MITIGATED NEGATIVE DECLARATION
FOR
INTERTRIBAL SINKYONE WILDERNESS PUBLIC TRAILS PROJECT

PROJECT PROPONENT
InterTribal Sinkyone Wilderness Council
P.O. Box 1523
Ukiah, CA 95482

LEAD AGENCY
State Coastal Conservancy
1330 Broadway, Suite 1300
Oakland, CA 94612

PREPARED BY
InterTribal Sinkyone Wilderness Council
with California State Parks

September 2012

NOTICE OF INTENT TO ADOPT

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION by the California State Coastal Conservancy (Conservancy) for a proposal by the InterTribal Sinkyone Wilderness Council (Council) to construct three new trail routes within the InterTribal Sinkyone Wilderness.

PROJECT: InterTribal Sinkyone Wilderness
Public Trails Project

LEAD AGENCY: State Coastal Conservancy (Conservancy)

PROJECT PROPONENT: InterTribal Sinkyone Wilderness Council (Council)

AVAILABILITY OF DOCUMENTS:
This Initial Study/Mitigated Negative Declaration is available for review at:

State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

Or online at www.http://scc.ca.gov/

Mendocino County Library
105 North Main Street
Ukiah, CA 95482

The proposed Mitigated Negative Declaration will be available for the public's review and comment beginning September 10, 2012. Written comments are due at the Council's U.S. Mail address or e-mail address, noted below, by October 10, 2012.

PROJECT DESCRIPTION:
The InterTribal Sinkyone Wilderness Council (Council) proposes to make the improvements, described herein, to provide limited public access through portions of its property, known as the InterTribal Sinkyone Wilderness.

The project will include the construction of three (3) new trail routes within the InterTribal Sinkyone Wilderness, known as the South, Middle, and North Trails, on a mid-slope position within coastal watersheds located within the Sinkyone Wilderness/Lost Coast. The trails will provide the general public with limited access through the InterTribal Sinkyone Wilderness property for increased access to the Sinkyone Wilderness State Park (SWSP) by providing enhanced opportunities to connect with the SWSP system of coastal trails (Lost Coast Trail, Hotel Gulch Trail, Wheeler Trail, etc.). Trail structures, such as steps, armored drain swales, drain lenses, retaining walls, foot bridges and puncheons, will be installed along the new routes to control erosion and provide a low-

maintenance trail tread. The trail routes will be constructed employing a combination of hand crews using hand tools and small-scale mechanized equipment. The project also will include the construction of trailhead parking areas, and the construction of campground facilities and installation of waterless toilets at the trailhead/camping locations.

A copy of the Initial Study is incorporated into this Mitigated Negative Declaration. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

Via U.S. Mail:

Chairperson
InterTribal Sinkyone Wilderness Council
P.O. Box 1523
Ukiah, CA 95482

Via E-mail:

intertribalsinkyone@sbcglobal.net

Pursuant to Section 21082.1 of the California Environmental Quality Act, the State Coastal Conservancy (Conservancy) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of the Conservancy.

The Conservancy, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Original Signature on File- State Coastal Conservancy

Priscilla Hunter — Date
Chairwoman, InterTribal Sinkyone Wilderness Council

Original Signature on File- State Coastal Conservancy

Sam Schuchat — Date
Executive Officer, State Coastal Conservancy

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CHAPTER 1 — INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in order for the State Coastal Conservancy (Conservancy) to evaluate the potential environmental effects of the proposed limited Public Trails Project at the InterTribal Sinkyone Wilderness, Mendocino County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 et seq.

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration (MND) may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b) (1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is the State Coastal Conservancy, due to its anticipated participation in funding the construction of the access improvements. The contact person for the lead agency is:

State Coastal Conservancy
Attn: Susan Corbaley
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

scorbaley@scc.ca.gov

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Public Trails Project in the InterTribal Sinkyone Wilderness, as described in the *InterTribal Sinkyone Wilderness Plan for Limited Public Access*, prepared by the Council in 2004, and subsequently finalized by on-the-ground reconnaissance conducted in 2006 and 2007 by State Parks trails planning personnel, Council staff, biologists, and archaeologists. Mitigation measures also have been incorporated into the project to eliminate potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

Chapter 1 - Introduction
This chapter provides an introduction to the project and describes the purpose and organization of this document.

Chapter 2 - Project Description
This chapter describes the reasons for the project, scope of the project, and project objectives.

Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures
This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less than significant level.

Chapter 4 – Mandatory Findings of Significance
This chapter identifies and summarizes the overall significance of any potential impacts to the natural and cultural resources, cumulative impacts and impacts to humans, as identified in the Initial Study.

Chapter 5 - Summary of Mitigation Measures
This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.

Chapter 6 – Monitoring Plan
This chapter describes the monitoring plan that will be used to ensure that all mitigation measures are implemented as planned during project construction.

Chapter 7 - References
This chapter identifies the references and sources used in the preparation of this IS/MND, and includes a list of report preparers.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each

impact resulting from implementation of the proposed project. Based on the Environmental Checklist and the supporting environmental analysis provided in this document, the proposed limited Public Trails Project would result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems, and cumulative impacts.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project would not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

CHAPTER 2 — PROJECT DESCRIPTION

2.1 INTRODUCTION

The State Coastal Conservancy, together with the InterTribal Sinkyone Wilderness Council, in consultation with Sinkyone Wilderness State Park trails planners, proposes to implement limited public access improvements called for in the *InterTribal Sinkyone Wilderness Plan for Limited Public Access* (2004), and recommended in the additional reconnaissance, surveys and assessments conducted in 2006 and 2007 by State Parks trails planners, Council staff, and natural resource consultants, for the purposes of developing and providing limited public access through the InterTribal Sinkyone Wilderness property on three (3) designated trail routes. This Mitigated Negative Declaration evaluates the environmental effects of the proposed Public Trails Project. The project will include the construction of three (3) new trail routes known as the South, Middle, and North Trails on a mid-slope position within coastal watersheds located within the Sinkyone Wilderness/Lost Coast. Trail structures, such as steps, drain lenses, retaining walls, bridges and puncheons, will be installed along the new reroute to control erosion and provide a low-maintenance trail tread. The trail routes will be constructed by hand crews using small-scale mechanized trail equipment and a combination of hand and power tools.

The project also will include construction of trailhead parking areas and campground facilities for use by the general public. The project includes the installation of waterless toilets at the trailhead/camping areas. Examples of features that will be included at each campground-trailhead location are: rock-surfaced parking lots w/drainages; vehicle protection barriers (boulders or posts to prevent vehicular access to adjacent campsites); gates for seasonal closures of the trailhead parking lots/campsites; iron rangers for deposit of use fees; campsites situated near the trailheads; picnic tables; bear-proof garbage receptacles; bear-proof food storage boxes for campsite users; one (1) waterless vault toilet per trailhead; and signage along the trails and at the trailhead locations.

2.2 PROJECT LOCATION

The InterTribal Sinkyone Wilderness is a private property located in the coastal mountains of northwestern Mendocino County, encompassing the western slope of the ocean-facing ridge of the coast range (see Figures 1 and 2). The south end of the property is located approximately 27 air miles north of Fort Bragg, CA, and the north end of the property is located approximately 13.5 air miles southwest of Garberville, CA. The property is a 3,845-acre holding in a landscape configuration approximately seven miles long and one mile wide, with a significant narrowing in the middle. The property is bounded on the north, west, and south by the 7,250-acre Sinkyone Wilderness State Park (SWSP) and on the east by the approximately 50,000-acre “Usal Redwood Forest” owned by the Redwood Forest Foundation, Inc. The property’s eastern boundary (approximately 12 road miles) is defined entirely by Mendocino County Road #431 (Usal Road). The Hotel Gulch Trail defines the boundary between Council land and the SWSP for approximately 1/3rd of the southernmost portion of the property. The property

includes the following Assessor Parcel Numbers: 01247023, 01249021, 05222009, 05224009, 05224010, 05225004, and 05230004.

The work proposed as part of this project would take place within the watersheds of Jackass (Wolf), Anderson Gulch, Dark Gulch, Hotel Gulch, and Usal Creeks, which drain directly to the Pacific Ocean. Project work locations are on the Bear Harbor 7.5 Minute quadrangle T24N, R19W, sec. 25; T24N, R18W, sec. 19,20,31,32; T24N, R18W, sec. 5,6; Mistake Point 7.5 Minute quadrangle T24N, R18W, sec. 8; Hales Grove 7.5 Minute quadrangle T23N, R18W, sec. 9,15,16,17,22. Access to the project site from the south is via Usal Road, which intersects State Highway 1 roughly half way between Leggett, CA and Fort Bragg, CA.

Access from the north is by Usal Road, via the Briceland-Thorn Road, which originates to the east in Redway, CA. The Usal Road (Mendocino County Road #431) is an unimproved dirt road, of which the approximately northernmost 2/3rd segment is closed via locked gates to public vehicular traffic between November 15 and April 15, or for longer periods annually as determined by the Mendocino County of Transportation. The seasonal closure of Usal Road, approved by the Mendocino County Board of Supervisors on June 21, 2011, does not affect access to the Usal campgrounds, and applies to the approximately 18-mile stretch of the Usal Road located north of the Usal campgrounds, from 6.26 miles north of State Route 1, thence northward to 24.30 miles north of State Route 1 (approximately 1 mile south of the Briceland-Thorn Road/Usal Road junction).

The locations, lengths, and uses planned for the three (3) trails and trailheads are as follows:

South Trail: Trailhead (situated approximately 100' southwest of Usal Road) is located approximately 2.7 miles northwest of northernmost Usal campground in the SWSP. Total length of planned trail is approximately .978 miles (5155'). Its end would intersect with the Hotel Gulch Trail at a point approximately two (2) miles northwest of the northernmost Usal campground in the SWSP. Designed for public and tribal member hiking, and for equestrian access by Council management for patrolling and maintenance. Improvements include a parking lot, vault toilet and campsites at trailhead area.

Middle Trail: Trailhead (situated approximately 100' west of Usal Road) is located approximately 4.7 miles northwest of northernmost Usal campground in the SWSP. Total length of planned trail is approximately .315 miles (1665'). Its end would intersect with the Hotel Gulch Trail at a point approximately 150' southeast of the Hotel Gulch Trail/Wheeler Trail junction. Designed for public and tribal member hiking and equestrian use, and for equestrian access by Council management for patrolling and maintenance. Improvements include a parking lot, vault toilet and campsites at trailhead area.

North Trail: Trailhead (situated adjacent to and immediately west of Usal Road) is located approximately 10.4 miles northwest of northernmost Usal campground in the SWSP. Total length of planned trail is approximately 1.02 miles (5400'). As currently designed, the trail end has no available connection to any trails within the SWSP. Designed for public and tribal member hiking, and for equestrian access by Council

management for patrolling and maintenance. Improvements include a parking lot at trailhead area.

Discussion of planned North Trail route: The North Trail route specified in this MND document is situated entirely on the prism of an abandoned logging haul-road that traverses the Council's property in a southwesterly direction from the Usal Road, eventually crossing the headwaters of a tributary of the North Fork of Jackass (Wolf) Creek, just west of the Council's boundary with the SWSP. In order to make it accessible to hikers, this currently planned route would require minimal brush removal and hand-tool work, since it is situated on an existing road prism. No use of heavy equipment would be necessary to open this route.

The North Trail route situated on the existing road prism is not an optimal route for reasons explained below. However, it is included in this MND document for the following reasons: a) the Council has conducted the required biological and archaeological studies for this route, and these studies indicate no problems regarding resources in the vicinity of this route; b) it can serve as an interim hiking trail for day-users; and c) it will require little to no actual construction (or cost) to develop.

However, the route is undesirable for two reasons: 1) an analysis of the route by State Parks trails planners, conducted subsequent to the route's selection by the Council and other consultants (and after completion of environmental studies), determined that the route would, in the long term, result in an unsustainable trail due to inherent weaknesses and likely future failures of the logging road prism, which currently is exhibiting deterioration. Also, the route includes several short segments with gradients that are greater than the maximum steepness recommended for hiking trails, which ultimately would result in erosion in those areas; and 2) no feasible connection to the State Parks trails system is available, as this North Trail route terminates some distance south of a spur route through the SWSP to the Lost Cost Trail (LCT) and the vicinity of Bear Harbor that State Parks intends to open in the future. Extensive reconnaissance by State Parks trails planners during summer 2007 determined that a connection between the Council's road-based North Trail route and the State Parks planned segment to the LCT/Bear Harbor area is not possible due to extremely steep terrain, slope instability, unavailability of a feasible stream crossing site, and other unfavorable elements in the vicinity where these two segments approach each other (See Figure 3).

Later surveys by the Council and State Parks resulted in identification of a highly desirable alignment for the ultimate, eventual location of the North Trail route. This alignment is situated within an area ½ mile north of the currently planned road-based North Trail route. Like the current North Trail route, this alignment departs from the Usal Road, but this better alignment follows a much more gradual gradient; would be sustainable and manageable in the long term; crosses the stream at a location where a bridge can be constructed; and—perhaps most importantly—would connect directly to the planned State Parks segment to the LCT/Bear Harbor area (see Figure 6 map). In addition, the trailhead area for this route would include more room than the road-based route, thus enabling inclusion of a larger parking area, as well as trailhead campsites and a vault toilet—features not possible to include at the trailhead for the current road-based North Trail route. Funding will be sought to conduct more extensive route

surveys for the new alignment, and the environmental studies, reviews and permits required for the new route's construction.

Additional Information about the Lost Coast Trail Network and Coastal Wilderness lands

Uses: Hiking will be permitted on the South and the North trails. Hiking and equestrian use will be allowed on the Middle Trail. None of the trails or campsites is designed for ADA accessibility. Camping and parking will be allowed only within the designated campsites and parking areas at the trailhead areas. Deviation from the trail pathways by the public into the private property of the InterTribal Sinkyone Wilderness Council is prohibited. The InterTribal Sinkyone Wilderness Council may, at any time and at its sole discretion, impose seasonal closures of the trails, campsites, parking areas, and trailhead facilities. The Council also may impose fees for the public's use of the trails, campsites, parking areas.

Locations and Connections and Future Trail Plans: The ends of both the South and Middle Trails will link directly into points on the Hotel Gulch Trail. The entire Hotel Gulch Trail is a public hiking and equestrian route located on a Council-State Parks management road (approximately 4.5 miles long) that serves as the dividing line between the southernmost portions of the InterTribal Sinkyone Wilderness and the SWSP. It is situated west of and runs parallel to the Usal Road. The Hotel Gulch Trail's southern end is located a few hundred feet north of the southern terminus of the Lost Coast Trail in the Usal campgrounds. Its northern end is located at its junction with the Wheeler Trail, at a point approximately 0.60 miles west of mile 10.4 on the Usal Road.

The entire Wheeler Trail is a public hiking and equestrian route located on a Council-State Parks management road (approximately 4 miles long). The Wheeler Trail begins on the west side of the Usal Road, at approximately mile 10.4. The first mile of the Wheeler Trail passes through portions of the InterTribal Sinkyone Wilderness property as it gradually transitions into the SWSP. It follows a northwesterly direction, and ends at the Wheeler campgrounds along the lower reach and estuary of Jackass (Wolf) Creek, where it connects to the Lost Coast Trail.

The Lost Coast Trail (LCT) is an approximately 53-mile long coastal-wilderness hiking trail that comprises an important segment of the California Coastal Trail. It traverses the entire lengths of both the 7,250-acre SWSP and the 68,000-acre northerly-adjacent BLM King Range National Conservation Area (KRNCA), which together comprise the longest contiguous stretch of permanently protected coastal wilderness in the lower 48 states. The California Park and Recreation Commission officially designated the SWSP with wilderness status in 2006. That same year, Congress designated 42,585 acres of the KRNCA as federal wilderness under the Northern California Coastal Wild Heritage Wilderness Act.

