WILD AND SCENIC RIVERS ACT
SECTION 7 ANALYSIS AND DETERMINATION

Digital 299 Broadband Project

Trinity County, California

Proposed by:
Vero Fiber Networks, Inc.

For submittal to:
National Park Service
U.S. Forest Service

Prepared by:
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Transcon environmental | Planners & Scientists

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TABLE OF CONTENTS

LIST OF FIGURES

1. INTRODUCTION

Section 7(a) of the Wild and Scenic Rivers Act (WSRA) requires the river-administering agency to evaluate the effects of a federally assisted water resources project proposed within a Wild and Scenic River (WSR) corridor on the river's free-flowing condition, water quality, and outstandingly remarkable values (ORVs). The following analysis is a summary of the effects of the Digital 299 Broadband Project where it crosses under the Trinity River using horizontal directional drilling (HDD) at two locations between Big Bar and Junction City along California State Route (SR) 299.

The Project would cross the Trinity River in a total of nine locations; however, all but two of these locations would be bridge attachments, fully avoiding impacts to the river. The remaining two crossings would be completed by HDD. The first HDD crossing is proposed on private land at Coopers Bar near Chimariko Road northwest of Junction City. The second HDD crossing is proposed along an alternative segment of the alignment near Big Bar on Shasta-Trinity National Forest land. The Proponent may use HDD under the Trinity River along Coral Bottom Road if the preferred path (i.e., continuing along SR 299) is unable to be constructed and if the bridge at this location is unable to have conduit attached. The National Park Service (NPS) is responsible by default for all WRSA Section 7 evaluations on the Trinity River except where the river flows through lands within the jurisdiction of the U.S. Forest Service (USFS) or Bureau of Land Management (BLM) (NPS 2021). Thus, the NPS and USFS are responsible for determining whether the proposed Project would have a direct and adverse effect on the river's free-flowing condition, water quality, and/or ORVs at the Coopers Bar and Big Bar crossings, respectively.

In 1981 the Trinity River was designated as a WSR under the WSRA. The primary designated section includes the main stem from the Trinity River's confluence with the Klamath River to 100 yards below Lewiston Dam. Additionally, three other river sections are included: the North Fork from the Trinity River confluence to the southern boundary of the Trinity Alps Wilderness Area, the South Fork from the Trinity River confluence to the California State Highway 36 bridge crossing, and the New River from the Trinity River confluence to the Trinity Alps Wilderness Area.

These Trinity River sections were designated as Wild and Scenic to preserve the following values: anadromous and resident fisheries, outstanding geologic resource values, scenic values, recreational values, and cultural and historical values. The values applicable to the sections of the Trinity River intersected by the Project are its free-flowing aspect, water quality, and anadromous fish habitat (USBR 2006).

The proponent for the proposed action is Vero Fiber Networks. The Project crosses jurisdictional lands or waters managed by the BLM, NPS, USFS, U.S. Army Corps of Engineers, Bureau of Reclamation, California Public Utilities Commission (CPUC), California Department of Transportation, California State Lands Commission, California Coastal Commission, California Department of Fish and Wildlife (CDFW), State Water Resources Control Board, and Hoopa Reservation. Agencies collaborated during Project planning to streamline National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, leveraging a joint NEPA/CEQA document and associated technical studies to demonstrate compliance and support their separate decisions and permits.

This analysis evaluates the effects of the Project on the Trinity River's designated values—free-flowing condition, water quality, and ORVs. Protection of these values under Section 7 of the WRSA is required. The analysis borrows from environmental analysis contained in the Project Environmental Assessment (EA).

2. DEFINITION OF THE ACTIVITY

2.1 Project Proponent

Vero Fiber Networks, LLC

2.2 Purpose and Need for the Project

Digital 299 is a proposal to install approximately 300 miles of new conduit and fiber optic cables to provide internet to unserved or underserved communities in California. The Project route generally follows the SR 299 corridor through Trinity, Shasta, and Humboldt counties between Redding and Eureka in Northern California. The Project proponent, Vero Fiber Networks, LLC (Vero), is a certified telecommunications provider growing their network in Northern California.

There is nationwide public and private interest and investment in the expansion of broadband networks and capabilities. In the passage of the Internet for All Act (AB 1665), the California State Legislature set a statewide goal of achieving 98 percent broadband coverage to meet public safety, healthcare, education, and economic development goals (California State Legislature 2018). The purpose of Digital 299 is to help achieve the state's coverage goals in partnership with the CPUC. Vero and CPUC will work together to ensure the network reaches under-served communities and public institutions such as libraries, hospitals, and schools.

Coordinating agencies have a need to respond to Vero's requests for permits and authorizations for the Project. Those agencies, including their permitting or approval mechanism and specific action they are considering, are listed in Table 1 of the Digital 299 EA.

2.3 Geographic Location of the Project

The overall Project area extends approximately 300 miles through Humboldt, Trinity, and Shasta counties between Redding and Eureka in Northern California, generally following SR 299 through federal, state, and private lands. The scope of this WSRA Section 7(a) analysis is limited more narrowly to two locations where the Project will use HDD to cross underneath the Trinity River. However, the overall Project route is also described herein to provide context for the portions of the action subject to the WSRA.

The Project proposes to use HDD to cross under the Trinity River in two locations. The first HDD crossing is proposed on private land at Coopers Bar near Chimariko Road northwest of Junction City (40.759722, -123.094167). The second HDD crossing is along an alternative segment of the alignment where Corral Bottom Road crosses the Trinity at Big Bar on Shasta-Trinity National Forest land (40.738347, -123.252219). The Proponent may use HDD in this location if the preferred path (i.e., continuing along SR 299) is unable to be constructed and if it is not feasible to attach conduit to the Corral Bottom Road Bridge.

The overall Project route has been chosen to include about five alternative segments in case field conditions impede constructability of the primary route. The Digital 299 Broadband Project EA/Initial Study (IS) includes the primary route and alternative segments; however, because only one or the other (the primary or the alternative segment) would be built, impacts and disturbances described in the EA are slightly greater than what would be constructed. The primary route and alternative segments are described below, following the route from west to east.

The primary route begins along the coast, with terminus points in Samoa and Eureka. The alignment follows two routes north around Humboldt Bay, including a crossing of Samoa Bridge from the Peninsula to Eureka, with the two routes connecting in Arcata. From Arcata, the primary route heads north to its junction with SR 299. From here, it follows two routes: one north for 16 miles through McKinleyville and Clam Beach

to a terminus point in Trinidad, and the other continuing eastward as the primary route following SR 299 to Blue Lake, where it departs from SR 299 through residential Blue Lake, then for 16 miles following Maple Creek Road, Bald Mountain Road, and Snow Camp Road, connecting back to SR 299 at the intersection of Old Highway 200. The primary route follows SR 299 for 5 miles to Saber Tooth Road, with an alternative segment continuing on SR 299 and the primary route following the Saber Tooth Road and County Route 7K1000 for 6 miles, at which point it reconnects and continues along SR 299 for about 50 miles through Willow Creek, Salyer, Burnt Ranch, Big Bar, and Junction City. At Willow Creek, an aerial spur breaks off north from the primary route to serve Hoopa.

Between Salyer and Junction City, three alternative segments are proposed in case the primary route along SR 299 is not able to be constructed. One alternative segment departs SR 299 just west of Salyer, following Route 447 and Hennessey Road southeast for 15 miles. Another alternative segment departs the primary route from Burnt Ranch and follows Route 16, Forest Route 5N09, 5N25, and Eagle Rock Road for 20 miles, including a 5-mile spur up to Eagle Rock Peak. This alternative reconnects with the primary route along SR 299 in Big Bar. The third alternative in this area departs the primary route west of Helena, breaking into alternate paths around Junction City—the primary route heading south along Wintu Pass Road, Forest Route 33N41, Red Hill Road, and Dutch Creek Road, and the alternative segment running north from Valdor Road, an unnamed Forest Road, PowerHouse Road, and Canyon Creek Road; both alternatives reconvene at SR 299 in Junction City.

From Junction City, the primary route follows SR 299 to Slattery Pond, with an alternative segment continuing on SR 299 and the primary route following La Grange Road and Castle Road for 2 miles back to SR 299 to Weaverville. In Weaverville, the primary route breaks from SR 299 to follow Trinity Lake Boulevard, Lance Gulch Road, and Route 3 for 4 miles. An aerial route continues following Route 3 south to Douglas City, while the primary route continues east along Browns Mountain Road for 10 miles into Lewiston. Within Lewiston, it follows Lewiston Road, Trinity Dam Boulevard, and other residential roads. The route continues east for 17 miles following Deadwood Road, French Gulch Road, and Trinity Mountain Road before the route connects back to SR 299 south of French Gulch.

