling, and changing of fluids will occur outside of riparian habitats in upland areas.
3. The Project will be implemented (both Phase I and Phase II) by a Professional Geologist licensed in the State of California as well as a person with good understanding of fluvial geomorphology.
4. Heavy equipment will be operated from the adjoining upland areas. Habitat structures will be placed gently one-at-a-time into the stream channel so that the disturbance will be minimized and any fish present will have the opportunity to flee.
5. Earth materials generated as part of channel excavation, including excess fillslope materials, will be end hauled and used to re-contour road benches and debris will be placed and stored in locations where they cannot enter into the active stream channel.
6. Coffer dams and high volume pumps will be used when necessary to trap sediment, reduce saturation of overburden, and redirect turbid waters onto natural filtration areas located away from the active channel.
7. All bare mineral soil exposed in conjunction with Project activities shall be treated prior to the onset of significant rain events or the completion of the Project, whichever comes first. Treatment of bare mineral soil will consist of seeding with native grass seed and mulching with weed-free straw mulch.
8. Excavate pulled stream crossings down to natural grade where feasible.*
9. Excavate side slopes of pulled crossings so that they are at a 2:1 slope or equivalent to the natural grade of the surrounding landscape.*

* NMFS recommended additional BMPs to reduce affects associated with pulled crossings. The FWS concurred with adding these additional measures on July 7, 2010 via email.

10. Use rock to armor the upper portions of excavated crossings where the formation and migration of head-cutting may be expected to occur.*

EFFECTS OF THE PROPOSED ACTION

McGarvey Creek is a tributary to the Lower Klamath River located approximately 6.5 miles upstream of the Pacific Ocean. The Project is located along the lower 6,400 feet of McGarvey Creek and approximately 1,000 feet upstream of its confluence with the Klamath River. McGarvey Creek supports populations of anadromous salmonids including coho salmon, Chinook salmon, steelhead, and coastal cutthroat trout. The YTFP has consistently detected coho salmon throughout McGarvey Creek, although the majority of observations have been made upstream of the Project area. The majority of the Project area tends to be dry during late summer and thus NMFS believes that exposure of SONCC coho salmon to project impacts is not anticipated.

This Project will have long-term beneficial impacts to SONCC coho salmon as well as the other salmonids known to utilize McGarvey Creek. Beneficial effects of the project include increasing the complexity of existing habitat by installing CWJ structures; enhancing the quantity of slow velocity habitat available via alcove channel construction; facilitate sorting and retention of spawning substrates via CWJ installations; reducing road related erosion and the risk of chronic sediment delivery via road decommissioning and stabilization; and restoring the connectivity and function of the floodplain.

Effects of Alcove Channel Construction
Affects associated with the construction and excavation of two alcove channels (Phase I and Phase II channels) will be primarily associated with temporarily elevated turbidity resulting from increased suspended sediments. To prevent immediate discharges of sediment during alcove channel excavation, coffer dams with geo-textile fabric liners will be placed at the downstream end of the alcove channels. The coffer dams will be installed so that fish cannot become entrapped in the newly excavated channels. Upon completion, the coffer dams will be removed by hand after the sediment has settled or has been pumped out using high volume pumps. All trees that need to be felled to facilitate excavation of the alcove channels will be used in CWJ structures.

The quantity of suspended sediments discharged into McGarvey Creek due to post-construction adjustments of the excavated channels will be ameliorated by the two phase implementation plan. Limiting excavation activities to only one alcove channel per year will assist in dispersing the disturbance over two years as opposed to concentrating the affects into one season. Increases in suspended sediments and the resulting turbidity will be short lived and temporary in nature and thus NMFS believes these effects to be insignificant given the operational features of the Project and the BMPs identified in the proposal.

Effects of CWJ Structure Installation
General effects to salmonids resulting from the installation of CWJ structures include a heightened risk of injury due to crushing while the logs are placed into the active stream channel. Given the proposed timing of the Project, it is unlikely that water will be present on site and therefore the presence of listed SONCC coho salmon is not anticipated. However, In the event that water is present on site, logs will be gently placed one-at-a-time into the wetted portion of the steam channel to allow listed individuals an opportunity to avoid the disturbance. The behavioral response of a salmonid to a perceived threat is to flee and avoid the threat. Heavy equipment will be used to install CWJ structures from adjoining upland areas and will not be permitted to enter the wetted portions of the stream channel (if water happens to be present during implementation). Best management practices (BMPs) have been identified to reduce and minimize the affects of CWJ installations. Each of the 18 to 20 structures will be installed one-at-a-time thus limiting the spatial and temporal extent of affects associated with CWJ structure installation to insignificant levels.