The LCT's southern trailhead is located in the Usal campgrounds in the SWSP; its northern trailhead is located at the mouth of the Mattole River in the KRNCA. Several spur trails connect to the LCT, allowing hikers to enjoy day hikes to and from various inland locations. The locations of the three (3) trials proposed for this project have been selected to increase public access and enjoyment of the coastal and redwood ecosystems. The Council's 2012 acquisition of the 164-acre Four Corners property at

the very northern end of the SWSP presents another such opportunity: the future linking of an existing network of hiking trails in the Upper Mattole River Ecological Reserve to the Lost Coast Trail.

The South Trail will directly connect to the Hotel Gulch Trail at a point in the extreme upper reaches of Hotel Gulch, a tributary to Usal Creek. A future connection to the Lost Coast Trail may be possible at a point approximately ¼ mile south of the South Trail/Hotel Trail junction, where the LCT and Hotel Gulch Trail closely approach each other.

The Middle Trail connects at the junction of Hotel Gulch Trail and Wheeler Trail, at a point in the extreme upper reaches of Waterfall Gulch, a tributary to the Usal Creek.

2.3 BACKGROUND AND NEED FOR THE PROJECT

The primary purpose of this project is to provide coastal access to remote backcountry locations of Northern California. The project would improve the hiking and camping experience in this unique coastal wilderness area. It will provide several hiking loop opportunities and would enhance long distance hiking options by linking to the adjacent State Park trails.

In 2004, the Council completed a plan (*InterTribal Sinkyone Wilderness Plan for Limited Public Access*) outlining access improvements that would provide the public with limited hiking access across its InterTribal Sinkyone Wilderness property to the coastal trail system in the Sinkyone Wilderness State Park. This initial planning document was followed by botanical, avian, wildlife, archaeological, and additional trail design reconnaissance, surveys and assessments conducted in 2006 and 2007 jointly by the Council, State Parks, Mad River Biologists, and Humboldt State University.

Currently, access to Sinkyone Wilderness State Park (SWSP) and to this portion of the coast is possible only at the northern and southern extremes of the state park, and by parking at the top of, and then walking down, the Wheeler Road (from the locked gate at the Usal Road-Wheeler Road junction, located approximately 4.2 miles north of the Usal campgrounds within the SWSP). Approximately the first mile of the Wheeler Road passes through portions of the Council's InterTribal Sinkyone Wilderness property, and is used as a public hiking and equestrian route to access the Hotel Gulch Trail and the Lost Coast Trail in the SWSP.

2.4 PROJECT OBJECTIVES

The project will create limited coastal access and recreation opportunities in the InterTribal Sinkyone Wilderness, and increase coastal access and recreational opportunities in the adjoining Sinkyone Wilderness State Park.

The primary objective of the proposed project is to:

- Increase the opportunity for coastal access experiences by the general public.
- Provide low-maintenance backcountry trails.
- Improve the aesthetic and recreational qualities of the property.

- Improve visitor safety by providing well-designed and constructed trails.

2.5 PROJECT DESCRIPTION

The InterTribal Sinkyone Wilderness Council proposes to make the improvements described herein to the coastal watersheds within the property.

The project will include the construction of three (3) new trail routes known as the South, Middle, and North Trails on a mid-slope position within the coastal watersheds of the Lost Coast region of California. Trail structures, such as steps, armored drain swales, drain lenses, retaining walls, foot bridges and puncheons, will be installed along the new routes to control erosion and provide a low-maintenance trail tread. The trail routes will be constructed by hand crews using small-scale mechanized trail equipment and a combination of hand and power tools. The project will also include construction of trailhead parking areas and campground facilities for use by the general public. The project includes the installation of waterless toilets at the trailhead/camping areas. Examples of features that will be included at each campground-trailhead location are: rock-surfaced parking lots w/drainages; vehicle protection barriers (boulders or posts to prevent vehicular access to adjacent campsites); gates for seasonal closures of the trailhead parking lots/campsites; iron rangers for deposit of use fees; campsites situated near the trailheads; picnic tables; bear-proof garbage receptacles; bear-proof food storage boxes for campsite users; one (1) waterless vault toilet per trailhead; and signage along the trails and at the trailhead locations.

See Section 2.6 (Project Construction) below for details on the actual construction process.

2.6 PROJECT CONSTRUCTION

The anticipated construction window for this project would occur between July 15, 2013 and January 31, 2015. Various trail crews of three to 10 people, using small-scale mechanized trail equipment and hand tools and small power equipment would perform the proposed work.

TRAIL LAYOUT AND DESIGN

Trail layout and design for this project followed a systematic approach developed by California State Parks North Coast Redwoods District Roads, Trails, and Resources (RTR) section. This process, undertaken during the summer of 2007, involved identification of conceptual trail corridors, identification of trails designs and construction standards, researching and obtaining information on the landform, major control points identification, reconnaissance, determining maximum sustainable linear grades, minor control point identification, identifying the linear grades between control points and flagging between control points.

The trail routes were designed to have no surface erosion; fill slopes and cut banks will be well vegetated and have no erosion; stream crossings are sized for the maximum foreseeable flood event and to be passable to aquatic species, bed load, and debris; the trail routes avoid sensitive habitats and cultural resources; and routes will follow curvilinear alignments (e.g., natural contours). The trails were designed to blend in with

the surrounding setting, provide access to unique, aesthetically pleasing and interesting features, provide users with a sense of discovery and to not detract from users' sensory experience. They were designed for long term sustainability and maximum protection of the resources. The trails also were designed to maximize the level of accessibility that can be achieved on new pedestrian and equestrian trail routes.

Prior to design of the trail routes, RTR staff reviewed all applicable literature, which included information on the geology, hydrology, soils, topography, cultural resources and natural resources of the area. Additional background information including identification of property boundaries, easements, rights-of-way and other transportation routes was also considered. The Sinkyone Wilderness State Park General Management Plan (2006) and the landowner's requirements for limited public access were reviewed to ensure that the proposed trails are in compliance with long range planning goals for the region. Topographic maps and aerial photographs were reviewed to develop a better understanding of the landform. In addition, CEQA documents developed for projects in the vicinity were reviewed to obtain information valuable to a trail construction project in this setting.

One of the most important techniques used in the project design was to layout trails on the contour of the land to help facilitate natural sheet drainage. This layout process is known as "curvilinear alignment", which involves crossing contour lines at nearly flat or oblique angles. Curvilinear layout helps keep the trail alignment perpendicular to natural sheet runoff. Curvilinear layout requires closely following the landform, and pulling into and out of each swale and crenulation on the proposed route. Pulling in and out of all drainages using a drain swale feature (even in the most subtle crenulations) insures that the trail alignment cannot capture or divert the flows related to these drainages. This technique effectively decouples the trail from the watershed and eliminates the need for drainage structures. Constructing the trail bench on a hillslope, rather than on flat ground, also enhances the trails' performance. Constructing into the hillslope provides a fuller trail bench and facilitates more efficient overland sheetflow drainage. Curvilinear alignment combined with sustainable linear grades, hillside construction and outsloping also prevents water diversions and accumulation.

Once the trail corridors were identified on a map depicting all the known major control points, and the average linear grade between those control points was determined to be within the acceptable limits, reconnaissance was performed along this general route to thoroughly investigate the landform. After reconnaissance, resource specialists such as an engineering geologist, wildlife biologists, and an archeologist were consulted. Consulting with these specialists early in the design and layout process improved the evaluation of the landform and enhanced the synergy process that occurs between disciplines to reduce conflicts that might occur if these disciplines were not integrated until later in the environmental review process.

On the ground reconnaissance involved walking several times across a broad corridor that the trail route may follow to become familiar with the features and characteristics of the land, allowing the planners to closely inspect the landform to determine the maximum sustainable linear trail grades. While performing reconnaissance, additional control points, referred to as "minor controls", were identified. These included drainage crossings, seeps or springs, significant or protected trees, small landslides, flat poorly

drained terrain, excessively steep terrain, sensitive cultural resources, and critical animal habitat. Conditions such as the presence of wet obligate plants; pistol grip or tilted trees; ponding water; or old landslide rotations overgrown with vegetation were used to identify terrain where trail construction should be avoided. Unique features or experiences such as waterfalls, viewsheds, specimen trees or access to water were also identified as minor controls.

Drainage crossings include wet crossings (such as armored stream crossings) and dry crossings (such as bridges). Wet crossings are used in low volume ephemeral drainages that can be crossed even during peak flows. The crossing locations have a mild stream gradient that is controlled by a feature (nick point) such as bedrock, boulders or large trees growing in the channel. These grade controls stabilize the channel and make it easier to construct and maintain the crossing. The trail crossing sites were selected where the channel is generally straight and not subject to lateral scour, undercutting or deposition. The trail crossing sites are selected where stream banks are stable and have moderate slopes to facilitate the construction of the trail in and out of the channel.

Dry crossing sites are usually located on larger and deeper bodies of water or in the front country where user expectations do not include getting wet when using a trail. These crossings are facilitated by bridges and have their own design requirements. A bridge site on the Middle Trail was selected for a location where the stream channel (the headwaters of Waterfall Gulch Creek, a tributary of Usal Creek) narrows and the banks are high above the stream. The narrowing of the channel reduces the length and size of the bridge structure and the high banks help keep the bridge above future flood events. Careful investigation of the stream channel was required to ensure the bridge would be situated well above future flood events (100 year flood event minimum.) The channel at the proposed bridge site was inspected up and down stream of the selected crossing site to find indicators of past flood events. These include scour marks on stream bank walls, vegetation loss or changes related to past floods, driftwood debris deposited on ledges or flat areas, pieces of grass and flotsam left hanging on vegetation, silt lines left on trees or rocks and tree bark scared by flood debris. When establishing the high water mark, the size of any woody debris that might be carried down the stream in a flood event was also considered. Additional freeboard was included to allow floating debris to pass under the bridge during peak runoff events.

The general morphology of the stream channel was also evaluated. The stream channel banks appear to be stable and comprised of durable and scour resistant material. The stream channel was also evaluated to insure that the banks adjacent to the abutments are not subject to erosion and undercutting from lateral scour. The bridge crossing site on the Middle Trail is located on a section of channel where the banks are not being eroded by the current. The general health of the watershed was also evaluated.

Two individuals using clinometers performed the flagging of all the trail routes. Using these instruments the trails were flagged between the established control points. Upon the completion of the initial flag lines, the flagging team went back through the alignments and evaluated the flagged routes. Once this was completed the routes were “tight flagged”, spacing the grade flags every 20 to 30 feet apart.

The trail layout avoids low gradient hillslopes (< 15%) and flat ground. In areas where flat ground cannot be avoided the trails' treads will be elevated by constructing turnpikes or causeways. On hillslopes, the trails' treads will be constructed to have full benches. Full benches will provide more durability and greater sustainability on the trails.

MECHANIZED EQUIPMENT IN TRAIL TREAD CONSTRUCTION

The use of mini-excavators and trail dozers is very effective and efficient for constructing backcountry trails on the type of terrain that exists at the project site, and these will be used to conduct much of the construction work. This equipment essentially replaces the front two thirds of the hand construction line that is comprised of heavy digging tools. Machines can move earth much faster than hand crews but must work in combination with hand crews. This equipment is not as effective as hand crews at performing the final shaping and compaction of the trail tread; therefore, hand crews will be used to do all trail tread finishing. The best trail construction performance occurs with mechanized equipment moving the bulk of the soil, and hand crews doing the brushing, clearing, the constructing of all trail structures (such as retaining walls and bridges) and performing the final shaping and compaction of the trail tread. The value of using mechanized equipment to construct trail tread is largely based on the skill level of the operator. Because trail dozers can remove hundreds of yards of soil before they can be stopped and corrected, it's important to employ experienced and skilled operators. Another issue related to the use of mechanized equipment is the finished product it produces. Unskilled dozer and excavator operators tend to not follow curvilinear alignment when constructing the trail bench. They often cut across small drainage swales and crenulations, essentially cutting off the high ground and filling the low ground, thereby leaving a trail that resembles a highway. This produces a trail that is less functional hydraulically, as well as usually aesthetically unpleasing. Generally, experienced trail builders make better trail dozer and excavator operators than heavy equipment operators because they understand the subtle nuances of curvilinear construction.

The trail dozer is most effectively used to construct the trail bench, lay back the cut bank and remove the berm on the fill slope and, in some cases, remove tree stumps and reposition down logs. The best trail dozers have a maximum track width of 48 inches, a six way blade, good ground clearance, and enough weight and horse power to provide the traction required to work on rocky ground and push full blades of dirt. These dozers are also equipped with such essential attachments as air and hydraulic pumps to power a variety of tools, slope boards, berm busters and winches. During operation of a trail dozer, the machine cuts into the hillslope slightly above or near trail grade. This cutting action is performed in a sweeping motion so that the dozer digs into the hillslope with its blade, then pivots towards the outboard edge with a full blade of earth and then pushes the earth over the slope. This process is repeated until the dozer has carved out a bench at or near trail grade that it can work from. It then continues this process along the entire alignment until the operator comes to an obstacle such as drainages, or requires a structure such as a retaining wall or a bridge. Dozers are not appropriate to construct through drainages because of their need to side cast the earth that they excavate. Sometimes the terrain is too steep, rocky or sensitive for the dozer to go around these locations. To solve this problem it is often more efficient to construct

through these areas with hand crews prior to the dozer reaching these locations. Trail crews can move ahead of the dozer to brush and clear the alignment, construct retaining walls, construct bridges, and excavate through the rock outcroppings.

A mini-excavator may be used to construct the trail bench in drainage crossings or trail segments within the influence of drainages. The mini excavator can effectively be used to construct trail tread. The operator initiates the construction at the top of the cutbank in the same fashion as the hand crew, and then excavates downward until the desired trail grade is reached. The excavated material is side cast in the interfluve areas and exported within the influence of drainages. A skilled operator can leave a fairly smooth trail bench by using the back of the bucket or the small blade attachment to smooth the tread surface. Compaction is achieved by rolling over the trail bench with the grousers or by tamping the trail bench with the back of the bucket. None of these methods produce a uniformly smooth and compacted trail bench, therefore hand crews are required to provide final compaction. Mini-excavators can also be used to excavate through rock (with a hammer attachment), place rock (with a thumb attachment) or backfill retaining walls or bridge abutments. Using a combination of a trail dozer and mini-excavator together with the support of other mechanized equipment such as powered wheelbarrows and vibraplate compactors provides a versatile and efficient mechanized approach.

To maximize its efficiency, a trail dozer will be used to excavate as much of the trail bench as possible. This means not only making the initial bench cut but using the slope board to lay back the cutbank, the “berm buster” to cut off the berm on the outboard hinge and the six-way blade to establish the outslope and clean off the trail bench. These techniques, when combined with a hand crew performing the final shaping and compaction, will provide the most durable and sustainable trail tread.

SAFETY

All accidents, no matter how minor, will be reported to the Crew Supervisor immediately. Minor injuries that require no immediate medical aid or hospitalization can usually be dealt with at the project work site or after the crews have returned back to their work-station or camp. Major injuries that require immediate medical aid or hospitalization shall receive top priority and the full attention of the Trail Coordinator. In such events, the energies of the Trail Coordinator, Crew Supervisor and Trail Crew shall be directed towards responding to the injury. Only in the interest of reducing confusion, panic and disorganization shall the Trail Crew continue to work on their assigned projects.

Crews working in remote or inaccessible areas shall be equipped with portable hand held radios. If radio transmissions from portable units are weak or ineffective, a radio equipped vehicle shall be positioned at a location where radio transmissions can be relayed. In the event that radios cannot be used due to the work site topography, a minimum of two people shall be assigned to act as couriers. These individuals must be familiar with the area so they can go for help in case of an accident.

Prior to beginning any trail construction or maintenance project, employees shall be provided training that covers the proper construction techniques and procedures as well as the appropriate materials, tools and equipment required and their safe use. Formal

training programs will be conducted for new employees and inexperienced crew members.

Pre-project planning and training shall include the identification and review of all possible hazards associated with the project. These hazards shall be reviewed with employees prior to the start of the project. Material safety data sheets shall be obtained if any hazardous materials are used on the project and will be kept in a location where employees can easily access them. Prior to the start of the project, the Trail Coordinator shall review the proper chain of command or course of action to follow if employees are confronted with unforeseen problems.