Connected again with SR 299 south of French Gulch, the primary route continues for 14 miles through Whiskeytown and Shasta, breaking south in Redding to follow Buenaventura Boulevard, Placer Street, and other residential roads. It follows Route 273/South Market Street south for 9 miles to Anderson, where it follows Barney Road and Locust Street, with an alternative segment following South Barney Road and Industry Road and the primary route following Locust Road to Trefoil Lane, terminating on Trefoil Lane northeast of Cottonwood.

2.4 Duration of the Activities

The total duration of construction for the middle-mile route of the Project is estimated at up to 24 months, beginning in the second or third quarter of 2022. Construction crews generally work 8 to 10 hours a day, 5 days a week during daylight hours. Saturday work may be required in some areas as needed; approval from the proper agency would be obtained prior to construction on weekends. No work is anticipated to occur on major holidays or during Native American ceremonies. Digital 299 would avoid lane closures during times of inclement weather, including but not limited to rain, snow, and ice.

Phase 2 of the Project (last-mile connections) would begin construction once middle-mile fiber is installed and as soon as last-mile providers and Vero finalize interconnection points and locations of service drops. Phase 2 construction is expected to begin in 2024.

The portions subject to this WSRA analysis—i.e., the Coopers Bar and Big Bar HDD crossings—would require approximately 4 to 7 days of construction each, including 2 to 4 days of setup and 2 to 3 days of

crossing activities. Crews would require at least 1 day to set up and presurvey the area to help avoid inadvertent release of drilling fluids ("frac-out"), at least 1 day of drilling, and at least 1 day to pull the fiber through the conduit and clean up the site. The HDD process can be more time-intensive in rocky riverbeds and when boring deeper than the minimum depth below a waterway. Vero would perform these activities between the months of November and April to avoid incidental take to the Upper Klamath/Trinity spring-run Chinook salmon, as requested by the CDFW.

2.5 Magnitude and Extent of the Project Activities

The magnitude and extent of the activities associated with the Trinity River HDD crossings are summarized below. To focus this analysis on the activities relevant to Section 7(a) of the WSRA, only the two applicable crossings are described. Chapter 2 of the EA provides an in-depth description of the magnitude and extent of the activities associated with the Project as a whole, including these crossings.

HDD is a steerable, trenchless method of installing underground conduits along a prescribed bore path between two bore pits using a surface drilling rig. The HDD process involves drilling a hole with guidance equipment and continuous drill bit position monitoring. Once drilling is complete, the conduit is pulled through the bore hole. HDD uses a clay/water mixture that is pumped down the drill stem to lubricate the drill head and drill pipe, maintain the bore hole opening, and remove bore cuttings. All bore pits and HDD paths would be located within the 25-foot construction corridor.

The Coopers Bar HDD crossing would span approximately 1,568 feet from Chimariko Road on the eastern side of the river to a flat, open area on the western side of the river. Both bore pits would be located at least 450 feet away from the ordinary high water mark (OHWM) of the Trinity River at the proposed location. There are several alternative bore pit locations identified at the Coopers Bar crossing, the closest of which would be placed a minimum of 330 feet from the OHWM of the river. The bore pit to the north/west would be located within the 100-year floodplain; the bore pit to the south/east would be located outside the 100-year floodplain. The bore path would begin at a minimum depth of 36 inches on each end, increasing gradually to 60 to 72 inches within the flood-prone area of the riverbank and to a minimum depth of 20 feet below the riverbed.

The Big Bar HDD crossing would span approximately 546 feet beneath the Corral Bottom Road Bridge. Both bore pits in this location would be sited along paved roadways on either side of the existing bridge, away from the riverbank and riparian vegetation. Both would be located within the 100-year floodplain. The bore pits would be located at least 130 feet from the OHWM of the river. The bore path would begin at a minimum depth of 42 inches on each end, increasing gradually to a minimum depth of 15 feet below the bed of the river.

2.5.1 Upland Construction and Ground Disturbance

HDD causes minimal impacts; ground disturbance occurs only at the entry and exit points of the bore path, referred to as "bore pits." Bore pits at the Cooper Bar and Big Bar HDD crossings would be sized up to 10 feet by 10 feet to a maximum depth of 4.5 feet. All bore pits would be within the 25-foot construction corridor.

Of the two Trinity River HDD crossings, vegetation removal would only be necessary at Coopers Bar. The two bore pits at the Big Bar crossing would be located within paved roadways and, as such, would not require any recontouring of the riverbank or removal of vegetation. The Coopers Bar bore pits would be sited outside sensitive areas, and all temporarily disturbed areas would be restored as described in the Restoration Plan (EA Appendix J). Impacts may also include the potential introduction and spread of noxious weeds and invasive plant species into on-site and adjacent vegetation communities. Protective controls to avoid and minimize the spread of noxious weeds are outlined with Best Management Practices

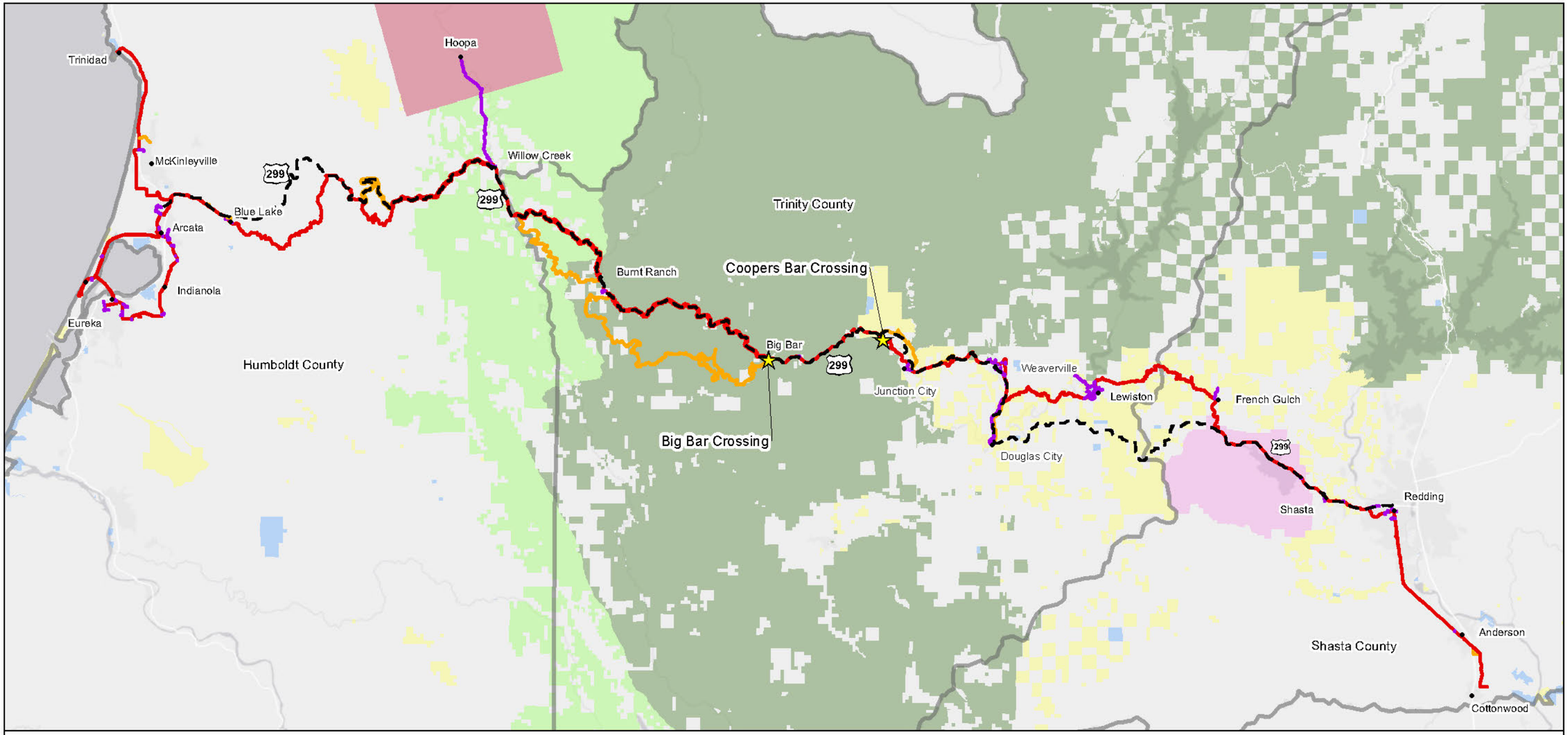
(BMPs) in Appendix G of the EA. Additional protective controls to minimize impacts to soil and biological resources, including a Stormwater Pollution Prevention Plan (SWPPP), Spill Pollution Prevention Plan, and inspection of the HDD bore path, are also included in Appendix G.