Effects of Road Decommissioning
The potential effects to SONCC coho salmon resulting from the proposed road decommissioning are primarily associated with temporary increases in suspended sediments in McGarvey Creek following Project implementation as channels and disturbed areas adjust during the first rain events. The road crossings proposed for removal and decommissioning are located in small tributaries which do not have fish present and therefore direct effects upon SONCC coho salmon at these locations is discountable.

The quantity of suspended sediments discharged into McGarvey Creek due to post-construction adjustments and settling of disturbed areas will be ameliorated by the two phase implementation plan. Conducting decommissioning activities in two phases will assist in dispersing the disturbance over two years as opposed to concentrating those efforts into one season. Increases in suspended sediments and the resulting turbidity will be short lived and temporary in nature and thus NMFS believes these effects to be insignificant given the operational features of the Project and the BMPs identified in the proposal.

ESA CONCLUSION

Based on our review of the documents provided, our observations during a site visit, and our understanding of listed species within the Project Area, NMFS concurs with the FWS determination that the proposed Project may affect but is not likely to adversely affect SONCC coho salmon. This concludes informal section 7 consultation in accordance with 50 CFR § 402.14(b)(1). However, reinitiating consultation may be required where discretionary Federal involvement or control over the action has been retained or is authorized by law and if: (1) the Project is modified in a manner that causes an effect to the listed species that was not previously considered, (2) new information reveals effects of the action that may affect listed species in a manner or to an extent not previously considered, or (3) a new species is listed or critical habitat designated that may be affected by the Project.

EFH CONSULTATION

Under the EFH implementing regulations [50 C.F.R. 600.810(a)], the term "adverse effect" is defined as any impact that reduces quality and/or quantity of EFH and may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce quantity and/or quality of EFH. NMFS determined that the Project would adversely affect EFH for species managed under the Pacific Coast Salmon Fishery Management Plans. As previously discussed, habitat quality of the water column will be diminished as a result of temporarily elevated turbidity from suspended sediments. Benthic organisms and prey species may also be injured during installation of CWJ structures. NMFS believes the Project has been designed to minimize and reduce the magnitude of potential effects associated with elevated turbidity in the water column. The quantity and quality of EFH will be increased and expanded by the Project. Therefore, NMFS provides no additional conservation recommendations.

FWCA CONSULTATION

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. 661). The FWCA establishes a consultation requirement for Federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage [16 U.S.C. 662(a)]. Consistent with this consultation requirement, NMFS may provide recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. NMFS has no recommendations to make beyond the methods for avoiding impact already incorporated into the Project design.

Please contact Mr. Matt Goldsworthy at (707) 825-1621 or via e-mail at Matt.Goldsworthy@noaa.gov should you have any questions regarding these consultations.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: Chris Yates, NMFS, Long Beach
Copy to file: 151422SWR2010AR00247

LITERATURE CITED

Abbe, T.B., G. Pess, D.R. Montgomery, and K.L. Fetherston. 2003. Integrating engineered logjam technology in river rehabilitation. *In* D.R. Mongtomery, S. Bolton, D. B. Booth, and L. Wall (Editors), Restoration of Puget Sound rivers, pages 443 to 490. University of Washington Press, Seattle.

YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548
Phone: (707) 482-1350 • Fax: (707) 482-1377

June 28, 2010 YTWQCP-10-004

Sarah Beesley
Fisheries Biologist
Yurok Tribe Fisheries Program
PO BOX 1027
Klamath, CA 95548

Subject: Yurok Tribe Water Quality Control Plan Section 401 Water Quality Certification for the *Enhancement of Overwinter Rearing Habitat in McGarvey Creek*

Dear Ms. Beesley,

The Yurok Tribe Environmental Program (YTEP) received the 401 certification application and project description for the *Enhancement of Overwinter Rearing Habitat in McGarvey Creek* on June 4, 2010. Thank you for providing the project description and the complete application. YTEP staff have reviewed the application and met with you to discuss the details of this project.

Please be informed that under the Clean Water Act (CWA) you need to apply to USEPA to obtain CWA Section 401 certification if the project will involve a US Army Corps of Engineers section 404 permit or any discharges to waters of the United States.

Project Description

According to the project description and supporting documentation, the purpose of the project is to enhance the fisheries habitat in McGarvey Creek by deconstructing priority floodplain roads and stream crossings; creating complex off-channel rearing habitat for natal and non-natal salmonids; and installing complex wood jams to increase geomorphic function.