MATERIALS

Native or on-site materials are those construction material resources that occur naturally within the environment or landform that the trail passes through. The use of native materials is preferred since they connect the trail user to the environment the trail passes through. Native materials enhance the architectural appearance of a structure and reduce the visual impacts of those structures by blending into the surrounding environment.

Native resources such as trees, rocks, gravel, soil, vegetation, etc. can be used to construct trail structures when it has been determined that their use will not adversely affect the natural or cultural resources. Every effort will be made to fully restore and blend the harvested source area with its surroundings and mask it from view. On site native material shall be collected in a manner that will minimize the adverse impacts to the landform, vegetation, and the potential impacts to the visual resource. Material collection areas will be sloped to ensure dispersed sheet runoff, will be camouflaged to match the surrounding site conditions, and will be planted with vegetation removed from the trail alignment. Native materials that will be used for construction will be flagged for identification by work crews.

All trail construction materials that are imported to the worksite are considered non-native materials. Prior to using non-native materials, their potential impacts or effects on the natural environment and their incompatibility or contrast to the natural view shed will be considered carefully, and in full consultation with and approval from the InterTribal Sinkyone Wilderness Council. Non-native materials will be environmentally and aesthetically compatible with the surrounding landform.

Imported rock, gravel or soils will be durable and appropriate color to compliment the area the trail traverses. Rock may be imported for various trail structures, their shape and parent material is strategic to the success of the trail structure. Choice of appropriate rock size and shape is determined by the trail structure. Color and geologic type of imported rock shall closely match the native materials of the trail environment. Rock fill which is not seen or part of the visual final trail structure can be of type and color not complementing the parent geology. Gravel or aggregate may be needed in many instances to harden the trail. Gravel or Aggregate will be of the same color of the surrounding landform the trail traverses. The gravel or aggregate will be free of organics and homogeneous in mix.

Lumber shall be construction grade heart redwood, cedar or other woods which are naturally resistant to rot and decay. Care shall be taken to determine the source of the lumber origin to display a measure of environmental competence and not be supporting the destruction of valuable old growth forests. If naturally resistant lumber materials are not available or cost-prohibitive, the use of select structural pressure treated lumber products is appropriate for some applications. Use of treated lumber will never be used in situations of public contact, such as hand rails or bench seats. Whenever composites of manmade materials are considered for an application, they must have proper aesthetic design and appropriate placement on the landform or wilderness setting, and be suitable for long term sustainability and have minimum maintenance requirements.

Metal components can be utilized in many trail structure from bridge stringers to anchor plates and structural components. The choice to use metal structural components is related to aesthetic and structural requirements of the individual trail structure. In coastal environments, such as at this project, the use of corrosion inhibitors is required. Galvanization, zinc plating and all weather steel (self rusting steel) or painting of metal surfaces are all choices for corrosion inhibitors. Level of maintenance, structural capability and aesthetics are all factors on determining the appropriate corrosion inhibitor. Wire rope shall be pre-stretched, galvanized and engineered for proper tensile strength. It shall be of good quality and of suitable size for the job. All metal components shall be rust resistant.

Since their introduction in the construction of roads, geotextile fabrics have demonstrated their usefulness in trail construction and maintenance. Geotextiles are currently manufactured using a wide variety of fabrics, materials and styles or designs. This is a rapidly growing industry and each year numerous new products are developed that improves or expands the application of geotextiles. Presently the three principal uses of geotextiles are in the construction of turnpikes, drainage lenses and retaining walls. The most common use of geotextiles in trail maintenance is in the construction of turnpikes (elevating the trail bed through low wet areas), exposed roots or entrenched areas using native soils or gravel. Prior to building up the trail bed with soil or gravel, a course of nonwoven fabric cloth is laid down over the saturated soils. This semi-impervious material helps provide a stable base for the application of soil or gravel and reduces the contamination of fill material by the saturated base soils. This technique eliminates mucking through knee-deep mud and burying a large proportion of the base material before the soil firms up. Care must be taken to treat the fabric edges and securely anchor, bury and hide the fabric to keep it from exposing as the imported fill erodes from the edges. Another application of geotextiles is in the construction of rock drainage lenses. This creates a relatively soil-free rock drainage lens that easily accommodates ephemeral low volume water flows. The drainage lenses technique eliminates the need for constructing puncheons or bridges when a trail is bisected by an ephemeral seep or spring. Water can easily pass through a trail by first laying down a course of nonwoven semi-impervious fabric cloth and placing broken quarry rock on the upper surface.

The third use of geotextiles is in the construction of small retaining walls or structured fill. By using woven permeable fabric a slip out can be repaired quickly with minimal material cost. Use of geotextiles fabric for this application can be cost effective and is

appropriate if constructed in a way so it is totally hidden from view by a layer of soil, mulch or natural vegetation. The location for the retaining wall is excavated down to firm and stable soils. The excavation should be deep enough into the hillslope that a level bench can be left to support a native soil covering over the completed retaining wall. After the first layer of fabric cloth is laid across the bottom of a slip out, it is filled with gravel or a porous native soil and compacted. The fabric is laid out so that it is long enough to fold back over one half of its length and is laid on top of the compacted gravel or soil. The next layer of fabric cloth is also laid on top of the compacted gravel or soil as well as the folded back bottom layer. This layer is stepped back to a minimum 1:1 ratio (45%). This provides better weight transfer and greater stability to the wall. It also is filled, compacted and folded back to one half of its length. This process is continued until the last layer of fabric cloth is folded back its entire length and capped with native soil. The outer edge or face of the wall is also covered with native soil and compacted to prevent the fabric from being damaged from sunlight or torn by foot traffic. It also produces a more natural look to the retaining wall. One additional application is the construction of jute fabric wall on the exterior of the geotextile wall. This method is used when the angle of repose is too steep for native material to keep from sloughing. The jute fabric wall is constructed in the same fashion as the geotextile wall and seeded and planted to provide the vegetative cover.

VEGETATION FOR RESTORATION

Rehabilitation of a disturbed area will include the transplanting and seeding of native plant species typically found in the area. Such vegetation will be placed in a manner consistent with how it would grow naturally. Transplanted vegetation will be selected and harvested from nearby areas abundant with desired species. Attempts shall be made to leave a harvested area in a natural looking appearance. Crews will not repeatedly use the same access point when gathering vegetation.

Vegetation for transplants shall harmonize with the surrounding habitat. Care shall be taken to transplant into areas of similar soil types, drainage, amount of direct light and shade. Sword ferns survive very well when transplanted during winter months and are good for forested areas. Humus layers taken from down logs provide a diverse vegetation mix when placed on the ground or on other logs. Nursery logs already decomposing with growth on them may be placed to restore disturbed areas. Young coniferous trees may be transplanted if the entire root ball can be obtained and the transplanting takes place during the winter months. The trees should be no larger than 4 feet tall (5 gallon size) for optimum transplant success.

CLEARING AND BRUSHING

Clearing and brushing the trail alignment is usually the first step in the trail construction process. This includes the removal of all trees, down logs and brush within the trailway (top of cutbank to bottom of fillslope). The clearing limits will vary depending on the size of the trail bench. The steeper hillslopes will have wider clearing limits. In addition, the clearing limits will shift from the centerline of the trail depending on the steepness of the hillslope. In general, as the hillslope becomes steeper the more the ground above the centerline of the trail needs to be cleared. That is because the steeper the hillslope, the

further into the hill the trail will be constructed. The supervisor and trail crew will make these adjustments to the clearing limit changes by adjusting their clearing to the visual changes in the hillslope and using the trail grade flag as a reference point. Plant species that are suitable for transplanting will be salvaged from the new alignment and used to camouflage fill slopes or borrow areas.

Typically clearing and brushing is performed by trail crews using a combination of hand tools and power tools. When constructing new trail with hand crews, it is important to have a crew large enough to achieve some level of operational efficiency. Clearing and brushing crews are organized in different ways but one of the most effective is to send a group of brushers out in front of the sawyers. Trail crews remove the brush within the clearing limits of the trail. They skip over all down trees and all standing trees greater than 2 inches in diameter. The brush is cut off as close to ground level as possible without dulling the tools. The brushing group is then followed by the sawyers who cut down standing trees and cut out down logs/trees. Generally, only a few standing trees over 10 inches in diameter at breast height will be removed from the trail alignment. Larger trees or species of trees having special significance will be routed away from during the reconnaissance and flagging process. Small trees are removed by felling them at the maximum height above ground level. This provides a stem or trunk that can be used as a lever when the trees and their roots are pulled out of the ground later. The remaining tree is then bucked into pieces that can be removed by hand or mechanical hoist. Down trees are logged out within the clearing limits and the saw cuts are made in a fashion to facilitate rolling the cut log out of the down tree. A skilled trail crew should be able to perform this task so that the removed log is in one piece. This eliminates unnecessary movements and the unsightly remnants of log rounds scattered above or below the trail. Periodically, the cut brush and bucked trees need to be removed from the trail alignment. If the brush is thick this will be required before the trees are pulled and the cut logs are repositioned. In areas with light brush, stashing may not be required until after the trees have been removed and the logs repositioned. In remote locations this is accomplished by stashing the brush and tree limbs above the trail and out of sight. This may require establishing human chains to minimize worker movements, reduce ground impacts and improve efficiency.

The next phase of clearing is the pulling of the tree stumps, the repositioning of the bucked downed trees, grubbing out of the brush roots and removing the duff and organics from the trailway. These tasks are best completed by using a combination of mechanical hoist, rigging and hand tools. By setting up rigging teams of two to three workers, these teams can position themselves along the cleared alignment to pull tree stumps and reposition logs from various locations where they can anchor their hoist and reach as many trees and logs as possible. By leaving high trunks or stems on the felled trees, a high choker set can be utilized to effectively use the trunk as a lever. This technique will make it easier for the crew to remove the stumps and improve their efficiency.

When removing trees and logs lying across the alignment, the cut out log is placed below the bottom of the fill slope in a position where it is perpendicular to the trail. This places the log in a position where it has minimum disruption to overland sheetflow and the least amount of visual impact. Members of the trail crew not involved in the removal

of tree stumps and logs can be used to grub out the roots of the brush plants that were cut at ground level during the brushing operation and can rake the duff off the intended trailway. This organic material is raked downslope to a point below the toe of the fillslope. There it can be used as a waddle to filter sediment coming of the trail, a source of duff to be placed later on the finished trail tread, or scattered evenly across the slope. It is critical that all brush, trees and down logs and their associated roots be removed from the top of the cutbank to the toe of the fillslope prior to trail bed construction.

TRAIL TREAD CONSTRUCTION

Once the trail alignment has been cleared and brushed, the flag line will be re-established. It is important that the trail crew have the trail alignment clearly identified prior to excavating the trail bench. This is a very detailed level of flagging and shall include all subtle adjustments for small swales and crenulations, the identification of soil export and deposition areas, trail structure locations and dimensions, and native material source locations. Trail bench construction will be accomplished by using small-scale mechanized trail equipment and hand crews with a combination hand and small power tools (outside of the Northern Spotted Owl breeding season).

When constructing trail tread within the influence of stream drainages or a topographical swale, the soil excavated to create the trail bench must be exported and not side cast down slope. This insures that the excavated soils will not enter the stream network of the watershed thereby impacting aquatic resources. Typically in these locations either manual or powered wheelbarrows are used to export the excavated soil to a location nearby. This soil can be used as backfill for retaining walls or bridge abutments. If fill material is not required within close proximity to the drainage, then it can be side cast at a location outside the influence of the drainage where it will not enter the watercourse. When performing trail construction requiring the exporting of the excavated soil, the trail crew is reduced in size due to the need to load the soil into wheelbarrows as it is excavated out of the hillslope. This reduces the working space in the construction line and the number of people needed to efficiently perform this task. Three to five people excavating and shoveling the soil into wheelbarrows and several people pushing or operating wheelbarrows is usually the most efficient approach.

PUNCHEON

A puncheon structure is a log or timber structure built close to the ground (3 feet or less) with or without hand railings. It may be used to cross small drainages, wet areas or other places where turnpikes or causeways are not effective. It usually consists of mud sills, stringers and wood decking. Decking surface must be minimum thickness of 4 inches and minimum tread width of 60 inches and 52 inches between bull rails. Typical dimensioned lumber of 4 inches x 6 inches or 4 inches x 8 inches rough con-heart redwood will be anchored with 3/8 inch x 8 inches galvanized wire spikes. Approaches to both ends of the bridge will be level if at all possible. A ramp should be constructed for puncheon approach if trail grade is below the grade of puncheon tread. The use of puncheons will be held to a minimum.

BRIDGE

One bridge will be constructed on the middle trail route. The bridge design will incorporate soil dams at the ends of the stringers. When a bridge approach is flush with trail grade, soil contact is separated from the bridge structure by the soil dam. Soil dams can be constructed of redwood, treated lumber, or concrete. They shall be constructed to provide a complete soil barrier between the mud sill, the bridge stringer and the decking. This will keep soil from sloughing onto the mud sill, stringers and bridge decking and causing premature damage.

Construction of a typical wood bridge will consist of placing sound, peeled, milled or split mud sills, minimum 14-inch x 14-inch x 8 feet long, set on a compacted abutment. The mud sills will be spanned by two sound stringers and surfaced with decking planks. Stringers will be fixed to the sills. The tread shall be secured to the stringers with an appropriate galvanized fastener.

Handrails shall be constructed by bolting an upright post to the stringer and toe nailing it to the post sill. A top rail and lower diagonal will be attached to serve as safety railings. Uprights and braces will be spaced not more than 10 feet apart. Handrail upright posts and brace diagonals and top rails will be at least 4 x 5 inches when skinned smooth.

Diagonal post braces shall be placed from the end of the post sill to above the tread. A 4 x 5-inch skinned smooth handrail, fixed to the uprights with #50 galvanized nails, will span the uprights. The top of the finished handrail will be 42-inches above the level of the bridge deck.

Stringers and rails will be placed to allow a deck width between rails of not less than 40-inches. Tread material will extend 3-inches beyond the deck width on each side and be not less than 3-inches thick.

Trail tread to each approach of the bridge will be flush with the walking/riding surface. The bridge tread will be level and uniform, with all knots and protruding edges hewn smooth.

RETAINING STRUCTURES

Retaining structures are designed to contain or stabilize soil, gravel and rocks. This material may be upslope, within or downslope of the trail bed, or part of a structural component such as bridge abutments, ramps or cribbed steps. Often soil conditions or geomorphic activity can cause a cut bank to be or to become unstable. This condition can be resolved with the construction of a retaining structure, of natural or synthetic materials, to stabilize the cutbank and prevent debris from falling on the trail bed. Retaining structures can be used to contain fill slopes along the outside edge of a trail bed. A common use for this type of application is where the fillslope has failed due to erosion, tree failure or shallow landslide activity. Generally, the use of this structure would occur where moving the trail farther into the hillslope is not an option. Without the use of a retaining structure, achieving the designed trail width and stabilizing the fillslope would not be possible. When constructing trails on steep side slopes (in excess of 70%) to minimize the height of the back slope a retaining wall can be constructed across the slope first (with the top of the wall at trail grade). This wall can then be back

filled by importing soil from trail tread excavations on either side of the wall or from a smaller cut into the hillslope behind the wall that will reduce the volume of material to be excavated and will result in less ground disturbance and a lower backslope height. Trail structures such as bridges often require retaining structures such as abutments to create stable foundations. Often these structures are in or near watercourses. These retaining structures can help resolve bank stabilization problems, bank elevation differences, span support requirements and bridge freeboard requirements.

When constructing any structures, care will be given to hide that structure or blend it in to the natural environment. Trails provide the user with a route through the natural environment and facilitate intimate contact with that environment. The eyes of the trail user should be on that natural setting and not the trail or its structural components. The use of native stone, wood, soil and vegetation in the design and or concealment of a retaining structure will enhance its aesthetic qualities and the experience of the user. If non-native materials are the best design solution then they should be covered with soil and planted with native vegetation to allow the structure to blend in with the natural environment.