2.5.2 Riparian and Floodplain Construction

The bore path at the Coopers Bar HDD crossing would begin at a minimum depth of 36 inches on each end, increasing gradually to 60 to 72 inches within the flood-prone area of the riverbank and a minimum depth of 20 feet below the riverbed. The north/west bore pit would be located within the 100-year floodplain. The bore path at the Big Bar crossing would begin at a minimum depth of 42 inches on each end, increasing to a minimum depth of 15 feet below the riverbed. Both bore pits at the Big Bar crossing are located within the 100-year floodplain, although both are near the edge of the mapped area. The bore hole for both crossings would be 4 inches in diameter, containing four 1.25-inch conduits to house the fiber optic cable. Construction within the floodplain areas would be temporary; all permanent facilities would be located belowground within riparian and floodplain areas. Protective controls, including the implementation of an HDD Contingency Frac-Out Plan, are outlined with BMPs in Appendix G of the EA. The Digital 299 Fiber Project BH2 HDD Contingency Plan (Frac-Out Plan) is included as Appendix E of the EA.

2.5.3 In-Channel Construction

No construction would occur in the waterway channel at either crossing. Vero would bore to a minimum depth of 15 feet below the riverbed at Big Bar and a minimum depth of 20 feet below the riverbed at Coopers Bar. Vero would employ a Frac-Out Plan (EA Appendix E) in case of frac-outs during the HDD operation. The Frac-Out Plan would include overarching BMPs as well as site-specific plans and designs for major waterway crossings. General BMPs include but are not limited to installing temporary sediment barriers and storing spoils away from riparian boundaries when boring under waterways, monitoring fluid pressure and bore paths for the duration of drilling operations and keeping a vacuum and spill kit on-site. The Frac-Out Plan would incorporate agency input prior to issuing permits.



Wild and Scenic Rivers Act - Trinity River HDD Crossings
Project Overview
Digital 299 Broadband Project

Figure 1

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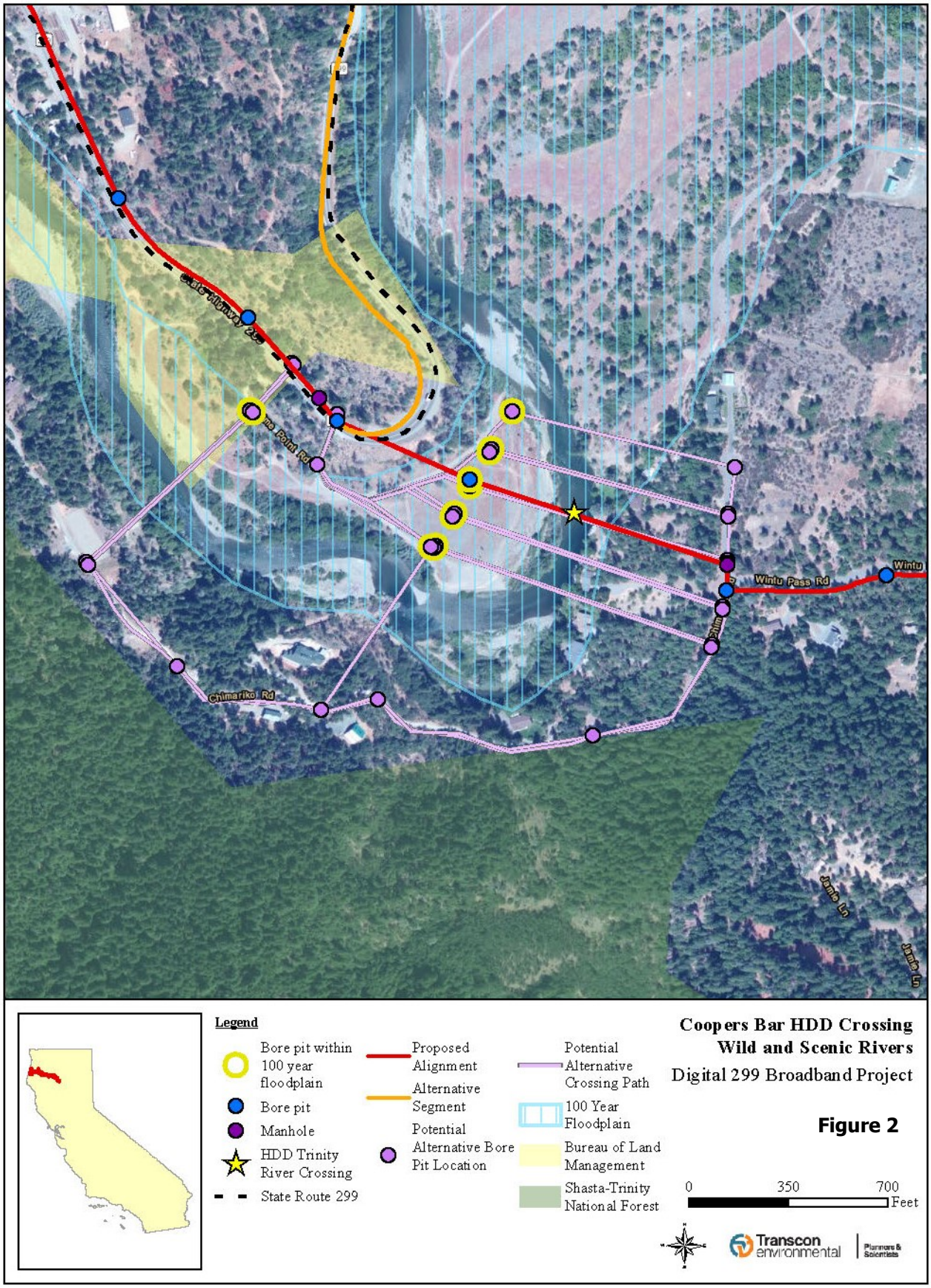
State Highway 299
Wintu Pass Rd
Wintu
Chimariko Rd
Jamie Ln
Legend
Bore pit within 100 year floodplain
Bore pit
Manhole
HDD Trinity River Crossing
State Route 299
Proposed Alignment
Alternative Segment
Potential Alternative Bore Pit Location
Potential Alternative Crossing Path
100 Year Floodplain
Bureau of Land Management
Shasta-Trinity National Forest
Coopers Bar HDD Crossing
Wild and Scenic Rivers
Digital 299 Broadband Project
Figure 2
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350
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Feet
Transcon environmental
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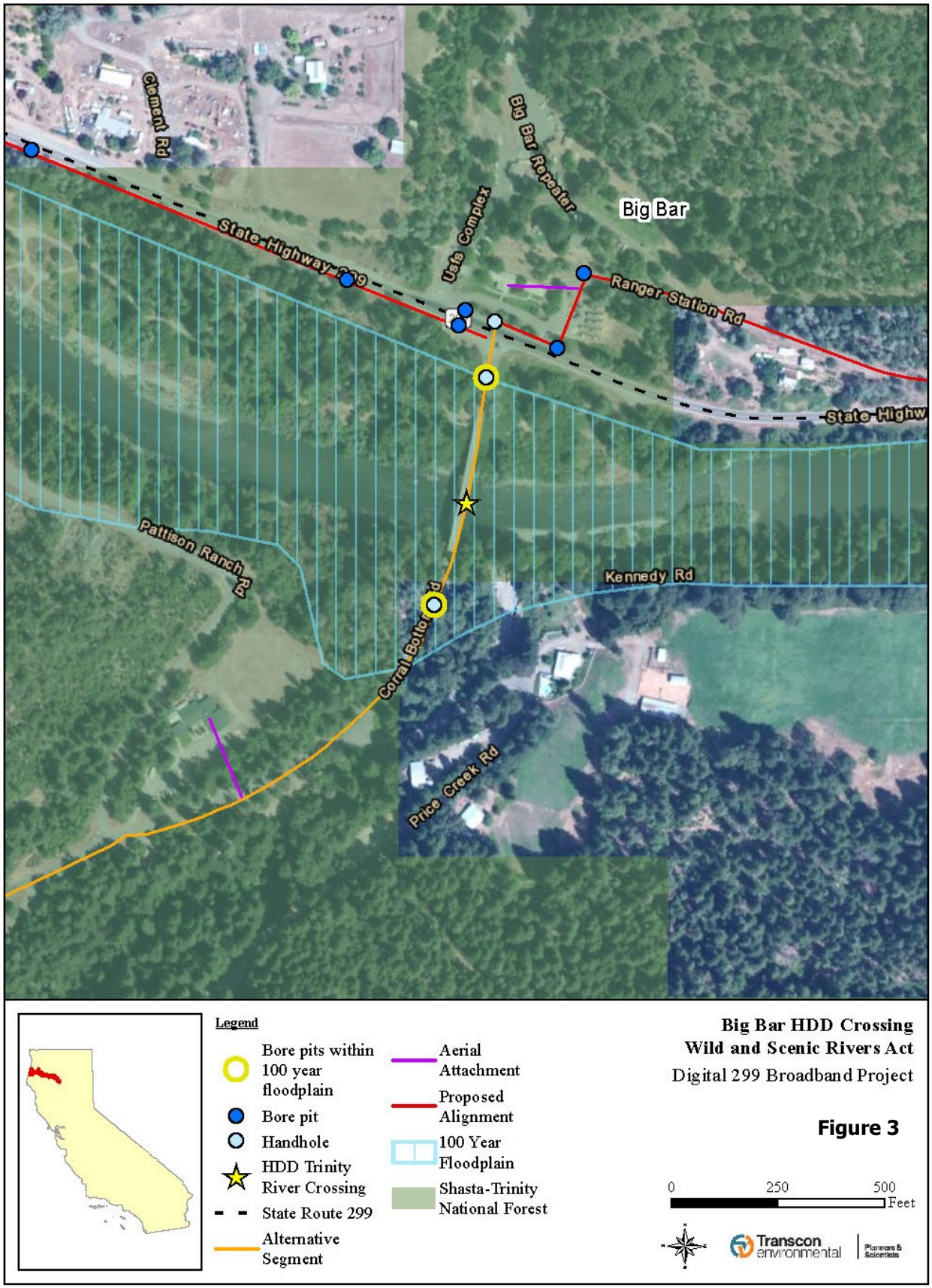
Clement Rd
Big Bar Repeater
Big Bar
State Highway 299
Usfs Complex
Ranger Station Rd
State Highw
Pattison Ranch Rd
Kennedy Rd
Corral Bottom Rd
Price Creek Rd
Legend
Bore pits within 100 year floodplain
Bore pit
Handhole
HDD Trinity River Crossing
State Route 299
Alternative Segment
Aerial Attachment
Proposed Alignment
100 Year Floodplain
Shasta-Trinity National Forest
Big Bar HDD Crossing
Wild and Scenic Rivers Act
Digital 299 Broadband Project
Figure 3
0
250
500
Feet
Transcon environmental
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3. BASELINE CONDITIONS