Certification

We hereby grant Yurok Tribe Water Quality Control Plan Section 401 Certification for your project with the following conditions:

1. All work in the bank or bed of the named tributaries above, shall occur between June 15th and

October 15th during the life of this permit. This permit is valid for calendar years 2010 and 2011. Should the project need to be extended, early consultation with YTEP should be initiated.

2. All sites will be 'winterized' prior to seasonal work shut down. An inspection by Yurok Tribe staff shall be requested at least 7 days in advance of seasonal work shut down. The applicant may request seasonal extensions based on field review by YTEP and in conjunction with other permit and regulatory requirements (i.e. NOAA fisheries, U.S. Army Corps, USEPA).

3. You shall limit any excavation work in and adjacent to applicable waters to that necessary for the project.

4. No construction materials -- including cement, debris, oil or petroleum products, sand, sawdust, silt, slash, or soil -- shall be allowed to enter or be placed where it may enter the live channel of applicable waters in amounts that are considered to have adverse effects on the beneficial uses.

5. You shall not permanently dispose of any construction material, demolition wastes, wastewater, or any other pollutant within applicable waters.

6. Water used in dust suppression shall contain no contaminants that could violate surface water or aquifer standards and originate from a source based on consultation with Yurok Tribe Fisheries and/or Environmental Program (see Yurok Tribe Water Quality Control Plan for water quality objectives).

7. All stationary machinery that uses gasoline or diesel fuel shall be placed within impermeable spill containment vessels capable of preventing migration of fuel in the event of a spill.

8. All contractors and subcontractors shall report, verbally and in writing, immediately upon discovery, any spills of chemical contaminants, including oil, gasoline, hydraulic fluid, or diesel fuel, during or after operations. Reports shall be submitted to EPA Region 9 and the Yurok Tribe. Appropriate cleanup of spills shall commence immediately. Within two weeks following cleanup, a summary report shall be submitted to EPA Region 9 and the Yurok Tribe that describes the reason for the spill, the spill duration and volume, steps taken to correct the problem, the remediation/clean up activities and steps taken to prevent a recurrence of the problem.

9. Best Management Practices (BMPs) for sediment and turbidity control shall be implemented in accordance with the project description provided in the permit application and in place prior to, during, and after construction in order to ensure that negligible discharges to applicable waters are ensured.

10. Water discharged from the project site shall not contain settleable materials or suspended materials in concentrations that cause nuisance or adversely affect beneficial uses. The project shall not violate any narrative and numeric criteria established in the Yurok Tribe Water Quality

Control Plan (see Yurok Tribe Water Quality Control Plan for water quality objectives)

11. You shall revegetate all slope faces that will be impacted for staging, equipment access, and construction with comparable vegetation types. Areas that have trees removed that are taller than 3 feet in height and greater than 2 inches in diameter will be replaced with saplings of the same species. Pre and post documentation of the revegetation work is required.

12. If, at any time, an unauthorized discharge to surface water occurs, or any water quality problem arises, the project shall cease immediately and you shall immediately notify EPA Region 9 and the Yurok Tribe.

13. Yurok Tribe shall be notified at least three business days in advance of construction in order to allow staff to be present during construction.

14. If there are any substantive changes in the proposed project that may affect water quality, you shall notify the Yurok Tribe Environmental Program, immediately. Failure to do so will result in revocation of this certification.

15. You shall provide a copy of this certification to all contractors and subcontractors. You also shall review the conditions of this certification with all such contractors and subcontractors.

Monitoring

No instream water quality monitoring is required for this permit.

The project proponent, or its contractor, shall conduct a visual inspection of the project site with YTEP staff immediately after the first significant rainfall, and will take any additional erosion control measures, including applying additional straw mulch and silt fences, if required.

The point of contact at the Yurok Tribe is Ken Fetcho. Please contact me at (707) 954-1523 or at kfetcho@yuroktribe.nsn.us. The point of contact for the proposed project at EPA Region 9 is Melissa Scianni. Please contact Ms. Scianni at (415) 972-3821 or at scianni.melissa@epa.gov.

Sincerely,

Kathleen Sloan

Kathleen Sloan
Director,
Yurok Tribe Environmental Program

e-copy:

Carol Heidsiek, U.S. Army Corps of Engineers, Eureka

Melissa Scianni, U.S. Environmental Protection Agency
David Hillemeier, Yurok Tribe Fisheries, Klamath
Thomas O'Rourke Sr., Chair, Yurok Tribe Council
Troy Fletcher, Interim Executive Director, Yurok Tribe
John Corbett, Senior Attorney, Yurok Tribe
Ken Fetcho, Assistant Director, Water Division Manager, YTEP
Robert McConnell, Tribal Historic Preservation Officer, Yurok Tribe