The foundation for any retaining structure shall be excavated out of solid, stable native material. The depth and size of the foundation is dependent on the height of the structure and the amount and slope of material to be retained. Retaining structures require either a foundation or a pier system, which is determined by the style of structure and the sensitivity of the tree root systems in the project area. Any structure foundations constructed near a stream must start the bottom of the foundation a minimum of 18 inches below the scour line of the stream to prevent undermining of the foundation by stream flows. The actual thalweg or scour depth of the stream channel may be below the observed depth if the stream section being evaluated is unstable and in a depositional mode.

Log Crib walls are the simplest retaining structures used in trail construction. These structures are typically used to contain and support the outside edge of the trail and contain fill material used as part of the trail bed. They may be used to contain fill material that is used to bridge over tree roots and rocks or to contain fill material used to ramp on and off trail structures. They may also be used to buttress the toe of back slopes to control minor raveling or soil creep. Usually the materials for these structures are native logs and rocks that are generated during the clearing phase of trail construction or are gathered within close proximity to the project worksite. A variety of non native materials can also be used to construct these structures such as pressure treated lumber, concrete block, etc. but the vast majority of crib retaining structures is constructed with onsite native materials. The logs used in these structures should be rot resistant Redwood to provide some longevity.

TRAIL CURING

Once the new trail has been completed, it needs time to cure before being opened for use. This time allows the soils to bond and form a thin crust before they are subjected to mechanical wear. It is desirable to let the new trail remain closed for one wet season. If the trail is completed during the winter or wet season, it should not be opened during the wet season and be allowed to dry and firm up first.

2.7 VISITATION TO THE INTERTRIBAL SINKYONE WILDERNESS

The 3,845-acre InterTribal Sinkyone Wilderness is a private property owned and managed by a 501(c)(3) nonprofit tribal consortium, the InterTribal Sinkyone Wilderness Council, which is comprised of the following federally recognized tribes based in Mendocino and Lake Counties: Cahto Indian Tribe of the Laytonville Rancheria; Coyote Valley Band of Pomo Indians; Hopland Band of Pomo Indians; Pinoleville Pomo Nation; Potter Valley Tribe; Redwood Valley Rancheria of Pomo Indians; Robinson Rancheria of Pomo Indians; Round Valley Indian Tribes; Scotts Valley Band of Pomo Indians; and Sherwood Valley Rancheria of Pomo Indians. The Sinkyone Council has owned the InterTribal Sinkyone Wilderness property since 1997, and manages it as a tribal wilderness area for the permanent protection of conservation values and traditional cultural uses, and for the restoration of the redwood forest ecosystem.

There are currently no trails, restrooms, campgrounds or other facilities in the property. Access to and use of the InterTribal Sinkyone Wilderness property is limited to tribal members of the tribes comprising the InterTribal Sinkyone Wilderness Council. This Public Trails Project will open new trail routes, campgrounds and related facilities in specified locations for public use and tribal member use for the first time on the InterTribal Sinkyone Wilderness. The Public Trails Project does not provide for or authorize public access at or within any locations on the InterTribal Sinkyone Wilderness property other than at those locations identified in this Mitigated Negative Declaration that are subsequently opened by the Council as public trails, campgrounds, and trailhead parking areas.

A condition agreed to by the Council when it purchased the 3,845-acre Sinkyone property from The Trust for Public Land in 1997 was that the Council would develop and manage limited public access through this property via hiking trails. Additionally, conservation easements over the property that are held by private land trusts (Pacific Forest Trust; Sanctuary Forest), allow for the development of limited public access through construction of hiking trails, campgrounds, and trailhead parking areas and facilities on the property.

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed Public Trails Project at the property is consistent with local plans and policies. The implementation of this project is consistent with other projects conducted or planned by the County of Mendocino; adjacent landowners; the Bureau of Land Management, which manages the nearby King Range National Conservation Area; the USDA Forest Service; and California State Parks, which manages the adjacent Sinkyone Wilderness State Park. The Local Coastal Plan (LCP), developed by Mendocino County pursuant to the California Coastal Act, limits developments along the coastal zone adjacent to, and downslope from, the proposed project. The LCP calls for the maintenance of a wilderness recreational experience wherever appropriate and a low-impact recreational experience in other areas not adaptable for the wilderness recreational experience. The LCP calls for provisions for improved trails and camp areas, as well as the protection and enhancement of anadromous streams, seal haulout areas, wetlands, old growth redwood stands and archaeological resources. The proposed project is consistent with the Coastal Element section of the Mendocino

County General Plan (Plan, updated August 2009; Coastal Element section, Chapter 7, scheduled for update in 2012), which discusses trail development in the Lost Coast, trails connecting Usal Road with coastal beaches and being designed to minimize impacts to the environment while providing features such as parking areas at Usal Road trailheads to encourage hike-in recreation.

2.9 DISCRETIONARY APPROVALS

The Conservancy and the Council have approval authority for the proposed Public Trails Project at the InterTribal Sinkyone Wilderness. The project requires no approval from the California Department of Fish and Game (DFG) with regard to a Stream Alteration Agreement (SAA), which DFG has determined is not required. The U.S. Fish and Wildlife Service (USFWS) has reviewed the project site with regard to the marbled murrelet and Northern Spotted Owl. A letter of Technical Assistance has been obtained from the USFWS, identifying any temporal operating restrictions for the species. A Coastal Development Permit from the Mendocino County Planning Department may be required for the project, and the Council is in the process of providing the Department with information that will enable the Department to make this determination.

2.10 RELATED PROJECTS

No other trail construction projects have occurred or have been proposed for the property. However, the Council intends to develop a comprehensive watershed rehabilitation plan that would include extensive, phased road removals and stream crossing treatments. In addition, the Council plans to develop a plan for property wide forest restoration and stewardship, which would include forest thinning, prescribed fire, and other appropriate management activities. As noted earlier, the Council is involved in trail planning at other locations within the Sinkyone Lost Coast area that ultimately will link to the currently proposed trails project.

On the adjoining Sinkyone Wilderness State Park property, a park wide watershed rehabilitation project was completed in 2006, which included the removal of over 50 miles of abandoned logging roads. State Parks also conducts trail and road maintenance on a regular basis. The Council has been an active partner with State Parks in the SWSP watershed rehabilitation project, as well as many other restoration and resource protection projects within the SWSP and at other locations with a number of agency and nonprofit partners.

CHAPTER 3 — ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION	
1. Project Title:	InterTribal Sinkyone Wilderness Public Trails Project
2. Lead Agency Name & Address:	State Coastal Conservancy 1330 Broadway, 13th Floor Oakland, CA 94612-2530
3. Contact Person & Phone Number:	Su Corbaley, 510-286-6767
4. Project Location:	InterTribal Sinkyone Wilderness
5. Project Sponsor Name & Address:	InterTribal Sinkyone Wilderness Council P.O. Box 1523 Ukiah, CA 95482
6. General Plan Designation:	Forest Lands
7. Zoning:	Timber Preserve

8. Description of Project:

The Council proposes to make the improvements described herein to the InterTribal Sinkyone Wilderness (property) watersheds. The following is a summary of the planned improvements:

The project will include the construction of three (3) new trail routes known as the South, Middle, and North Trails on a mid-slope position within the coastal watersheds. Trail structures, such as steps, armored drain swales, drain lenses, retaining walls, bridges and puncheons, will be installed along the new routes to control erosion and provide a low-maintenance trail treads. The trails will be constructed by using small-scale mechanized trail equipment and hand crews using a combination of hand and power tools. The project will also include construction of trailhead parking areas and campground facilities for use by the general public. The project includes the installation of waterless toilets at the trailhead/camping areas. Examples of features that will be included at each campground-trailhead location are: rock-surfaced parking lots w/drainages; vehicle protection barriers (boulders or posts to prevent vehicular access to adjacent campsites); gates for seasonal closures of the trailhead parking lots/campsites; iron rangers for deposit of use fees; campsites situated near the trailheads; picnic tables; bear-proof garbage receptacles; bear-proof food storage boxes for campsite users; one (1) waterless vault toilet per trailhead; and signage along the trails and at the trailhead locations.

9. Surrounding Land Uses & Setting: Refer to Chapter 3 of this document (Section IX, Land Use Planning)

10. Approval Required from Other Public Agencies: California Department of Fish and Game, County of Mendocino.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

If implemented as written, this project could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Initial Study on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	☒ None

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

Original Signature on File – State Coastal Conservancy

Date:

Title

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:

   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ANALYSIS

The Environmental Analysis (Initial) Checklist was prepared to assess the proposed project's impact on the environment. The environmental setting for each topic describes the conditions currently existing at the project site. Potential environmental impacts, identified by checklist point, are addressed in the discussion section. For each impact identified as "less than significant with mitigation", mitigation measures have been specified to reduce the impact to a less than significant level.

I. AESTHETICS.

ENVIRONMENTAL SETTING

The property contains many of California's most significant and irreplaceable natural and visual resources, including stands of coast redwoods, prairie vistas, historic features, clear streams, and unspoiled coastlines.

Remnant old growth as well as second-growth and third-growth redwood forests and mixed coniferous-deciduous forests are common in the region, and also provide a high quality aesthetic resource. From a macro landscape perspective, these forests typically have a varying visual signatures resulting from variations line, form, color, texture and vegetation density. These variations are an outcome of forest age, original method of harvest, location of the forest, and vegetation species. Typically, these forests are densely vegetated and have few vistas.

The region's picturesque coastline and associated coastal environments are prime visual resources. Impressive, jagged rock outcrops and cliffs enclose or alternate with beaches of varying extent. Coastal bays, coves, tide pools, marshes, and river mouths add tremendous visual contrasts and variety. Coastline and coastal environments are visually dynamic landscapes, having dramatic contrasts and expansive views. Coastline and coastal environments provide endless variety of micro and macro visual experiences.

Drainages that cut through the coastal ridges on their way to the ocean provide additional visual variety and seasonal variation to the landscape. The finest redwood trees are often found bordering these drainages. Visually, streams in the property are significant where they are adjacent to heavily forested landscapes or dramatic geologic features. Depending on the adjacent landforms and vegetation cover, larger streams provide spectacular macro viewing opportunities and smaller ones tend to provide more inwardly focused micro experiences.

Open meadows and prairies in the area provide strong contrasts and visual variety to the predominantly forested landscape of this region. Some of these features dominate the landscape and strongly influence overall visual quality. Prairies frequently provide a pastoral visual experience, especially when associated with past agricultural use. Prairies are especially significant if located near shorelines, adjacent to streams, or on ridges. Prairies often provide strong macro visual experiences.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

DISCUSSION

a) No impact.

b) None of the proposed project sites are within a state scenic highway easement or viewshed. The project would help improve the scenic resource of a mixed second and old growth forest. The project would improve the backcountry characteristics and hiking experience. Old-growth trees would be protected from damage. No rock outcrops would be damaged. Finally, no known historic resources of aesthetic value are in the project area. No impact.

c) The project will substantially improve the existing visual character and value of the site. The trails will be designed to be aesthetically pleasing and blend with the natural features of the landform. No impact.

d) The project would not create glare because all trees would be preserved. Lighting is not an element of this project and no new light sources would be introduced into the landscape. All construction work would be limited to daylight hours, eliminating the need for work lights. This project would create no new source of light or glare and, therefore, would have no impact in this area.

II. AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

The adjoining land to the east of the project property is commercial timberland. Land to the north and west of the property is zoned for recreation and no authorized agricultural activity exists adjacent to the property. No agricultural activities are permitted within the property.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

*In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

a) No land adjoining the project site in any direction is zoned as agricultural land or used for authorized agricultural purposes, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California. Therefore, this project would have no effect on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of Farmland to non-agricultural use. No impact.

b) As noted in the Environmental Setting above, the property does not support any agricultural operations or farmland. No impact.

c) Policies and practices, deed restrictions, and other constraints related to the property's operational and resource management needs do not allow for agricultural uses in the property, other than a native plants nursery for forest restoration purposes. No impact to agricultural resources.

III. AIR QUALITY

ENVIRONMENTAL SETTING

The Mendocino County Air Quality Management District is the agency responsible for enforcement of all State and Federal Air Quality Laws and Local Air Quality Regulations in Mendocino County. The District is managed by a five member Board of local elected officials which currently consists of the Mendocino County Board of Supervisors. The Mendocino County Air Quality Management District is one of 35 local Air Districts in California.

The District's legal boundaries are coterminous with the County boundaries; however the District is part of the larger North Coast Air Basin, which includes Del Norte, Trinity, Humboldt, Mendocino and part of Sonoma County. The District is in attainment for all Federal criteria air pollutants and is also in attainment for all State standards except Particulate Matter less than 10 microns in size (PM10).

The Mendocino County Air Quality Management District is designated as non-attainment for the State Standard for Airborne Particulate Matter less than 10 microns in size (PM10). The California Clean Air Act of 1988 requires that any District that does not meet the PM10 standard make continuing progress to attain the standard at the earliest practicable date.

Since the early 1980s levels of airborne particulate matter in the District, as monitored by the District, have gradually declined. This decline is the result of a changing industrial base, enhanced regulations and increased enforcement by the District. Particulate Matter (PM) has significant documented health effects and new research has shown that children are especially susceptible to elevated PM levels. While PM levels have dropped over the last 20 years, the District still exceeds the state standard several times a year. The majority of these exceedances result from wildfires, residential wood burning, unpaved roads and construction activities, the largest sources of PM in the District. As the population within the District continues to grow, emissions from many of these sources are likely to increase. Growth in population, vehicle use and wood combustion will surpass the reductions in levels of airborne particulate matter that have occurred in the last 15 years. In order to continue to improve local air quality, as required by the California Clean Air Act of 1988, the District must implement control measures on the largest sources of Particulate Matter in the County. (*Air, 2005)*

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☐	☒

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

*Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.

DISCUSSION

a) Work proposed in this project is not in conflict with or would not obstruct implementation of any applicable air quality plan for Mendocino County, the North Coast Air Basin, or USEPA Region IX. The organic material generated during this project would not be burned. Some small-scale diesel and gasoline equipment would be used during the project but their emissions would be insignificant. No impact.

b) The proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. No impact.

c) The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). A minimal amount of dust generation from excavation of soils is expected during the project, but vegetative canopy over the trail corridors as well as exposure of project worksites to moisture-laden fogs from the nearby coastline will help to prevent the release of most project-related dust into the atmosphere. Also, the slow movement, the small scale of equipment used during operations, and the short window of construction are all factors that will result in less than significant quantities of dust contributing to a net increase of applicable criteria pollutants. No impact.

d) The project will not expose sensitive receptors to substantial pollutant concentrations. No Impact.

e) The proposed work would not result in the generation of objectionable odors that would affect a substantial number of people. No Impact.

f) The project will not generate greenhouse gas emissions, either directly or indirectly, that will significantly impact on the environment because the following mitigation measures will be taken to prevent and reduce the generation of greenhouse gas emissions during project work:

MITIGATION MEASURES AIR-1

1. Construction activities will be restricted to the period July 12 to February 1 in any given year. Vehicles and equipment used in the project shall be allowed to idle only when absolutely necessary.
2. Engines, carburetors, and exhaust systems of project's vehicles and equipment shall be maintained in excellent operating condition.
3. Work crews shall camp at trailhead locations during workweeks to eliminate daily commutes to worksites.
4. Work crews shall not use generators for powering camp lights or appliances. Camp stoves and lights, as well as appliances, utilities, and devices used in the camps shall be gas- or battery-powered instead of generator-powered.
5. Work crews shall carpool weekly to worksites to eliminate taking individual vehicles to the worksites.
6. Use of manual tools shall be maximized, and small-scale construction equipment shall be used only when needed.
7. Project contractors and work crew members shall be hired locally whenever possible to reduce travel distances.
8. Project equipment and materials shall be procured locally whenever possible to reduce travel distances.
9. Project materials shall be procured from project property whenever possible (including wood materials for various trails structures).

g) The project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases because the level of emissions caused by the project will be minimal, and will be further reduced by the mitigation measures outlined above. No impact.