3.1 Free-Flowing Condition

Existing conditions at the Cooper Bar and Big Bar crossings have been influenced by historic mining and subsequent reductions in flood flow on the Trinity River. These sections of the river are largely channelized.

Mining originally brought prospectors to the Trinity River, and gold mining lasted for more than a century, ca 1848 to 1962 (AECOM 2013; Bailey 2008; Clark 1976; O'Brien 1965). The discovery of gold in Trinity County near Douglas City in 1848 by Major Pierson B. Reading prompted the identification of an access route to this remote area and helped ignite a gold rush (AECOM 2013). The initial rush consisted of numerous miners sluicing and panning gold by hand. Chinese miners were active along Trinity River between Big Bar and Helena from the 1850s to 1880s (Bailey 2008). Large bench gravel deposits still exist at Coopers Bar, Hocker Flat, Benjamin Flat, and Chapman Ranch. Important mines included Copper Bluff, Fairview, Headlight, Kelly, Trinity Bonanza King, and Venecia (Loftus et al. 2021).

Channelization of the Trinity River is associated with the historic mining and dredge activities that have occurred over the past 175 years. Beginning in 1963 with the construction of Lewiston Dam, modifications to the river flow regime were compounded by the Trinity River Diversion (TRD) and Central Valley Project. When the Trinity River was designated as a WSR in 1981, the river was channelized by riparian berms in several locations. The original alluvial nature of the river has been modified heavily over the past several decades.

3.2 Water Quality

The water downstream of Lewiston Dam is notably high quality. In the late summer, Trinity River water is used to lower the water temperature and improve water quality conditions of the Klamath River during low water conditions. Regular water releases from the TRD influence flow volumes, flow velocities, and channel geometry downstream of Lewiston Dam and also affect water quality parameters such as temperature, turbidity, and suspended sediment. Trinity Basin water supports municipal and domestic water supplies, and beneficial uses are primarily associated with sustaining high-quality fish habitat (cold-water spawning and rearing habitat) and recreational pursuits (swimming and boating). These benefits are protected by numeric and narrative water quality objectives defined in the Water Quality Control Plan for the North Coast Region (NCRWQCB 2011).

The Environmental Protection Agency (EPA) added the Trinity River to its list of impaired rivers under the provisions of Section 303(d) of the Clean Water Act (CWA) in 1992. The State of California had determined that the water quality standards for the river were not being met due to excessive sediment. In 2001, the EPA established a Total Maximum Daily Load for sediment in the Trinity River. The North Coast Regional Water Quality Control Board (NCRWQCB) has continued to identify the Trinity River as impaired in subsequent listing cycles. Excessive sediment in the Trinity River primarily contributes to the degradation of habitat for anadromous salmonids. Data from ongoing sediment transport monitoring suggest that below Douglas City, additional streamflow and sediment contributions from Indian, Weaver, and Reading creeks significantly reduce the coarse sediment and streamflow deficits. Below Douglas City, dam releases and natural runoff events are generally capable of transporting sediment influxes.

Water temperature is one of the most important variables affecting salmonids and other aquatic organisms (Carter 2005), influencing feeding rates, growth, metabolism, development, timing of migration, spawning, rearing, and the availability of food. Since the construction of the TRD, discharge from Lewiston Dam has played an important role in regulating water temperatures in the Trinity River downstream.

Flows in the vicinity of Coopers Bar and Big Bar typically exceed the temperature targets for short periods of time in the fall (Magneson and Chamberlain 2015). Presently, river temperature requirements maintain the health of adult spawners. During spring rearing periods, when juvenile salmon and steelhead grow prior to their seaward migration, the temperature is often warmer than required for optimal growth conditions.

The Trinity River is typically very clear and generally has a turbidity of less than 3 nephelometric turbidity units (NTUs) (TRRP 2015). Turbidity is typically lowest in the summer, and spikes in turbidity occur naturally during storms or other runoff events (TRRP 2015). Turbidity is highest during high tributary flows. Sedimentation is the primary impairment of the Trinity River, with listings for temperature (South Fork) and mercury (Trinity Lake, East Fork, Upper Trinity hydrologic area) as other impairments" (NCRWQCB 2021). The river is used for drinking water and is generally free from other pollutants.

3.3 Outstandingly Remarkable Values: Anadromous Fish Populations and Habitat

The anadromous fishery is a primary ORV identified for this segment of the Trinity WSR. It possesses either existing or potentially high or very high-quality anadromous fish habitat (HCRS 1980). Specifically, the Trinity River supports the Southern Oregon/North California Coast Coho salmon evolutionarily significant unit, which was federally-listed as threatened under the Endangered Species Act (NMFS 2020). The Trinity River also supports Klamath Mountain Province steelhead trout, Upper Klamath/Trinity River (UKTR) fall-run Chinook salmon, a remnant population of UKTR spring-run Chinook salmon, and Pacific lamprey (CalTrout 2019).

All anadromous salmonid species begin their life in fresh water, migrate to the ocean to rear and mature, and eventually return to spawn in fresh water. Although the three Trinity River native species have broadly similar life histories, they differ in the time of year they migrate, spawn, and incubate eggs.

The critical factors for production of all anadromous salmonids include adequate flows, water temperatures, water depths, and velocities; appropriate spawning and rearing substrates (e.g., riverbed gravels); and availability of instream cover and food. Spring-run Chinook salmon and summer-run steelhead also require long-term adult holding habitat, which relies on factors including pool size and depth, temperature, cover, and proximity to spawning gravel. Regardless of species, newly emerged fry and juveniles require the presence of rearing habitat with low water velocities, open cobble substrate, and cool water temperatures. The emigration of smolts to the ocean and the immigration of spawning adults each require adequately timed flows with the appropriate temperature, depth, and velocity.

4. WILD AND SCENIC RIVERS ACT SECTION 7(A) EVALUATION STANDARD AND EVALUATION CRITERIA

4.1 Evaluation Standard

The Project will be evaluated to determine if the proposed activities will result in any "direct and adverse" effects on the river's values (free flow, water quality, and ORVs). According to the Forest Service Manual 2354.74a, the regional forester has the responsibility to make determinations for water resources projects on designated WSRs where other federal assistance is involved. This responsibility may not be delegated. The regional director will approve the determination for NPS.

4.2 Evaluation Criteria

The following specific criteria were used to evaluate for direct and adverse effects to the free flow, water quality and ORVs.

4.2.1 Free-Flowing Condition

- Alteration of within-channel conditions, including:
  - Active channel location
  - Channel geometry
  - Channel slope
  - Channel form
  - Navigation of river
- Alteration of riparian and/or floodplain conditions, including:
  - Vegetation composition, age structure, quantity, or vigor
  - Relevant soil properties such as compaction or percent bare ground
  - Relevant floodplain properties such as width roughness, bank stability, or susceptibility to erosion
- Alteration of upland conditions, including:
  - Vegetation composition, age structure, quantity, or vigor
  - Relevant soil properties such as compaction or percent bare ground
  - Relevant floodplain properties such as width roughness, bank stability, or susceptibility to erosion
  - Relevant hydrologic properties such as drainage patterns or the character of the surface and subsurface flows
- Alteration of hydrological processes, including:
  - The ability of the channel to change course, reoccupy former segments, or inundate its floodplain
  - Streambank erosion potential, sediment routing and depositions, or debris loading
  - The amount or timing of flow in the channel
  - Existing flow patterns
  - Surface and subsurface flow characteristics
  - Flood storage (detention storage)
  - Aggradation or degradation of the channel
- Magnitude and extent of off-site changes, including:
  - Changes that influence other parts of the river system, including:
    - Range of circumstance under which off-site changes might occur

        - Likelihood that predicted changes will be realized
    - Processes involved, such as water, sediment, and the movement of nutrients

4.2.2 Water Quality

The evaluation criteria for water quality are:

- Temperature
- Turbidity
- Pollutants (i.e., oil and grease)
- Sediment

4.2.3 Outstandingly Remarkable Values: Anadromous Fish Habitat

The evaluation criteria for the anadromous fisheries ORV are:

- Water temperature
- Water quality (physical, biological, chemical)
- Aquatic habitat
    - Geomorphic condition
    - Substrate quality
    - Nutrient cycling
    - Condition of aquatic invertebrate, amphibian, and mollusk habitat
    - Species composition and diversity
    - Fish species populations

This Section 7(a) evaluation addresses the potential of the Project to have a direct and adverse impact on the anadromous fishery ORV and other values identified by the WSRA. Chapter 3 of the Digital 299 EA provides additional information and analysis on the WSR, water quality, fisheries, wildlife, flora and fauna, recreation, and aesthetic values.

5. ANALYSIS OF EFFECTS TO FREE FLOW

5.1 How the Activity Will Directly Alter Within-Channel Conditions

5.1.1 Position of the Activity Relative to the Streambed and Streambanks

The Project activities described above are located a minimum of 130 feet from the Trinity River OHWM at the Big Bar crossing and a minimum of 330 feet from the Trinity River OHWM at the Coopers Bar crossing, which places them outside the streambed and streambanks. No work is proposed within the river channel, streambed, or streambanks. Streambed and streambanks have the potential to be affected in the event of a frac-out. BMPs to address a frac-out near or within a waterbody are included in the Frac-Out Plan (EA Appendix E). Any inadvertent release during drilling would be stabilized and would not result in a change to the form or function of the streambed or streambanks.

5.1.2 Potential Project-Related Changes to Free Flow

5.1.2.1 Active Channel Location

The Project would use HDD to cross under the channel and would not modify the active channel location. In the event of a frac-out, the BMPs included in the Frac-Out Plan would be implemented. The active channel location would not be altered.

5.1.2.2 Channel Geometry

The Project would use HDD to cross under the channel and is not expected to alter channel geometry in either the Coopers Bar or Big Bar crossings. In the event of a frac-out, the frac-out would be stabilized using the BMPs included in the Frac-Out Plan, and any drilling mud released would be cleaned up. There would be negligible impacts to channel geometry, if any.

5.1.2.3 Channel Slope

The Project would use HDD to cross under the channel and is not expected to alter channel slope at either the Coopers Bar or Big Bar crossings. The channel slope would not be altered in the event of a frac-out.

5.1.2.4 Channel Form

The Project would use HDD to cross under the channel and is will not alter channel form at either the Coopers Bar or Big Bar crossings. No structures would be placed in the channel in the event of a frac-out.

5.1.2.5 Navigation of the River

The Project would use HDD to cross under the channel and would not disrupt channel activities. Recreational uses of the Trinity River, including boating, rafting, fishing, swimming, camping, and wildlife viewing (BLM 2021), can occur concurrently with Project activities, although there would be some temporary disturbance to recreational activities due to increased traffic and construction noise (see Section 3.9 of the EA). Specifically, construction equipment may bring increased traffic to the routes used by the public for accessing recreational areas along the alignment. However, although construction may be an inconvenience, it would not block or inhibit the public from accessing recreational areas.

In the event of a frac-out, the BMPs contained in the Frac-Out Plan would be implemented. Stream crossings with flowing water, which would include the Trinity River at both locations, would be monitored during construction for inadvertent release. Monitoring would continue for 48 hours after drilling and reaming are complete. Notification of a release within jurisdictional waters would be made, if required. It is unlikely that cleanup during a frac-out event would impact navigation of the river. Project activities would pose a very temporary hazard to river navigation, if any.

5.2 How the Activity Will Directly Alter Riparian and/or Floodplain Conditions

5.2.1 The Position of the Activity Relative to the Riparian Area and Floodplain

Although the Project would place conduit and fiber optic cable within 100-year flood zone areas at the Coopers Bar and Big Bar crossings, the facilities would be buried to a depth of at least 60 inches in these areas and would allow flood flows to occur unimpeded. Three of the four temporary bore pits would be located within the 100-year floodplain. At the Big Bar crossing, the pits would be located along a road and not within riparian vegetation. At the Coopers Bar crossing, one bore pit would be located within a gravelly, grassed area, and the other would be located to the south or east of the river, outside the riparian area.

5.2.2 Potential Project-Related Changes to Floodplain Conditions

5.2.2.1 Vegetation Composition, Age Structure, Quantity, or Vigor

There would be no effects on vegetation composition, age structure, quantity, or vigor from the proposed HDD crossings.

5.2.2.2 Relevant Soil Properties Such as Compaction or Percent Bare Ground

The bore pits required for the HDD crossings would result in the temporary disturbance of soil. The affected areas are approximately 10 feet by 10 feet, excavated to a depth of approximately 4 feet. This would result in temporary spoils. Upon completion of the HDD boring and installation of the conduit, soils would be replaced, seeded, and mulched. Ultimately, four small areas of temporary bareness and decompaction would result due to Project activities. The additional percent bare ground would be negligible. Soils would ultimately be returned to pre-construction conditions, and restoration areas would be monitored for a period of 3 years or until the fulfillment of performance standards. Restoration and monitoring activities are described in the Restoration Plan (EA Appendix J).

5.2.2.3 Relevant Floodplain Properties Such as Width, Roughness, Bank Stability, or Susceptibility to Erosion

Due to the minimal extent of Project activities within the floodplain, the Project would have a negligible effect, if any, on any floodplain properties. Due to the soil disturbance associated with three of the four total HDD bore pits, there would be a slight increase in erosion potential at three locations within the floodplain. These sites are located a minimum distance of 130 feet away from the Trinity River and would be stabilized upon completion of construction activities. No alterations to floodplain conditions are anticipated.