IV. BIOLOGICAL RESOURCES

ENVIRONMENTAL SETTING

PLANTS

The property has a rich diversity of plant and animal life. Fifteen plant communities occur within or adjacent to the property: blue blossom chaparral, blue gum grove, California bay forest, coast redwood forest, coastal bluff, coastal prairie, coastal strand, Douglas-fir forest, Douglas-fir & coast redwood forest, freshwater marsh, krummholz Douglas-fir forest & north coast scrub mosaic, mixed evergreen forest, north coastal scrub, overgrazed pasturage, and red alder riparian woodland. (Sinkyone Wilderness State Park Resource Inventory, 1987)

The blue blossom chaparral plant community occurs as a result of logging on the steep upper slopes, where topsoil has been depleted. The associated species include coyote brush (*Baccharis pilularis*), cow parsnip (*Heracleum lanatum*), Douglas-fir (*Pseudotsuga menziesii*), sword fern (*Polystichum munitum*), and tan oak (*Lithocarpus densiflorus*). The community is serial to coniferous forest, meaning that, eventually, the coniferous species will succeed the blue blossom shrub in dominance.

The blue gum grove is a nonnative plant community dominated by an exotic tree from Australia, known as blue gum (*Eucalyptus globules*). Three groves occur within the adjacent State Wilderness near whale gulch, Bear Harbor, and at the old Usal town site. The trail project does not include any sites within the blue gum habitat.

The mesic canyon bottoms of the coastal watersheds support California bay forests. This community typically is a dense stand of California bay (*Umbellularia californica*) with little or no understory. In canyons and on moist slopes, it frequently intergrades with coast redwood forest. California bay stumps sprout vigorously after fire, and the length of time the community maintains dominance is closely linked to the regions fire history.

Prior to European settlement, the coast redwood community dominated the Sinkyone area. Thick stands of second growth redwood forest and a few scattered old-growth trees exist throughout the property. The coast redwood (*Sequoia sempervirens*) community includes Douglas-fir, huckleberry (*Vaccinium ovatum*), giant chinquapin (*Chrysolepis chrysophylla*), redwood sorrel, salal (*Gautheria shallon*), sword fern, thimbleberry (*Rubus parviflorus*), and tan oak.

The steep coastal bluffs in the adjacent State Wilderness vary from bare precipices to slopes supporting a sparse perennial herb cover to an herb-scrub mosaic. Harsh environmental conditions characterize the bluffs, which are frequently exposed to high winds, sand blast, and salt. The vegetation is comprised of perennials, many of which are succulent or otherwise adapted to persistent high salt levels and wind. Plant species common to the coastal bluffs include beach strawberry (*Fragaria chiloensis*), bush lupine (*Lupinus arboreus*), coyote brush, live-forever (*Dudleya farinose*), Pacific grindelia (*Grindelia stricta*), sea fig (*Carpobrotus aequilaterus*), seaside daisy (*Erigeron glaucuc*), silver beachweed (*Ambrosia*

chamissonis), and Suksdorf's sagebrush (*Artemisia suksdorfii*). The coastal bluff scrub is a catastrophic climax community and, because of the powers of the ocean, it frequently experiences massive disturbances resulting from landslides. The trail project does not include any sites within the coastal bluffs habitat.

The coastal prairies are located on the coastal terraces in the north portion of the adjacent State Wilderness and on steep slopes within the forest mosaic. The community includes native bunch grasses, herbaceous herbs, and exotic Mediterranean grasses. Portions of the prairies have been invaded by infestations of exotic plants, including Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), and periwinkle (*Vinca major*). Characteristic native bunch grasses include Agrostis, Calamagrostis, Danthonia, Deschampsia, Festuca, and Stipa. Their relative abundance depends primarily on past disturbances, such as livestock grazing and agricultural uses. The trail project does not include any sites within the coastal prairie habitat.

A small area of coastal strand occurs at the mouth of Usal Creek near the southern extent of the property. The coastal strand is exposed to high salt spray, sand blast, and a shifting sandy substrate with low water-holding capacity and low organic matter content. The coastal strand plant community is dependent on disturbance to maintain its dominance in an area. Shifting sands, primarily during winter storms, continually disturbs this community. The vegetation is characterized by low perennials, and species richness and percent cover is low. The common species at Usal beach are morning-glory (*Calystegia soldanella*), beach primrose (*Camissonia cheiranthifolia*), sand verbena (*Abronia latifolia*), and exotic sea rocket (*Cakile maritime*). A number of exotic species from the neighboring overgrazed pasturage have invaded into this community. The trail project does not include any sites within the coastal strand habitat.

The Douglas-fir forests on the coastal slopes of the property have been severely impacted by past logging. Douglas-fir occurs on soils of the Hugo and Josephine series as does the redwood forest, however, the fir tends to occupy the drier sites. The species associated with Douglas-fir include giant chinquapin (*Chrysolepis chrysophylla*), madrone (*Arbutus menziesii*), tan oak, bracken fern, California hazelnut (*Corylus cornuta*), Douglas iris, hedge nettle (*Stachys rigida*), wild rose, and thimbleberry (*Rubus parviflora*).

Freshwater marshes occur in the adjacent State Park at two sag ponds just south of Whale Gulch. Floristically, this community is comprised of cattails (*Typha spp*.), bulrushes (*Scirpus spp.*), and sedges (*Carex spp*.). Several sensitive species may be present in this community within the park, including Bolander's reed grass (*Calamagrostis bolanderi*), swamp harebell (*Campanula californica*), and Thurber's reed grass (*Calamagrostis crassiglumis*). Emergent species such as cattails, due to their habitat and dense growth, create conditions that favor sediment accumulation. As sediment and organic matter accumulates, conditions change until, eventually, less water-tolerant species may become established. Because the perennial herbs that dominate this community establish and spread quickly, via vegetative reproduction, succession may be rapid. The trail project does not include any sites within the freshwater marsh habitat.

The krummholz Douglas-fir forest and north coastal scrub mosaic is a community that does not fit into common classification schemes. It occurs on coastal bluffs and slopes that are somewhat protected from salt spray by topography. The term "krummholz" is a word used to describe stunting caused by wind. Its species composition and dominance varies from site to site and is composed of species from both the Douglas-fir forest and the coastal scrub communities. The trees in this community are stunted by wind and do not exceed the height of neighboring shrubs. The trail project does not include any sites within the krummholz habitat.

Mixed evergreen forest occupies the drier sites on the margins of the coast redwood and Douglas-fir forests. Within the property, broad-leaf trees, 30-100 feet tall, dominate the community. Most species are sclerophyllous evergreens, but winter deciduous species also occur. Relatively little understory grows under the dense canopy. Characteristic associated plant species within the property include California laurel, coast redwood, coast rhododendron (*Rhododendron macrophyllum*), Douglas fir, giant chinquapin, madrone, and tan oak.

Scattered stands of north coastal scrub occur in the vicinity, primarily on the marine terraces and nearby slopes. They occur on windy, exposed sites with shallow, rocky soils, such as the sandstone parent materials of the Franciscan Formation. The community is comprised of low evergreen shrubs, which rarely exceed six feet in height. The plant species include bush lupine, bush monkey flower (*Mimulus aurantiacus*), California blackberry (*Rubus vitifolius*), coyote brush, cow parsnip, hedge nettle, Indian paintbrush (*Castelleja latifolia*), pearly everlasting (*Anaphalis margaritacea*) and poison oak. The north coastal scrub is a serial community with boundaries that fluctuate dramatically, depending on grazing pressures and fire history. The trail project does not include any sites within the coastal scrub habitat.

Historic grazing of cattle and road building in the vicinity has impacted vegetation within the property. Exotic species exist in several areas. Dominants include English plantain (*Plantago lanceolata*), red-stemmed filaree (*Erodium cicutarium*), soft chess (*Bromus mollis*), and wild barley (*Hordeum leporinum*).

The red alder riparian woodland plant community is dominated by red alder (*Alnus oregona*) and grows near stream banks throughout the Wilderness. The community is confined to moist soils and is characterized by deciduous trees and occasional shrubs, with a sparse-to-dense understory of ferns and herbs. In addition to red alder, the community supports bigleaf maple, California blackberry, coltsfoot (*Petasites palmatus*), horsetail (*Equisetum spp*), candy flower (*Montia siberica*), miners lettuce (*Montia perfoliata*), sword fern, red elderberry (*Sambucus callicarpa*), and willow (*Salix spp*.).

Field surveys were conducted to target the blooming periods for all special status plants considered to have potential for occurrence in the project area due to the presence of suitable habitat conditions. The survey focused on the areas of greatest anticipated impact, including the six-foot wide trail prism of the south and middle trails, the entire road prism of the north trail, and all trailheads where facilities and other improvements are proposed. The

survey area typically spanned 25 feet on either side of the proposed trail prisms, and extended 50 feet up and down slope where local suitable habitat was identified.

The proposed trail corridors were surveyed by Mad River Biologists on April 17th and 18th, 2006 to look for Howell's montia (*Montia howellii*), an early blooming, ephemeral target species, and again on June 13th, 14th, and 15th, 2006 to cover the blooming season of the remaining target species. All plants were identified to the highest taxonomic level necessary for rare plant determination. A list of all plants found on or adjacent to the three trails is provided as Attachment C – Species List.

The field surveys identified one occurrence of leafy reed grass (*Calamagrostis foliosa*) located on the edge of the landing to the middle trailhead near Usal Road. This grass is considered by California Native Plant Society (CNPS) to be of limited distribution and fairly endangered in California. In addition, two occurrences of long beard lichen (*Usnea longissima*) were identified along Usal Road, at approximately one half mile and three quarters mile south of the south trailhead. The lichen is located on mature Douglas-fir a few feet from the road, however will not be impacted by the trail project.

ANIMALS

The diversity of vegetation and habitat types at the property supports the existence of a variety of animal species. The below discussion is based on-site avian and wildlife assessments conducted for by Mad River Biologists the planned trail corridors in April and November 2006.

Southern Torrent Salamander (*Rhycotriton variegates*). Although it is undocumented, moderate to high potential exists for this species to occur within the property project area. Most likely locations would be at the seep along the north trail and the ephemeral stream along the middle trail. However, this species has been discovered at sites far from water sources and might therefore be encountered at other locations within the project area where adequate cover is available. It has been documented nearby in the vicinity of the South Fork of the Eel River, McKinley Creek, Ten Mile Creek, Elder Creek, along Branscomb Road, Rockport Creek and Cottoneva Creek. The nearest documented occurrence is along Indian Creek approximately 3 kilometers north of the project area (north trail).

Tailed Frog (*Ascaphus truei*). The preferred habitat for this species (generally, year round fish-bearing streams) does not occur within the project area, however, it has been documented in nearby tributaries of Cottoneva Creek and Hardy Creek. Usal Creek, also nearby, offers the general preferred habitat qualities and probably also supports this species. It is not inconceivable that adults of this species may wander into the project area during periods of very wet weather when the ephemeral streams within the project area are flowing.

Northern Red-legged Frog (*Rana aurora aurora*). No suitable breeding habitat is available within the project area; however, adults are occasionally found away from permanent water sources and could occur within the project area outside of the breeding season. The most likely locations might be during wet periods where water is contained in puddles on landings

and road edges, but also within the forest where adequate cover and foraging is available. Although the CNDDB query resulted in no records of this species, it most certainly does occur within the quadrangles that were queried and is absent in the results only due to no reports being submitted.

Foothill yellow-legged frog (*Rana boylii*). No suitable breeding habitat is available within the project area, as permanent streams with cobble substrate are required for egg-laying. Adults are occasionally found away from permanent water sources and could occur within the project area outside of the breeding season. The most likely locations might be during wet periods where water is contained in puddles on landings and road edges, but also within the forest where adequate cover and foraging is available. Records exist from the south fork of the Eel River and this species likely occurs at Usal Creek and Cottoneva Creek.

Del Norte salamander (*Plethodon elongatus*). Although the southern-most range of this species is generally considered to be in Humboldt County, CNDDB records indicate that this species was found approximately two miles south of North spur in the mixed evergreen forest type near Chamberlain Creek in Mendocino County. Therefore, we must consider potential exists for this species to occur in the project area. Most likely locations would be at the seep along the north trail and the ephemeral stream along the middle trail. However, this species has been discovered at sites far from water sources and might therefore be encountered at other locations within the project area where adequate cover is available.

Osprey (*Pandion haliaetus*). Ospreys subsist almost entirely on live fish, and thus are strongly tied throughout the year to fish-bearing lakes, reservoirs, streams, estuaries, and seacoast. Although no such habitats occur within the property boundaries, suitable streams and the ocean are within reasonable distance for foraging flights from the project area. No suitable nesting structures were identified during site visits or on aerial photos.

Golden Eagle (*Aquila chrysaetos*). Pairs of Golden Eagles are thinly distributed throughout much of interior northwestern California. The more remote foothills and mountains of Mendocino County are known to support some of these birds. They patrol hunting areas typically comprising a large land area. While it is conceivable that the site may fall within the foraging territory of a pair there is no suitable nesting habitat for Golden Eagle present, nor is there any typical foraging habitat (vast open habitats, e.g., grasslands) within the property.

Bald Eagle (*Haliaeetus leucocephalus*). As with the Osprey, the bulk of the diet of Bald Eagles is fish. Foraging is strongly associated with larger rivers, lakes, and reservoirs. No known nest sites exist within the property or vicinity. Bald eagles might rarely forage near the mouth of Usal Creek and/or along the nearby coast but no records could be found.

Cooper's Hawk (*Accipiter cooperi*), **Sharp-shinned Hawk** (*Accipiter striatus*). Sharp-shinned and Cooper's Hawks are known to occur regularly in summer in northwestern California; they typically nest in dense stands of young-to-mature conifers or in a mixture of conifers and evergreen hardwoods. A Cooper's Hawk was observed flying from a nest tree 3.1 miles northeast of Bear Harbor in April, 2001. There is a possibility that nesting Sharp-

shinned Hawk or Cooper's Hawk could occur within the property boundaries. Scheduling the construction activities after the nesting season will avoid potential impacts to these species.

Northern Goshawk (*Accipiter gentilis*). In northwestern California, the goshawk is a rare, thinly distributed resident of larger forested expanses, generally at higher elevations. Although goshawks are exceedingly rare in the coast range of northern California, two nesting records of this species exist for the general area; one was one mile southwest of Leggett (1997) and another was at the Angelo Coast Range Reserve near Branscomb (1977). It should be considered that goshawks could occur within the property.

Peregrine Falcon (*Falco peregrinus*). Although many pairs of peregrines breed at highly scattered sites throughout much of northwestern California, there exists no known nest site or suitable nesting habitat within the vicinity of the property. Although Peregrine Falcons likely hunt along the nearby ocean coastline on occasion, these birds would not be affected by the construction of the trails.

Marbled murrelet (*Brachyramphus marmoratus*). No suitable marbled murrelet habitat was identified during the site visits, nor was there any apparent suitable habitat noted from analysis of aerial photographs of the InterTribal Sinkyone Wilderness. Although large-enough (> 4 inch diameter) limbs and other tree formations that might support a nest were rarely observed during the site visits, these were limited to larger single trees that lacked the supportive structure of adjacent habitat that would be necessary to provide cover and screening from the elements and predators.

Three small groves (Duffy Creek, North Fork and Sally Bell groves) of old-growth redwoods have been identified on the adjacent Sinkyone Wilderness State Park. Although murrelets are not known to use these areas, surveys have not been conducted to date and portions of the stands could provide the basic components needed for nesting. Pending future surveys, the stands are assumed by the Department of Parks and Recreation to be occupied by murrelets (Jay Harris, pers. comm.). There is no formal marbled murrelet survey data for the InterTribal Sinkyone Wilderness or the adjacent Sinkyone Wilderness State Park. The nearest known surveys were conducted south of the project area, along Usal Creek on private timberland and north of the project in the King Range National Recreation Area, where BLM intensively surveyed for many years (Paul Roush, pers. com.). No confirmed murrelet detections were reported as a result of any of those surveys. One incidental, unverified detection in the King Range was assumed to be a bird en route to Humboldt Redwoods State Park (Paul Roush, pers. com.).