5.3 How the Activity Will Directly Alter Upland Conditions

5.3.1 The Position of the Activity Relative to the Uplands

As described in Section 2 of this analysis, most Project activities would occur in upland areas. Three of the four bore pits being analyzed under the WSRA would be located in upland areas, while the fourth (western/northern location at Coopers Bar) would be located in a grassy and graveled section outside the OHWM but within the 100-year floodplain. Upland vegetation may be removed for the excavation of the bore pits and equipment access. The bore pits would be approximately 10 feet by 10 feet wide, and the vegetation removal could be slightly in excess of this area, with an area needed for spoils. The bore pits at Big Bar are proposed to be excavated along the edge of the road, potentially outside vegetated areas. The eastern/southern bore pit at Coopers Bar will be located within the road ROW and is not likely to require upland vegetation removal. Any vegetation removal would be minimal, given the scope of the activities.

5.3.2 Potential Project-Related Changes to Uplands

5.3.2.1 Vegetation Composition, Age Structure, Quantity, or Vigor

Clearing of vegetation prior to excavation could result in the reduction in mature vegetation. This impact would be limited to areas in slight excess of 100 square feet at each of the three bore pit locations within upland areas, for a total of approximately 300 square feet. Given the need for access, it is reasonable to estimate that the extent of HDD activities would not require more than 500 square feet of vegetation removal. Any affected areas would be restored and monitored for 3 years after completion of the HDD activities, pursuant to the Restoration Plan (EA Appendix J). Even after the 3-year period, additional time would be needed for mature vegetation to become reestablished within these areas. The overall amount of vegetation affected would be very minimal.

5.3.2.2 Relevant Soil Properties Such as Compaction or Percent Bare Ground

The soil at each of the bore pits would experience decompaction due to excavation. Soil would be replaced and compacted during restoration after HDD activities are completed. The bore pits would be temporarily bare as vegetation is reestablished through restoration efforts. Given the small size and discrete nature of each bore pit location, the activity would not add appreciably to the overall percent bare ground in upland areas, and the effect would be temporary.

5.3.2.3 Relevant Floodplain Properties Such as Width, Roughness, Bank Stability, or Susceptibility to Erosion

The excavation of the bore pits would not affect the width, roughness, or bank stability of the floodplain. The excavation of the bore pits would slightly increase susceptibility to erosion. However, activities would be of short duration, and BMPs would be applied, including the implementation of a sediment barrier around spoils as well as the backfill, stabilization, and seeding of bore pits immediately following construction. The overall additional erosion risk within the floodplain would be very minimal.

5.3.2.4 Relevant Hydrologic Properties Such as Drainage Patterns or the Character of Surface and Subsurface Flows

Project activities are not anticipated to have any effect on drainage patterns, the character or surface or subsurface flows, or any other hydrologic properties.

5.3.2.5 Archaeological, Cultural, or Other Identified Significant Resource Values

Project activities are not anticipated to have direct or adverse effects to archaeological, cultural, or other identified significant resource values. The Coopers Bar bore pits would not be sited within sensitive areas. However, at the request of Shasta-Trinity National Forest, archaeological and tribal construction monitoring would be implemented at both of the proposed Big Bar bore pits due to their proximity to culturally sensitive areas, as described in the Digital 299 Cultural Resource Inventory Report (CRIR) (Loftus et al. 2021).

The southwestern HDD bore pit at Big Bar would be located at the edge of the road within the Cox Bar School site, a sensitive area characterized by a historic school building originally constructed ca 1852 (later rebuilt in the 1960s) as well as sparse lithic scatter (Loftus et al. 2021). The bore pit for the WSR crossing would be located within the road shoulder, and archaeological and tribal monitors would be present during construction. Project activities are not anticipated to affect resource values associated with the Cox Bar School site.

The northeastern bore pit at Big Bar would be located at the edge of the road within the Big Bar site, which includes a prehistoric village site (not evaluated for the Digital 299 CRIR), a ranger station built in the 1930s (not eligible for the National Register of Historic Places), historic buildings and refuse piles (located

outside the Area of Potential Effects), and additional previously recorded resources that could not be located or were determined to no longer be present (Loftus et al. 2021). The bore pit for the Trinity River crossing would be located within the road shoulder, and archaeological and tribal monitors would be present during construction. Project activities are not anticipated to affect resource values associated with the Big Bar site.

As described in the CRIR and Section 3.4 of the EA, historic and prehistoric cultural resources also occur within and adjacent to other portions of the alignment beyond the Big Bar and Coopers Bar HDD crossings, including within other off-site portions of the WSR corridor. The cooperating agencies have coordinated closely with Vero to ensure that the Project overall would comply with Section 106 of the National Historic Preservation Act. Cultural resource monitoring procedures and resource protection measures—including inadvertent discovery protocols and cultural resource awareness training—will be employed across the Project where work is planned in sensitive areas, and bore pits will be sited outside of culturally sensitive areas to the extent possible. Project activities in off-site portions of the WSR corridor are not expected to affect archaeological, cultural, or other identified significant resource values.

5.4 How Changes in On-Site Conditions Can or Will Alter Existing Hydrologic Processes

5.4.1 Ability of the Channel to Change Course, Reoccupy Former Segments, or Inundate Its Floodplain

Due to the very limited and discrete nature of the Project activities within the floodplain, no effects to the functional floodplain are anticipated.

5.4.2 Potential Project-Related Changes to Hydrologic Processes

5.4.2.1 Streambank Erosion Potential, Sediment Routing and Deposition, or Debris Loading

The HDD activities are anticipated to result in a minor, temporary increase in erosion potential due to soil disturbance. This effect would not increase the overall erosion potential of the streambanks, as the banks themselves would not be disturbed. All activities are located a minimum of 130 feet from the OHWM.

5.4.2.2 The Amount or Timing of Flow in the Channel

Project activities would not affect the amount or timing of flow in the river channel.

5.4.2.3 Existing Flow Patterns

Project activities would not affect existing flow patterns.

5.4.2.4 Surface and Subsurface Flow Characteristics

Project activities would not affect existing surface and subsurface flow characteristics. Fiber optic conduits would be installed via HDD at a minimum depth of 15 feet below the riverbed at Big Bar and a minimum depth of 20 feet below the riverbed at Coopers Bar. HDD depths would avoid subsurface flow zones.

5.4.2.5 Flood Storage (Detention Storage)

Neither HDD location is conducive to flood storage. Project activities would not affect the potential for flood storage in any way.

5.4.2.6 Aggradation or Degradation of the Channel

All Project activities would occur outside the river channel and would not affect any aggradation or degradation within the channel. In the event of a frac-out within the channel, a minimal amount of drilling fluid would be released, and the measures contained in the Frac-Out Plan would be implemented. This would not affect channel aggradation or degradation.

5.4.3 Estimation of the Magnitude and Spatial Extent of Potential Off-Site Changes

5.4.3.1 Changes That Influence Other Parts of the River System

As described in Section 2 of this analysis, the overall Project area extends approximately 300 miles through Humboldt, Trinity, and Shasta counties between Redding and Eureka in Northern California, generally following SR 299 through federal, state, and private lands. Off-site activities would include placing fiber optic conduit within and beyond the WSR corridor along the road shoulder, constructing up to five in-line amplifier buildings, attaching aerial conduit to existing utility poles along last-mile segments, and crossing the Trinity River in seven other locations by attaching conduit to bridges. HDD would be the primary construction method for off-site activities, although trenching, plowing, and/or rock sawing may be used in some sections where HDD is not feasible. All construction activities will occur within a 25-foot-wide construction corridor located almost entirely along the edge of existing roadways. With the implementation of resource protection measures to avoid permanent impacts and minimize temporary impacts, no direct or adverse effects are anticipated to the Trinity River ORVs as a result of these off-site activities.

5.4.3.2 The Range of Circumstances Under Which Off-Site Changes Might Occur

No appreciable changes are anticipated to the Trinity River ORVs as a result of off-site Project activities.

5.4.3.3 The Likelihood That Predicted Changes Will Be Realized

No appreciable changes are anticipated to the Trinity River ORVs as a result of off-site Project activities.