The nearest known occupied murrelet habitat is at Humboldt Redwoods State Park, approximately 20-25 miles northeast of the project area. Additionally, single detections occurred south (~25 miles) of the project area at, and near Admiral Standley State Park, however, surveys completed more recently (Mad River Biologists, 2004, 2005) in that area had negative results.

Extensive surveys conducted over the last 15 or so years on private timberland throughout Mendocino County indicate very low activity levels, only in relatively small, disjunctive stands

of old-growth redwood habitat.

Northern Spotted Owl (*Strix occidentalis caurina*). Review of aerial photographs and on-site habitat assessment revealed that most of the habitat transected by the proposed trail routes is suitable foraging/roosting habitat for Northern Spotted Owls. Some areas, especially along the middle trail, appeared to have potential suitability for nesting. Nests of dusky-footed wood rat (*Netcom fuscipes*), a primary prey species of spotted owls in this region were encountered along all three trails. No spotted owl surveys have been completed on the property or on the adjacent Sinkyone Wilderness State Park. The most relevant survey data available is from a private timber management company (Campbell Timberland Management), which manages private forestlands immediately south and east of the property. That data, updated through 2005 and available from the California Natural Diversity Database, indicates four (4) spotted owl territories within approximately 1.3 miles of the project; three of the four territories are nearest to the North Trail and one territory is nearest the South Trail. No territories are within 1.3 miles of the Middle Trail and all territories are greater than 0.5 mile from any of the three proposed trails.

During the site visit on November 9th, 2006, a total of eight trees, (3 Douglas-fir, 5 tanoak) each estimated to be >10 inches dbh and less than 22 inches dbh were identified for removal for trail construction. Most of these trees were only marginally larger than 10 inches dbh. Seven of the eight trees are located along the South Trail and are separate from each other by at least 100 meters. Only one of the eight trees was found along the Middle Trail and no trees would be removed from the North Trail, as it will utilize an existing road which does not contain trees >10 inches dbh. All other trees to be removed would be less than 10 inches dbh and are not considered to provide a significant contribution to spotted owl habitat. The Council's intention is to remove as few trees as possible during this project. In lieu of performing surveys to determine if any spotted owl territories exist within the property nearer than those already documented, seasonal restrictions on the use of motorized equipment such as chain saws and trail-building machinery would ensure no spotted owls are disturbed during the breeding season. Operations would begin after July 12 and cease prior to February 1 in any given year.

Vaux's Swift (*Chaetura vauxi*). In urban areas Vaux's Swifts nest widely in chimneys, but in forested landscapes they utilize tree cavities such as woodpecker holes or burned out hollows in large diameter trees. None of the trees identified for removal for this project would be suitable nest trees for swifts.

Purple Martin (*Progne subis).* In forested areas of northern California Purple Martins frequently nest in large snags, which were not observed during site visits to the property project area, however they might be present. It is likely that this species would be detected foraging above the forested areas, as they are fairly common in this habitat throughout the coastal forests. No large snags or other suitable nesting habitat for this species would be affected by construction of the trail project.

Sonoma Tree Vole (*Arborimus pomo*). Sonoma tree voles are known to occur throughout the forests of the coast range, of which the property is a part, and there are many records for

this species within close proximity to the property trail project. Given the abundance of suitable habitat for this species and the relatively insignificant impact that the proposed project would have on the habitat, it is not likely that this species would experience measurable impacts.

Pacific Fisher *(Martes pennanti pacifica).* The Pacific Fisher requires large areas of mature, dense coniferous forests and deciduous-riparian areas with a high percent canopy closure. The nearest known occurrence (1973) is from near the town of Miranda, over 15 miles northeast of the property. It is conceivable that fishers could utilize habitats within the property. Care should be taken if/when large down wood is moved in order to not disturb a potential den.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

DISCUSSION

a) The project will have a less than significant impact with incorporation of mitigation

measures on sensitive, candidate, or special status species.

PLANTS

No populations of sensitive plants were identified in the Botanical Survey completed for the project. Because no populations were found within or adjacent to the proposed trail prisms there is no reason to believe that the proposed trails will have a negative impact on any sensitive species (MRB, 2006).

Precautions will be taken to protect the leafy reed grass during development of the trailhead and campsites of the middle trail. The leafy reed grass will be flagged prior to construction and construction crews will be notified to avoid impacting the immediate vicinity.

MITIGATION MEASURES BIO-1 (PLANTS)

1. Provide Department of Fish and Game with results of project surveys at least ten (10) days prior to commencement of project work.
2. Any necessary mitigation measures required by Department of Fish and Game shall be developed on-site, in consultation with DFG.

TREES

General suggestions for minimizing impacts to native vegetation include limiting tree clearing and avoiding the cutting of mature trees, limiting ground disturbance during construction by restricting traffic to the trail prisms, and allowing down woody debris already present to remain as much as possible.

MITIGATION MEASURES BIO-2 (TREES)

3. Work crews shall not cut redwood tree roots greater than 2” diameter within the root health zone of redwood trees (5x stem diameter). Limits of this zone will be marked prior to a crew beginning excavations and crew shall closely monitor its work to ensure no root damage occurs.
4. Cutting of trees (Douglas-fir and tanoak) will be limited to less than ten trees that are estimated to be >10 inches dbh and less than 22 inches dbh.
5. To minimize impacts to native vegetation, work crews shall limit ground disturbance whenever possible by:
   —Restricting traffic to the trail prisms.
   —Allowing down woody debris already present to remain as much as possible.

AMPHIBIANS

Care should be taken when moving woody material or large stones so that if amphibians are present they can be safely relocated away from the construction area. If amphibians are observed in the construction path they should be carefully relocated only far enough away in order to protect them from disturbance during construction. When working in stream or along banks of streams, silt fences will be utilized. Any amphibians that are found will be moved outside of the fence throughout the construction period.

MITIGATION MEASURES BIO-3 (AMPHIBIANS)

6. Care will be taken when moving woody material or large stones so that if amphibians are present they can be safely relocated away from the construction area.
7. If observed in the construction path, amphibians will be carefully relocated only far enough away in order to protect them from disturbance from construction.
8. When working in streams or along banks of streams, silt fences will be utilized. Any amphibians that are found will be moved outside of the fence throughout the construction period.

FISH

No fish species were identified in the Wildlife Assessment completed for the project. No fish will be impacted by the proposed project because the project is located on upslope positions where streams are perennial and would not support anadromous or other sensitive fish.

BIRDS

Suitable nesting habitat for Sharp-shinned Hawk, Cooper's Hawk and Northern Goshawk exists with the property trails project area. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act. Although no suitable nest trees are expected to be removed, these regulations may require that elements of the proposed project, specifically, the production of significant noise disturbance (i.e. noise above ambient level), be reduced or eliminated during critical phases of the nesting cycle (generally, March through June). The Council will restrict trail construction activities to the period July 12 to February 1 in any given year, in order to minimize disturbance to potentially occurring Northern Spotted Owls. This restriction would provide adequate protection to all nesting birds addressed in this document, as long as no potential nest trees are removed or disturbed. If any trees or snags other than those already assessed should need to be removed, a thorough assessment of their potential as nest trees should be made by an experienced observer. If it is determined that a potential nest tree would need to be removed, the California Department of Fish and Game would be consulted. If construction activities cannot be conducted outside of the nesting season, it is recommended that surveys be conducted to determine presence or probable absence of nesting individuals.

MITIGATION MEASURES BIO-4 (BIRDS)

9. Construction activities shall be restricted to the period July 12 to February 1 in any given year.
10. If any unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31), the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to DFG.
11. If an unoccupied raptor next is detected outside of the generic critical period then operations shall cease in the vicinity of the next and its location shall be reported to DFG. The Council will then attempt to determine the species of raptor which constructed or used the nest and then the measures stated below under Item 12 will be applied (based on species).
12. If an occupied raptor next is detected in the project area, then the Council will cease operations within ¼ mile of the raptor nest (unless it known to be a peregrine falcon eerie, then a 1 mile buffer shall be applied) and immediately notify qualified biologists. The biologists will then determine the species of raptor and then applicable measures shall be developed in concert with DFG.

b) The project will result in a less than significant impact on riparian habitat or other sensitive natural communities because with the exception of one bridge crossing location, it is located away from any springs, streams, or other sensitive habitats. In addition, the project has a limited volume of soil that will be excavated for the trail bench and minor amounts of vegetation clearing.

c) The activity will not involve the discharge of dredged or fill material into a water of the

United States, including wetlands, pursuant to Section 404 of the Clean Water Act." No fill will be placed on springs, seeps, or wetlands. Therefore, this project will have no impact on any federally protected wetlands.

d) This project will have no impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. No stream flow exists at the trail locations during the construction season.

e) No local policies protecting biological resources currently exist. No impact.

f) The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact.

V. CULTURAL RESOURCES

ENVIRONMENTAL SETTING

The original inhabitants of property were Sinkyone people, who had an estimated population of 4,000 in the area prior to European settlement. The Sinkyone who lived in the coastal watersheds moved seasonally, following food supplies. The people gathered acorns, hunted small game, snared deer and elk, collected berries, fished in the ocean, and harvested the abundant salmon runs. (Sinkyone State Park Wilderness Resource Inventory, 1987)

The Sinkyone people occupied permanent villages along the inland streams and rivers in the winter, and moved out in the spring, in family groups, to the hills to collect and dry food. They also moved to the coast for gathering seaweed, crustaceans, shellfish, fish, and sea mammals. Whales that washed ashore were shared by the entire group.

Another archaeological resource in the vicinity is Sinkyone house depressions. The Sinkyone built four types of houses: two dwelling styles, a dance and sweat lodge, and a temporary brush enclosure. The circular semi-subterranean house, with a center pole, and the wedge-shaped lean-to were both walled with redwood slabs and madrone bark. Within the house depressions are remains of baskets and tools.

The primary Euro American resources in the vicinity are the remains of agricultural endeavors and numerous wood industry sites. At locations, such as Bear Harbor, Usal, Wheeler, Northport, Kenny and Needle Rock, very little is left above ground to give insight into the businesses that were created, flourished, and died there. Each succeeding activity recycled or removed the construction of the previous venture. The history of this area has revealed an extensive socio-economic story of resource exploitation. Many of the features associated with historic activities have disappeared, although numerous sites have archaeological remains and physical scarring to show that man worked here. Open areas and marine terraces have been farmed and cultivated for grazing purposes. The hills and ravines show the signs of the harvesting of tanbark for processing leather and redwood logs to be converted into wood products known as “split stuff”. Euro American settlers built houses, camp kitchens, bunkhouses, bridges, shoring, warehouses and wharfs, and the framework for several wire chutes that lifted lumber products, wool, and baskets of eggs to the schooners and steamers anchored offshore.

Early settlers built a railroad at Needle Rock located several miles north of the property, while the Bear Harbor Railroad Company built a line from the wharf at Bear Harbor that extended up Bear Harbor Creek, through the steep gap between the creek and Anderson Creek to the county road. At Usal, the Usal Redwood Company stretched seven miles of track from the wharf into the forest.

Numerous logging operations existed in the area from the latter half of the 19th century until well into the 20th century. During this time, wood products were shipped to market from Usal, Needle Rock, Anderson’s Landing, Northport, and Bear Harbor. The introduction of railroads and roads in the early 20th century shifted logging, milling, and shipping activities inland, away from the coast. Starting in the late 1950’s until the 1980’s, the forests that had not been logged by early settlers were clear cut by large industrial operations. A network of

haul roads was constructed throughout the watersheds and heavy equipment was used to blade hundreds of miles of skid road into the forests.

Under contract with the Council, archaeologists from the Humboldt State University's Center for Indian Community Development, Cultural Resources Facility (CICD) conducted a preliminary archaeology survey of the proposed project sites during August 2006. The archaeological field investigation involved a walk-thru of the proposed trail routes, parking and campground. During the survey, previously recorded archaeology sites in the vicinity were inspected. Additionally, adjacent flats/landings that could be used for equipment and materials storage were surveyed. Flat ridgelines or other areas thought to be potential use areas by Native Americans were surveyed to identify areas to avoid if trail alignments are modified in later phases of planning or construction. Special attention was given to rodent burrows, berms, road cuts, and areas where the land surface appeared unusual. Surface visibility ranged from 0-10% and was limited by vegetation and thick duff. Throughout the project area, duff was swept aside at random intervals to examine the ground surface.

The results of this archaeological inventory resulted in the confirmation of previously recorded resources outside the project area, and four "culturally sensitive" areas within the proposed project area. The sensitive areas are located where the proposed project is situated and where topography was favorable for prehistoric and historic-era use.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to§15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

DISCUSSION

a) No historic resources were identified in the Cultural Resources Investigation, therefore the project will result in no impact to historic resources.

b) No archaeological resources were identified within the trail alignments, campground or parking areas. Four culturally sensitive areas were identified within the project area. Implementation of Mitigation Measure CULTURAL RESOURCES-1 below will reduce the impact to a less than significant level.

MITIGATION MEASURES CULTURAL RESOURCES-1

1. A Native American Tribal representative shall be onsite to monitor all construction

activities within the four culturally sensitive areas.

2. A professional archaeologist shall be onsite to monitor all construction activities within the four culturally sensitive areas.
3. In the event that previously undocumented cultural resources are encountered during project construction, work within the immediate vicinity (500 feet) of the find will be temporarily halted or diverted. Work would not continue at the site until the archaeologist and Tribal representative have evaluated and or recorded the site and prepared additional recommendations. Construction shall only resume with approval by the Council's board of directors.
4. If any significant cultural resources are found in a project location, a qualified historian, archaeologist and/or appropriate Native American Tribal representative will be brought in to monitor any ground-disturbing work in that area from that point forward.

c) No human remains or burial sites have been documented or are known to exist at the proposed project sites. No impact is anticipated, but if any human remains or burial artifacts are identified, implementation of Mitigation Measures CULTURAL RESOURCES-2 below will reduce the impact to a less than significant level.

MITIGATION MEASURES CULTURAL RESOURCES-2

5. In the event that human remains are discovered, work shall cease immediately in the area of the find and the project manager/site supervisor will notify the Council's Executive Director. Any human remains and/or funerary objects shall be left in place or returned to the point of discovery and covered with soil. The InterTribal Sinkyone Wilderness Council will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, Native American Tribal representatives, and the Native American Heritage Commission (NAHC). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the InterTribal Sinkyone Wilderness Council, which in turn will notify the appropriate authorities.
6. If the coroner and/or tribal representative determines the remains represent Native American interment, the Council will contact the most likely descendants and work with appropriate parties to carry out appropriate disposition of the remains. Work shall not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination. Only authorized persons shall handle the human remains or funerary objects.
7. If it is determined the find indicates a sacred or religious site, the site shall be avoided. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives shall also occur as necessary to define additional site mitigation or future restrictions.

VI. GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

The property is located in the Northern California Coast Range and the Western Klamath Mountains Province, expressed as northwest trending mountains and valleys formed by the convergence of the Gorda and North American tectonic plates. The bedrock within the Coast Range consists of Franciscan Complex. These rocks are tectonically fragmented interbedded greywacke, shale and conglomerate (Blake and Jones, 1974). The Coast Range and Klamath mountain provinces are separated by the coast range thrust fault.

Many of the hillslopes within the property are susceptible to mass wasting such as debris slides and avalanches, block falls, shallow and deep-seated landslides, streamside landslides, and earthflows. During periods of high precipitation, slope failures commonly occur in watersheds impacted by logging activities. The coastline of the adjacent State Park is subject to direct waves and surges, tsunamis, sea cliff retreat, landslides, block falls, and surface erosion. Fluctuations in ocean levels and climate, tectonic activity, composition of the underlying bedrock, and land users are factors that influence the rates and types of erosion along the coast.