5.4.3.4 Specify Processes Involved, Such as Water, Sediment, and the Movement of Nutrients

For HDD crossings, the primary risks within the upland area, riparian area, and channel include a minimal, temporary increase in potential for sedimentation and the potential for a frac-out within the channel or banks. The Big Bar and Coopers Bar HDD crossings are the only locations in which HDD will be used to cross the Trinity River. No appreciable changes are anticipated to the Trinity River ORVs as a result of off-site activities.

6. ANALYSIS OF EFFECTS TO WATER QUALITY

6.1 Relevant Water Quality Parameters

Impacts to hydrology and water quality do not meet the adverse impact thresholds listed in Section 3.6.3 of the Digital 299 EA and will be avoided and minimized with the implementation of measures in Appendix G. These measures require the Proponent to develop and implement a SWPPP; develop and implement a Spill Pollution Prevention Plan; develop and implement a Frac-Out Plan; visually inspect the bore path and stream area for frac-outs at all times during HDD activities; develop and implement a Restoration Plan (EA Appendix J) to guide the restoration of temporarily disturbed natural areas; and minimize erosion by maintaining runoff control structures, roadside diversion ditches, erosion-control structures, and energy dissipaters to the standards of the permits and SWPPP. In addition, all applicable CWA Section 404 permits and Section 401 water quality certifications would be addressed and acquired prior to commencement of construction activities, further ensuring that water quality standards and waste discharge requirements are not violated.

During construction activities, runoff from work areas could result in a slight increase in turbidity in surface waters within the Project area. Construction would result in temporary impacts within the 100-year flood zone at three of the four bore pit locations. Potential increases in turbidity would be minimized or prevented with implementation of BMPs (e.g., limiting work to the dry season, mulch mats, straw wattles, silt fencing, detention basins, and monitoring) and adherence to erosion and stormwater management practices to contain soil and runoff on the Action Area, as described in Appendix G of the EA. The implementation of BMPs will prevent or reduce soil entering the waterway, thereby maintaining water quality standards. As Project facilities are buried underground, there is no anticipation that the long-term operation of the Project would lead to increased runoff or change drainage patterns. Overall, impacts to surface water are expected to be direct, short term, and minor as a result of the Project.

No effects to groundwater would be expected from the Project, as it does not remove groundwater or affect groundwater recharge. Adherence to BMPs and environmental protection measures (EA Appendix G) would prevent potential adverse impacts to water quality. Although the Project would place conduit and fiber optic cable within 100-year flood zone areas at the crossings, the facilities would be buried to a depth of at least 60 inches in these areas and would allow flood flows to occur unimpeded.

Finally, no effects are expected from the operations and maintenance phase of the Proposed Action, as the facilities will be accessed via existing roads and vaults, and no new disturbance or changes to hydrology would be required to operate and maintain the fiber optic network.

7. ANALYSIS OF EFFECTS TO OUTSTANDINGLY REMARKABLE VALUES

The ORVs of the Trinity River are its free-flowing condition, anadromous and resident fisheries, geologic resource values, scenic values, recreational values, cultural and historic values, and the values associated with water quality. This analysis is focused specifically on effects to fisheries.

7.1 Water Temperature

Water temperature can have a substantial effect on salmonids and other aquatic organisms. It is a key variable in the various life stages of anadromous fish. Feeding rates, food availability, growth, and migration timing can all be affected. After the construction of the reservoirs along the Trinity River, the river's temperature and sediment regimes were significantly altered. Water releases from the dams are generally cold (42 to 47 degrees Fahrenheit), although flows in the Project area typically exceed the temperature targets for short periods in the fall (Magneson and Chamberlain 2015). The influence of the reservoirs diminishes downstream of the dams. Project activities are not anticipated to affect water temperatures in any way.

7.2 Water Quality (Physical, Biological, Chemical)

See Section 6.1.

7.3 Aquatic and Riparian Habitat

Direct effects to aquatic and riparian habitat would be avoided by employing HDD construction methods to bore under the Trinity River at Coopers Bar and Big Bar. The Proponent would only use HDD to cross under the Trinity River along Coral Bottom Road if the preferred path (i.e., continuing along Highway 299) is unable to be constructed and if the bridge at this location is unable to have conduit attached.

In order to protect waterways during HDD construction, the Proponent would implement BMPs, including preparing the work site no more than 10 days prior to boring in order to reduce the time soils are exposed, storing spoils behind a barrier 25 feet or more from the bank or wetland/riparian boundary, covering spoils with plastic or other stabilizing material, placing portable pumps and stationary equipment within secondary spill containment (when within 100 feet of a water resource), and maintaining a spill kit on-site at all times. The Proponent would also seed and stabilize disturbed soils immediately following backfill of the bore pits and would leave temporary sediment barriers in place until restoration is deemed successful.

The Proponent would implement any additional pre- and post-construction conditions identified in the CDFW Lake and Streambed Alteration Agreement and, where applicable, the USACE Nationwide Permit. The appropriate BMPs (EA Appendix G) and the Frac-Out Plan (EA Appendix E) would be employed during construction.

Indirect effects to waterways may occur from Project-related activities. Specifically, ground-disturbing activities during construction in or adjacent to waterways may cause indirect effects that include the potential introduction of hazardous materials (e.g., lubricants or fuel) from accidental spills, increased erosion, and increased sediment transport. With rapid containment and cleanup, the toxicity of these materials would be minimized or contamination avoided entirely, depending on the proximity of the spill to water bodies. Oils, fuels, and other contaminants could have short-term effects on anadromous fish; however, this is not expected to adversely affect organisms or populations. Implementation of BMPs in Appendix G of the EA which minimize the potential for stormwater runoff and accidental spill or pollutant discharge into waters or wetlands will avoid and minimize any indirect effects to waterways.

7.3.1 Geomorphic Condition (Sediment Transport and Substrate Quality)

Flows in the Trinity River are regulated by the Lewiston Dam. The channel has narrowed and experienced geomorphic changes due to diversion into the Sacramento River basin, and vegetation encroachment along the channel has increased (USFWS and HVT 1999). While the geomorphic conditions have changed over the years, the Project activities will not have any effect on the geomorphology due to their temporary nature and location outside the river channel.

7.3.2 Substrate Quality

The Project is not expected to affect substrate quality. Construction activities will not occur within the river channel. In the event of a frac-out within the channel, Project activities would be halted and the BMPs and procedures detailed in the Frac-Out Plan would be implemented. A small amount of drilling mud would be released, but this is not anticipated to have any appreciable effect on substrate quality.

7.3.3 Nutrient Cycling

The Project is not expected to affect nutrient cycling within the river, as Project activities will not place materials within or remove materials from the river channel.

7.3.4 Condition of Aquatic Invertebrate, Amphibian, and Mollusk Habitat

The Project is not expected to affect the condition of aquatic invertebrate, amphibian, or mollusk habitat.

7.3.5 Species Populations and Diversity

The Project is not expected to affect species populations and diversity or habitat complexity at either the Coopers Bar or Big Bar crossings.

7.3.6 Fish Species Populations

The Project is not expected to effect fish species populations at either the Coopers Bar or Big Bar crossings.

8. TIME FRAME OVER WHICH EFFECTS ARE LIKELY TO OCCUR

The proposed Project is not expected to have effects to the Trinity River and its free flow, water quality, and ORVs beyond the construction period for the Coopers Bar and Big Bar HDD crossings. This period would total approximately 8 to 14 days total for both crossings (i.e., 4 to 7 days per crossing) between approximately November 2022 and April 2024.

The portions subject to this WSRA analysis—i.e., the Coopers Bar and Big Bar HDD crossings—would require approximately 4 to 7 days of construction each (2 to 4 days of setup and 2 to 3 days of crossing activities). Crews would require at least 1 day to set up and pre-survey the area to help avoid frac-outs, at least 1 day of drilling, and at least 1 day to pull the fiber through the conduit and clean up the site. The HDD process can be more time-intensive in rocky riverbeds and when boring deeper than the minimum depth below a waterway. Vero would perform these activities between the months of November and April to avoid incidental take to the Upper Klamath/Trinity spring-run Chinook salmon, as requested by the CDFW.

The total duration of construction for the middle-mile route of the Project is estimated at up to 24 months, beginning in approximately June or July 2022. Phase 2 of the Project (last-mile connections) would begin construction once middle-mile fiber is installed and as soon as last-mile providers and Vero finalize interconnection points and locations of service drops. Phase 2 construction is expected to begin in 2024.