Soil development occurs in response to the weathering of the parent material (rocks and alluvial deposits) and input from surface materials (vegetation), and varies depending on the topography (slope, aspect and hydrologic conditions), underlying rock composition, and time. The soils in the property are generally well developed because the mild wet climate has caused a high degree of weathering of the underlying materials. Most of the soils have strongly developed surface horizons that are rich in organic matter and nutrients, particularly in areas that have coniferous and prairie vegetation, are moderately coarse textured, and have high infiltration capacities but posses little cohesion and very low shear strength. The steep terrain, rainy climate, and deep medium textured soils make the area very susceptible to erosion.

The soils of property are derived from the Franciscan Formation, which includes primarily sedimentary rock, along with some igneous and metamorphic rock material. The principal rock material is greywacke, highly variable sandstone with angular medium-sized grains, mixed with shale and siltstone. Igneous and metamorphic rocks are also combined in the substrate in some areas. The shale has a high proportion of angular mineral and rock fragments, with only a small amount of clay materials.

The Soil Survey of Mendocino County (Soil, 1993) mapped two general soil types in the property including the “Ornbaun-Zeni-Yellowhound” and the “Irmulco-Dehaven-Vandamme”.

Ornbaun-Zeni-Yellowhound	**Irmulco-Dehaven-Vandamme**
Deep and moderately deep, strongly sloping to very steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in material weathered from sandstone; on hills and mountains.	Deep and very deep, gently sloping to very steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in material weathered from sandstone; on hills

This map unit is on hilly and mountainous uplands. The vegetation is mainly Douglas-fir and redwood. Elevation ranges from 200 to 2,500 feet. The average annual precipitation ranges from 40 to 70 inches, the average annual air temperature is about 53 degrees F, and the average frost-free season is 220 to 320 days. A strong marine influence minimizes seasonal fluctuation in air temperature and thus results in little fluctuation in soil temperature. It is about 30 percent Ornbaun soils, 20 percent Zeni soils, 20 percent Yellowhound soils, and 30 percent soils and miscellaneous areas of minor extent. Ornbaun soils are deep. Typically, the surface layer is loam. The subsoil is loam or clay loam. Soft sandstone bedrock is at a depth of 40 to 60 inches. Slope ranges from 9 to 75 percent. Zeni soils are moderately deep. Typically, the surface layer is loam. It is underlain by a subsoil of loam. Soft sandstone bedrock is at a depth of 20 to 40 inches. Slope ranges from 9 to 75 percent. Yellowhound soils are deep. Typically, the surface layer is gravelly loam. The subsoil is extremely gravelly loam. Hard sandstone bedrock is at a depth of 40 to 60 inches. Slope ranges from 9 to 99 percent. Of minor extent in this unit are Comptche, Frenchman, Gschwend, Kibesillah, Threechop, and Woodin soils.	This map unit is on hills and in the uplands. It generally borders the Pacific Ocean, but in areas of marine terraces it is directly east of the terraces. The vegetation is mainly redwood and Douglas-fir. Elevation ranges from sea level to 1,000 feet. The average annual precipitation ranges from 40 to 70 inches, the average annual air temperature is about 53 degrees F, and the frost-free season is 290 to 365 days. A strong marine influence minimizes seasonal fluctuation in air temperature and thus results in little fluctuation in soil temperature. This map unit makes up about 21 percent of the survey area. It is about 35 percent Irmulco soils, 20 percent Dehaven soils, 15 percent Vandamme soils, and 30 percent soils and miscellaneous areas of minor extent. Irmulco soils are deep or very deep. Typically, the surface layer is loam. The subsoil is loam or clay loam. Soft sandstone bedrock is at a depth of 40 to 80 inches. Slope ranges from 9 to 75 percent. Dehaven soils are deep. Typically, the surface layer is gravelly loam. The subsoil is very gravelly and extremely gravelly sandy clay loam. Hard sandstone bedrock is at a depth of 40 to 60 inches. Slope ranges from 30 to 99 percent. Vandamme soils are deep. Typically, the surface layer is loam. The subsoil is clay loam or clay. Soft sandstone bedrock is at a depth of 40 to 60 inches. Slope ranges from 2 to 75 percent. Of minor extent in this unit are Dystropepts and Bigriver, Branscomb, Carlain, Cottoneva, Glenblair, Hotel, Tramway, and Usal soils.

The northern coast of California is the most seismically active region in the continental United States. Since the 1850's, more than 60 earthquakes have caused property damage in northern California. Most of the seismic activity is centered on the Cascadia Subduction Zone (CSZ), which begins north of the Mendocino triple junction near Cape Mendocino,

California, and extends 750 miles northward to Vancouver Island, Canada. Research shows that the last great megathrust earthquake associated with the CSZ occurred on January 26, 1700, and the average recurrence interval is every 300 to 500 years. The most recent earthquake CSZ was the Patrolia earthquake which produced the strongest ground shaking in recorded history.

Many earthquakes in the area originate onshore and have a recurrence interval of about 20 years. Nine major thrust faults (sloped contact between rocks where the overlying rocks are pushed up over the underlying rocks) along the Humboldt County coastline. Earthquakes can also occur offshore along the Mendocino Fault and along many faults within the Gorda Plate. They have a recurrence interval of every 7.5 years and can have a magnitude of up to 7.5.

Many areas in the property are underlain by unconsolidated materials that are susceptible to liquefaction during an earthquake. Usually liquefaction occurs in areas where there is a high water table, beach and dune sands, artificial fills, natural deposits of bay mud, lake deposits, and/or active Holocene age stream channels.

Tsunamis, or tidal waves occur when the sea floor is deformed by an earthquake. In the open ocean, tsunamis can travel as fast as 600 miles per hour. Depending upon the location of the epicenter of the earthquake, a series of waves up to tens of feet high can arrive on the coastline within minutes or hours of the earthquake and wave activity may last for several hours. The average tsunami run-up height for the northern California coastline has been estimated to be approximately 33 feet (Redwood, June 1998).

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a	☐	☐	☒	☐

	result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒

DISCUSSION

a) While the chance of the rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, or landslides are certainly possible in this area, this project will not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events. The proposed project will not add any element or structure that will increase public exposure. Although those working on the project will be exposed to any event that might occur, the property lies within a seismically active region. Exposure for most of the employees will be similar whether working on the project or simply living and working in the surrounding county. In fact, the time-weighted average exposure to seismic hazards is less at the project site than it would be in an urban or suburban setting. Due to the remote location of the project, the seismic effects on the project area are unlikely to affect persons not directly involved in project construction.

   Conditions for seiche or tsunami impacts are non-existent because the trail construction sites are located above 1,000 feet elevation. No volcanic hazards exist in the project vicinity. The project will result in a less than significant impact.

b) A temporary minor increase in surface erosion may occur at some locations as part of the trail construction, but the loss should not be substantial. Minor side casting of mineral soil may occur downslope from the excavation sites; however this will be a minor amount compared to the current background levels of erosion. Overall, the work will diminish erosion. The project will result in no impact.

c) The project is located within a geologic unit with unstable soil. Liquefaction within the property could occur if strong ground shaking took place during periods of high soil moisture. However, in such a situation, soils throughout the area will be susceptible to liquefaction and hazards from trail construction will only be minimal. The project does not create conditions that will cause subsidence because only insignificant amounts of organic materials will be buried under backfill or spoils. Soil and geologic conditions that could result in subsidence may exist where abandoned logging skid roads were constructed without proper clearing and grubbing. The project will have a less than significant impact on geologic instability.

d) Expansive soils do not exist in the project area. No buildings are being constructed. No

impact.

e) No septic tanks will be constructed or impacted for this project. No waste disposal systems exist at the project sites. Existing soils will support the waterless vault toilet units that will be installed on existing flat ground at each trailhead. No impact.

f) There are no known paleontological resources or sites or unique geologic features in the project area. No impact

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

There are no known hazardous materials within the project area. No fuel storage facilities exist within or adjacent to the project area.

Physical hazards in the property are similar to any outdoor setting and include steep slopes, rushing water, poison plants, wild animals, disease carrying insects, and inclement weather. The project area is in a remote portion of Mendocino County and transportation to the nearest hospital would require a 2-hour drive time from some locations. No airstrips exist within the project property or adjacent to the project property. U.S. Coast Guard helicopters patrol the coastline on a daily basis.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☐	☒
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

DISCUSSION

a) The proposed project does not involve the disposal of hazardous materials. However, the project does involve the routine transportation of small amounts of fuel to the work site. Construction activities will require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials are generally used for excavation equipment, small generators, and other construction equipment and will be contained in vessels engineered for safe storage. Large quantities of these materials will not be stored at the construction site. Spills, upsets, or other construction-related accidents could result in a release of fuel or other hazardous substances into the environment. The project will result in less than significant impact due to hazardous materials.

b) Failure of, or leakage from, vehicles or trail equipment could result in the release of hazardous substances (primarily petroleum based products) to the ground or water, (see VII (a) discussion above). Discarded barrels may be discovered in the work area and may contain unknown potentially hazardous substances. Abandoned vehicles may also be found within the planned project sites.

When appropriate, paints, sealants and preservatives may be applied to wooden and metal components of trail structures. Sealants and preservatives shall contain no Penta, Creosote or other restricted substances. The recommended sealant for all exposed wooden structural members is boiled linseed oil cut 50% with paint thinner with a Japan dryer additive. The recommended preservative to be applied on non-exposed wooden components is Copper Napthenate. The use of wood preservatives is not advised on trail structures unless warranted by insect or fungi infestations. Normally, through the use of con-heart redwood or cedar, prevention of earth-wood contact and providing a proper air gap, preservatives can be avoided. Recommended primer for ferrous metals is a red oxide synthetic alkyd-based industrial primer. The recommended finish is synthetic alkyd-based enamel. The use of metal primers and paints should be avoided on trail structures if possible. The use of pre-galvanized metal or all weather steel will negate the need for primers and paint and reduce the long term maintenance cost associated with this treatment. Implementation of Mitigation Measure HAZMAT-1 below will reduce the impact to a less than significant level.

MITIGATION MEASURES HAZMAT-1

1. All equipment will be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.
2. The contractor(s) will prepare an emergency spill response plan prior to the start of construction. Council will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the ITSW during construction,

the contractor will immediately notify the appropriate Council staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.

3. No maintenance or fueling activities shall be permitted within 200 feet of a stream.
4. Equipment will be cleaned and repaired (other than emergency repairs) outside the ITSW boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside ITSW boundaries, at a lawfully permitted or authorized designation.

MITIGATION MEASURES HAZMAT-2

5. If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the ITCWC Executive Director will be contacted. Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.

c) The project area is not located within one-quarter mile of any school and no schools are proposed for this area. No impact.

d) The trail construction sites are not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, no impact will occur with project development.

e) The planned project sites are not located within two miles of a public use airport. Therefore, no impact will occur as a result of this project.

f) The planned project sites are not located within the vicinity of a private air strip. Therefore, no impact will occur as a result of this project.

g) All construction activities associated with the project will occur within the boundaries of the property and work will not restrict access to or block any public road. Access to the project sites is limited and the trail construction sites are not part of any emergency response or evacuation plan. A general safety protocol for backcountry trail construction will be implemented as part of this project. This protocol outlines broad safety issues common to all projects and presents guidelines on how to address those issues. It also requires site inspectors to develop a project specific safety plan for each project, including the identification of any existing emergency response plans. The site specific plans are required to identify helipads for emergency evacuation, and these sites are marked on a map which is distributed to all crew members. The project is designed and will be implemented to avoid any conflicts with existing plans or increase in emergency response time. Emergency response requirements for this project will be no greater than for any other backcountry activities.

Workers spend most of their work hours in remote wildland settings and may be exposed to natural hazards consistent with that environment (e.g., wild animals, insects, noxious plants, lightning, wind, etc.). However, all employees are issued first aid kits and are trained how to respond to anticipated and unanticipated incidents. Employees are also asked to disclose any sensitivity that might affect their employment tasks or increase the potential need for emergency medical care. Therefore, this project will have no impact on an emergency response or evacuation plan.

h) Trail dozers, excavators, chainsaws, and other mechanical equipment used for trail construction can get very hot during the warmer part of the work season and is sometimes in close proximity to flammable vegetation. Improperly outfitted exhaust systems or friction between metal parts and rocks could generate sparks. The safety plan developed for each project is reviewed by all project staff and includes job site characteristics to reduce the potential for fire. The following mitigations will reduce the potential for adverse impacts from these incidents to a less than significant level.

MITIGATION MEASURES HAZMAT-3

6. A fire safety plan will be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.
7. Smoking will not be allowed on any portion of the InterTribal Sinkyone Wilderness property at any time during the project, including at the work crew camps. Campfires will not be allowed at work crew camps located on the InterTribal Sinkyone Wilderness property.
8. Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.
9. Construction crews will be required to park vehicles away from flammable material such as dry grass and brush. At the end of each workday, trail equipment will be parked over mineral soil to reduce the chance of fire. Equipment will also be required to park in locations that will minimize prolonged exposure to slope failure. All equipment will be required to be mechanically sound and free of flammable debris.
10. Contractors will be required to have a radio on site capable of direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

VIII. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

The North Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the area of California where the property is located, and is responsible for implementing the Water Quality Control Plan for the North Coast Region. Water quality objectives in the Plan do not allow any degradation of surface or ground waters or permit any alteration of natural conditions that result in water resource degradation. The plan also specifies the maximum contaminant levels for point and nonpoint sources.

Annual stream flow in the property is highly variable due to seasonal precipitation in the region. There are no natural ponds or lakes within the property; however lagoons, sloughs and wetlands are common at the mouth of several creeks which empty into the Pacific in the adjacent Sinkyone Wilderness State Park. Streams in the project area are small and steep and do not have well-developed floodplains. Past land use activities have increased runoff and sediment transport by the removal of vegetation for timber harvest, agriculture, grazing, mining, and road building. These activities have resulted in increased levels of sediment being deposited in stream channels, reduced capacity and gradient, obstructed flows, and increased channel bed elevation. In addition, the creeks and streams in the property are subject to flooding, primarily due to the heavy amounts and seasonal concentration of precipitation.

The Pacific Ocean is a moderating influence on the climate of the property, resulting in wet, mild winters and relatively dry summers with frequent coastal fog. Precipitation in the property occurs primarily in the six months from November through April. Summer showers are infrequent, with winter rainfall accumulations of up to 80 inches. During the summer months, a thick fog frequently blankets the coastal areas. The prevailing wind direction is northwesterly during the spring, summer, and fall and shifts to southeasterly during the winter season. Wind speed along the coast is typically 15 to 25 mph, with gusts up to 50 mph during winter storms. Temperatures vary only slightly from summer to winter along the coast. Mean temperatures at property are 40-50 F in January and 55-65 F in June. Temperatures above 90 F or below freezing are rare.