9. COMPARISON OF PROJECT ANALYSES TO MANAGEMENT GOALS

The Project is consistent with applicable management goals, including federal WSRA implementation guidance as well as regional management plans implemented by the USFS, NPS, and NCRWQCB. The key management goals applicable to the Trinity River involve protecting, maintaining, and enhancing water quality, free-flowing condition, and anadromous fish habitat. As described in Sections 5, 6, and 7 of this analysis, the Project is not expected to adversely affect these values, and the Proponent will incorporate measures to avoid and minimize any temporary impacts.

The NPS WSR Reference Manual 46 explains that the WSRA directs river-managing agencies to protect and enhance each designated river's free-flowing condition, water quality, and ORVs (NPS 2021). The ORVs of the Trinity River are its water quality, free-flowing condition, anadromous and resident fisheries, outstanding geologic resource values, scenic values, cultural and historic values, and recreational values. The Shasta-Trinity Land and Resource Management Plan (LRMP) outlines specific resource management goals designed to protect, maintain, and improve wild trout and salmon habitat in the Trinity River, including maintaining or improving water quality and quantity to meet fish habitat requirements (USDA 1995). The NCRWQCB (NCRWQCB 2011) establishes numeric and narrative water quality objectives to protect beneficial uses of the WSR, including sustaining high-quality fish habitat (cold-water spawning and rearing habitat) and recreational pursuits (swimming and boating).

The Trinity River Restoration Program (TRRP), a partnership between state, federal, tribal, and regional government agencies, is an adaptive management program designed to protect and enhance the ORVs of the Trinity River. TRRP partners include the Bureau of Reclamation, BLM, USFS, National Oceanic and Atmospheric Administration, CDFW, California Department of Water Resources, Trinity County, Hoopa Valley Tribe, and Yurok Tribe (USBR and BLM 2021). The key strategies outlined in the TRRP are flow management, mechanical channel rehabilitation, sediment management, watershed restoration, infrastructure improvements, adaptive environmental assessment and monitoring, and environmental compliance and mitigation (TRRP 2015). In keeping with the management strategies of the TRRP, Digital 299 would implement measures to minimize and avoid short-term impacts (i.e., environmental compliance and mitigation), including minimizing sedimentation and restoring temporarily impacted areas (EA Appendix G).

10. SECTION 7 DETERMINATION

The Digital 299 Broadband Project is a proposal to install approximately 300 miles of new conduit and fiber optic cables to provide internet to underserved communities in Shasta, Trinity, and Humboldt counties in Northern California, generally following California SR 299. The portion of the Project subject to the WSRA is a proposal to install fiber optic conduit beneath the Trinity River using HDD at two locations near Big Bar and Coopers Bar, the former of which is located on Shasta-Trinity National Forest land and the latter of which is located on private land (for which NPS is considered the river-managing agency). CPUC serves as the state lead agency for the purposes of compliance with the CEQA. In the absence of a lead federal agency, the cooperating agencies collaborated during Project planning to streamline NEPA and CEQA requirements, leveraging a joint EA/IS and associated technical studies to demonstrate compliance and support their separate decisions and permits. The EA/IS includes an analysis of the consistency of Project activities with the WSRA.

Based on the findings in the EA and appendices, and taking into consideration the direction established by the Shasta-Trinity LRMP and the NPS WSR Reference Manual, we have determined that although Digital 299 has the potential for minimal indirect effects to waterways (e.g., the potential introduction of oils or fuel from accidental spills, increased erosion, and increased sediment transport), the implementation of BMPs will minimize the potential for stormwater runoff and accidental spill or pollutant discharge into waters or wetlands, avoiding and minimizing any indirect effects to waterways. There would be no direct or adverse effects on free-flowing conditions, water quality, or the ORV of anadromous fisheries habitat.

Signatures agreeing with this determination are included on the following pages.

10.1 Signature Page – National Park Service (NPS) Pacific West Region

_____ _____

Cindy Orlando Date
Acting Regional Director
Pacific West Region, U.S. National Park Service

10.2 Signature Page – USDA Forest Service Pacific Southwest Region

_____ _____

Jennifer Eberlien Date
Regional Forester
Pacific Southwest Region, USDA Forest Service

11. REFERENCES

AECOM. 2013. Historic Context for Mining Along the Trinity River. Report on file with the BLM, Redding, California.

Bailey, J. 2008. Reclamation-Managing Water of the West. The Other California Gold: Trinity County Placer Mining, 1848-1962. Prepared for the United States Bureau of Reclamation, Technical Service Center, Denver, Colorado.

Bureau of Land Management (BLM). 2021. Trinity Wild and Scenic River. Accessed October 2021 from https://www.blm.gov/programs/national-conservation-lands/california/trinity-wsr.

California State Legislature. 2018. 2017-2018 session. Internet for All Act of 2017 (AB 1665). Accessed October 2021 from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1665.

CalTrout. 2019. Upper Klamath and Trinity Rivers Fall Run Chinook Salmon. Accessed October 2021 from https://caltrout.org/sos/species-accounts/salmon/chinook-salmon/upper-klamath-trinity-rivers-fall-run-chinook-salmon.

Carter, K. 2005. The Effects of Temperature on Steelhead Trout, Coho Salmon, and Chinook Salmon Biology and Function by Life Stage. California Regional Water Quality Control Board, North Coast Region.

Clark, W. 1976. Gold Districts of California (third edition). California Division of Mines and Geology, Bulletin 193.

Heritage Conservation and Recreation Service, Pacific Southwest Region (HCRS). 1980. Evaluation Report on the Eligibility of Five California Rivers for Inclusion in the National Wild and Scenic Rivers System. Accessed October 2021 from https://www.rivers.gov/documents/studies/american-eel-klamath-smith-trinity-study.pdf.

Loftus, Shannon, Everett Bassett, Victoria Harvey, Tim Jones, Kelly Larsen, Bronwynn Lloyd, Jessica Neal, Daniel Parker, Lucian Schrader III, Tad Schwennesen, Peter von Der Porten, Zachary Starke, and Erica Thompson. 2021. Cultural Resources Inventory Report. Transcon Environmental, Inc.

Magneson, M. D., and C. D. Chamberlain. 2015. The Influence of Lewiston Dam Releases on Water Temperatures of the Trinity River at Lower Klamath River, California, April to October 2014. U.S. Fish and Wildlife Service. Arcata, California.

O'Brien, J.C. 1965. Mines and Mineral Resources of Trinity County, California. California Division of Mines and Geology, County Report 4.

National Marine Fisheries Service (NMFS). 2020. Final Environmental Assessment Impacts of NOAA's National Marine Fisheries Service's Proposed 4(d) Determination under Limit 5 for the Trinity River Hatchery Coho Salmon Program. Accessed October 2021 from https://repository.library.noaa.gov/view/noaa/27229.

National Park Service (NPS). 2021. Reference Manual 46: Wild and Scenic Rivers. Accessed October 2021 from https://www.nps.gov/subjects/policy/upload/RM-46_04-12-2021-2.pdf.

North Coast Regional Water Quality Control Board (NCRWQCB). 2011. Water Quality Control Plan for the North Coast Region, May 2011.

_____ 2021. Watershed Info for Trinity River Watershed—Hydrologic Unit 106. Accessed October 2021 from https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/trinity_river/.

Trinity River Restoration Program (TRRP). 2015. Trinity River Restoration Program Annual Report, 2015.

U.S. Bureau of Reclamation (USBR). 2006. Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78 Environmental Assessment/Draft Environmental Impact Report (EA/DEIR), Volume 3, Appendix D, Wild & Scenic Rivers Act Section 7 Determination. Accessed October 2021 from https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=2138.

U.S. Bureau of Reclamation and the Bureau of Land Management (USBR and BLM). 2021. Trinity River Restoration Program. Finding of No Significant Impact, Oregon Gulch Channel Rehabilitation, May 2021. Accessed October 2021 from https://www.trrp.net/library/document/?id=2496.

U.S. Department of Agriculture (USDA). 1995. Record of Decision for the Final Environmental Impact Statement for the Shasta-Trinity National Forests. USDA, Forest Service, Shasta-Trinity National Forest.

U.S. Fish and Wildlife Service and Hoopa Valley Tribe (USFWS and HVT). 1999. Trinity River Flow Evaluation Final Report: A report to the Secretary of the Interior. Accessed October 2021 from https://corpora.tika.apache.org/base/docs/govdocs1/153/153413.pdf.