Ground water in the property is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. Groundwater aquifers are few in number and small in supply because most of the area is mountainous and is underlain by bedrock — conditions that do not provide for groundwater storage. The groundwater table in the property fluctuates annually, depending on rainfall and seasonal temperatures. The groundwater table varies throughout the area because of the geological or topographical influences. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed project.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				

a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☐	☐	☒
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☐	☐	☒
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f)	Substantially degrade water quality?	☐	☒	☐	☐
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☐	☐	☒
j)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION

a) The project will be in compliance with all applicable water quality standards and waste discharge requirements. (See Section VII, Hazards and Hazardous Materials, above, regarding potential impacts from accidents, spills, or upset.) Implementation of the project will result in a net decrease in non-point source pollution. Project work will be accomplished during the dry season, further lessening any chance of impact to surface water quality. The project scope does not include waste discharge work of any kind. Project location, design, and timing, in combination with the Hazmat mitigation measures indicated above for accidental hazardous material exposure, will result in no impact to water quality and waste discharge.

b) The project will not substantially deplete groundwater supplies or interfere substantially

with groundwater recharge. Groundwater quantity will not be changed by the project. Substantial short-term reductions in the amount of groundwater otherwise available for public water supplies will not occur as a result of the project. Sinkyone watershed is not used for any public or park water supply. The project will result in no impacts on groundwater supplies.

c) Existing drainage patterns at the site will not be altered because the project includes no alterations of any streams or rivers. The project will not substantially alter the existing drainage patterns of the project sites and immediately adjacent areas, nor will it result in substantial on- or off-site erosion or siltation because the trails and associated trailhead features will be situated on flat ground or mild gradients and will be constructed with full consideration for working with existing drainage patterns and other hydrologic dynamics. No impact.

d) Existing drainage patterns at the site will not be altered because the trail reroute will be carefully designed and constructed to provide uniform sheet drainage and trail structures will be built to prevent diversion of flow at crossings. The project includes no alterations of any streams or rivers. Occasionally, trail construction on an apparently dry hillside will open up subsurface water in the form of springs. A small drain swale or dip that leads the water to a drain across the tread will solve this drainage problem. In other areas, the trail base and tread will he hardened and small amounts of spring water will be allowed to flow across the trail. The project will not substantially alter the existing drainage pattern of the project site and immediately adjacent area, nor will it substantially increase the rate or amount of surface runoff in a manner resulting in on- or off-site flooding. No impact.

e) The project will not create or contribute runoff water in amounts that will exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. (See Discussion VIII. d) above.) No stormwater systems exist downslope from the project. No impact.

f) The project, in and of itself, reduces potential future soil erosion and sediment inputs to streams, thereby improving water quality after project completion when natural revegetation has occurred. However, there is the potential for short-term sedimentation and the accidental spillage of toxic substances (e.g., diesel fuel and hydraulic oil) during the construction process.

   Diesel fuel and hydraulic oil are used in the mechanized trail equipment, and are transported each day to the project site, using powered toters. Diesel fuel is poured from 5 gallon fuel tanks into equipment daily and involves a low potential for spillage. Hydraulic oils will be transported in five-gallon containers, and will be available on-site, should accidental hose rupture require equipment oil tanks to be refilled. The potential to degrade water quality with these products is small because of the comparatively small volumes used at one time. Fuel spills could occur if a piece of equipment crashed or overturned. Oil spills may also occur during stream channel excavations. However, these are usually the result of limbs from trees becoming entangled in excavator hydraulics, and crossings generally are more open and have less potential for entanglement. (See Mitigation Measures Hazmat 1-3 regarding potential impacts from accidents, spills, or upset.)

Short-term increases of turbidity may occur; however, long-term rates of turbidity will be higher without the work. The cumulative effect of trail construction is an overall decrease in turbidity and improvement of aquatic habitat. Water flow in the stream crossings will be generally nonexistent during the projected work period (late summer/early fall) and precautions will be taken to minimize exposure of equipment and personnel to flow. In the event of summer rainfall, work will be halted if any surface runoff occurs. Short term impacts from sediment will be minor, and will not result in a cumulative impact. Adaptive management through monitoring of treatment sites will be an integral component of the Council's trail management program. The trail construction sites will be monitored and evaluated annually to identify potential sustainability issues. Trail crews will implement maintenance and repairs as necessary to correct trail deficiencies if any occur.

Implementation of the following mitigation measures, in conjunction with those in HAZMAT-1-3 will reduce the project's potential adverse impacts to a less than significant level.

MITIGATION MEASURES HYDRO-1

1. All mechanized trail equipment work will occur during the dry season, before October 15th.
2. Trail Construction work will not occur in locations where surface runoff occurs due to rainfall.

g) The project does not involve housing. No impact.

h) The project does not include any structures that will impede or direct flood flows within a 100-year flood hazard area. No impact.

i) The project will not expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam. No levee or dam is involved with the project. Only small sediment filters and collection pools for temporary water diversion around construction sites will be used. No impact.

j) The project will not result in inundation by seiche, tsunami, or mudflow because all the project sites are located above 1,000 feet in elevation, and will be designed to limit the risk of mudflow through application of geologic engineering techniques. Work will occur during periods of non-saturation and no surface runoff to limit workers exposure to mudflow. No impact.

IX. LAND USE AND PLANNING

ENVIRONMENTAL SETTING

The proposed project is located within the boundaries of the InterTribal Sinkyone Wilderness. The intended purpose of this land is to preserve outstanding natural, scenic, and cultural values, and indigenous aquatic and terrestrial fauna and flora. In addition to resource preservation, the wilderness will be used for public recreation.

The primary purpose of this project is to provide coastal access to remote backcountry locations of Northern California. The project would improve the hiking and camping experience in this unique coastal wilderness. The project would provide several hiking loop opportunities and would enhance long distance hiking options by linking to the adjacent State Park trails.

The Wilderness is bounded on the north, west, and south by the 7,250-acre Sinkyone Wilderness State Park (SWSP) and on the east by Hawthorne Timber Company's approximately 55,000+ acre "Usal Unit". The property's eastern boundary (approximately 12 road miles) is defined entirely by Mendocino County Road #431 (Usal Road). The Hotel Gulch Trail defines the boundary between Council land and the SWSP for approximately 1/3rd of the southern portion of the property.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION

a) The project will not physically divide an established community because no community exists within the project boundary. No impact.

b) The project will not conflict with any land use project, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. In general, this project is in agreement with the Mendocino County Local Coastal Program. State and federal laws regulate environmental and worker safety aspects of the construction; however, the project will be consistent with all applicable laws and regulations. The area is zoned for agriculture and recreation, and the trail reroutes will provide additional access to the California Coast Line. No impact.

c) The project will not conflict with any applicable habitat conservation plan or natural community conservation plan because no such plans have been adopted. No impact.

X. MINERAL RESOURCES

ENVIRONMENTAL SETTING

No significant mineral resources have been identified within the boundaries of the property.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

a) The project would not result in the loss of availability of a known mineral resource because no known mineral resources exist within the property. No impact.

b) The project would not result in the loss of availability of a locally important mineral resource recovery site because none exist within the property. No impact.

XI. NOISE

ENVIRONMENTAL SETTING

The property is located in rugged forested terrain in northern California, surrounded by steep mountains and the Pacific Ocean.

Existing noise affecting the project area results from administrative use on adjacent State Park and the property's roads, County roads (Usal), adjacent timber company roads, occasional air traffic, consisting of small private planes, Coast Guard helicopters, and timber harvest activities on adjacent Hawthorne Timber Company properties.

This project area contains special status species that can be adversely affected by excessive noise during their nesting and breeding seasons. The USFWS has developed guidelines for eliminating noise impacts to threatened and endangered wildlife species in this area. These guidelines include seasonal restrictions on the use of equipment in potential habitat and/or during periods of nesting or the early phase of rearing of young. These restrictions apply to any use of mechanical equipment throughout the region. The USFWS would provide technical assistance on this project regarding noise impacts prior to construction implementation.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	☐	☐	☐	☒
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☐	☐	☒
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☐	☒	☐	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

DISCUSSION

a) Construction noise levels at and near the planned project areas will fluctuate, depending on the amount of construction equipment operating at any given time. There are no noise-sensitive human land uses located in the vicinity of the project site that will be substantially affected by the proposed construction-related activities and no known noise standards applicable to this area (other than species-related noise restrictions - see Mitigation Measure BIO-3 for project constraints related to endangered and threatened species). However, depending on the specific construction activities being performed, short-term increases in ambient noise levels could result in speech interference near the project site. Implementation of the following mitigations, in conjunction with BIO-3, will reduce the any potential adverse impacts to a less than significant level.

MITIGATION MEASURES NOISE-1

1. Construction activities will be limited to the hours between sunrise and sunset.
2. Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer.
3. Equipment and trucks used for construction will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
4. Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

b) The project will not generate or expose people to excessive groundborne vibrations or groundborne noise levels because only a few relatively small pieces of mechanized equipment will be operating at any one time. The sizes of the machines used will not generate excessive vibrations. No impact.

c) Project-related noise will only occur during actual construction. Once construction is completed, all noise-generating equipment will be removed from the site. The project will not create any source that will contribute to a substantial permanent increase in ambient noise levels in the vicinity of the project. No impact.

d) See Discussion XI. a) above. No more than two pieces of mechanized trail equipment will be operating on this project at any one time throughout the project area. The project sites will be closed to the public during construction and only construction workers will be affected by the equipment noise. Because the sites are primarily in thick second growth forests, noise travels only a short distance before it becomes muffled by vegetation and wind. The sites are well away from campgrounds and high use visitor areas. Because the project sites are linear, noise impacts will be transitory. Implementation of the mitigations indicated in Mitigation Measure Bio-3 and Noise-1 will reduce any potential impacts to a less than significant level.

e) The project is not within an airport land use plan and is not within two miles of an airport

or private air strip; therefore, the project will have no impact.

f) The project is not within the vicinity of an airport or private air strip; therefore, the project will have no impact.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

The Wilderness is bounded on the north, west, and south by the 7,250-acre Sinkyone Wilderness State Park (SWSP) and on the east by the approximately 50,635-acre "Usal Redwood Forest" owned by the Redwood Forest Foundation, Inc. The project area does not contain any structures. No other housing exists within the project area and no housing developments are planned at this time. The entire project area is owned by the Council.

Because of the remote location of the project and the substantial vehicle travel time to the worksite from the nearest community, trail construction crews will need to establish temporary camping facilities near the project worksite. These spike camps are fully contained facilities including field kitchens, community dining and leisure area wall tents, personal tents, chemical toilets and bear proof food storage and garbage facilities.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

a) The project would not induce substantial population growth because the project does not involve housing or new businesses. The project would be constructing recreation trails and would have no direct or indirect effect on population growth. The project would have no more than 15 employees working at one time during the summer months. No impact.

b) No replacement housing would be required, because all workers already maintain housing in the region and the spike camp operations would only be temporary facilities. No impact.

c) No people would be displaced because the project only involves trail construction and would not restrict access or private property use. All work would take place within the confines of the property boundaries, with no additions or changes to the existing local infrastructure. Therefore, the project would have no impact on population growth or

housing requirements in the area. No impact.

XIII. PUBLIC SERVICES

ENVIRONMENTAL SETTING

No schools exist within the project area and the nearest school is over 30 miles away from the work sites, in Shelter Cove, CA. Police protection is provided by the Mendocino County Sheriff's. Fire protection is provided by the California Department of Forestry and Fire Protection with the nearest fire station located Whitethorn, California. The project is located in a remote and unpopulated area.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

DISCUSSION

a) The project would not result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services discussed below.

- No additional demands on local fire protection authorities would occur as a result of this project. No impact.
- No additional demands on local law enforcement authorities would occur as a result of this project. No impact.
- No schools exist within or adjacent to the project area. No changes would occur that would affect existing schools or require additional schools or school personnel. No impact.
- The project would improve public access to the property and to the trails located in

the adjacent Sinkyone Wilderness Sate Park. No adverse impact would occur at the property or any other public facilities as a result of this project.

- The project, as a whole, or in part, would have no impact on any other public facilities.

XIV. RECREATION

ENVIRONMENTAL SETTING

The Council acquired fee title to the InterTribal Sinkyone Wilderness property in the 1997. This 3,845-acre parcel is mostly upland from the Sinkyone State Park Wilderness (SWSP) and shares most of the same resources and land characteristics. The property also comprises much of the upper watersheds above the SWSP. There are over 25 miles of hiking trails through the SWSP most of which are designated as the California Coastal Trail Route. The proposed three trails in the property would all ultimately connect to the trail system in the SWSP. Currently, the SWSP trail system can only be accessed from Needle Rock Visitor Center at the north or from the Usal campground at the south. The twenty plus miles of trail between these two points is otherwise inaccessible. The three proposed trails will provide the public with east-to-west connections to the California Coastal Trail and the opportunity for more loop trail experiences. The SWSP receives about 10,000 visitors each year.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

DISCUSSION

a) The project will undoubtedly increase the existing public use of the property. However, it is anticipated that this use will be very light as the area is very remote and does not currently receive much visitation. The combination of its being located a great distance from populated areas, not being located in an area that attracts many visitors and the difficult, rough and narrow dirt roads that must be driven to access these trails will surely keep the number of visitors to these trails low. The county road system accessing these three trails is not open to public vehicular traffic during the winter months. This project will also likely increase the visitation to the adjacent Sinkyone Wilderness State Park. Again this increase is expected to be minor but needs to be monitored. The project will not lead to a significant increase in use of other nearby facilities.

b) This project does include the construction of new recreational facilities including three new hiking trails and their associated trailhead facilities. These facilities, however, are being designed and constructed so they will not adversely impact the environment and in some

instances may help reduce some of the current resource impacts occurring on the property. Without having developed or designated recreational facilities the Council is currently experiencing the dumping of trash, wood poaching, target shooting and illegal OHV use on its property. Undeveloped and remote areas often attract these types of activities. By attracting the general public to these facilities they will discourage the illegal use that is occurring now. No longer will these areas be out of sight and a likely location for vandalism and illegal activities to occur. Trail signage and monitoring of the trails will further reduce the negative impacts currently occurring on the property and ultimately will result in environmental benefits to the project area by reducing negative impacts.

XV. TRANSPORTATION/TRAFFIC

ENVIRONMENTAL SETTING

Usal road is the major north-south route providing access to the property. This county road traverses the eastern boundary of the property. Usal road can be accessed from the south via HWY 1 and from the north via Briceland road. Usal road is a dirt road that is not maintained during the winter months. During the dry season its takes approximately 40 minutes to travel to HWY 101 from the property and 1 hour and 15 minutes to travel to Briceland road from the property. Both HWY 1 and Briceland road connect to Hwy 101 to the east. The travel time to Hwy 101 is approximately 35 minutes from HWY 1 and 50 minutes from Briceland road. The property is located in an area known as the lost coast. This name is derived from the difficulty of accessing this portion of California's coastline.

The nearest airport is the Eureka-Arcata airport in McKinleyville. The travel time from the property to this airport is approximately 2.5 hours. This airport has regularly scheduled commercial flights, which are often delayed or canceled due to thick fog and heavy rain.

IMPACT **Would the project:**		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a)	Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b)	Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c)	Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d)	Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☐	☒	☐
e)	Result in inadequate emergency access?	☐	☐	☐	☒
f)	Result in inadequate parking capacity?	☐	☐	☐	☒
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

DISCUSSION

a) The project may increase the traffic on Hwy 1, Briceland-Thorn Road and Usal Road, but that increase would be less than significant due to the low anticipated use of these trails.

b) The project will not cause traffic levels to exceed, individually or cumulatively, the level of service standards for designated roads or highways; the number of vehicles and frequency of travel related to this project is insignificant. No impact.

c) The project sites are not located within an airport land use project, within two miles of a public airport, or in the vicinity of a private air strip, and do not serve as a normal reporting point for air traffic in the area. Nothing in the proposed project will in any way affect or change existing air traffic patterns; therefore, no impact will occur as a result of this project.

d) The project does not contain a design feature or incompatible use that will substantially increase traffic hazards. The existing road systems will not be altered by this project. Increased use will be insignificant.

e) The project will not result in inadequate emergency access because the project will not impact any roads that are currently open to vehicle use. This project may possibly improve emergency access to the trail system on SWSP by allowing rescuers faster access to the Coastal Trail. No impact.

f) The project will not result in inadequate parking capacity. Parking facilities are being provided at each trailhead. The capacity of these parking lots should exceed the anticipated use. No impact.

g) The project will not conflict with adopted policies, plans, or programs supporting alternative transportation because it does not reduce or increase transportation uses. No impact.

XVI. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL SETTING

The project area does not contain any utilities or service systems. The area is second and third growth forest in a remote wildland setting.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐	☐	☐	☒
Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐	☐	☐	☒
Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☐	☐	☐	☒

DISCUSSION

a) No wastewater will be produced by this project. No impact.

b) No wastewater will be produced by this project. No impact.

c) The project will not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities because no stormwater facilities are needed. No impact.

d) No outside source of water will be required during or subsequent to construction. No running water facilities will be developed at the project sites, so no new or expanded entitlements are needed. No impact.

e) No wastewater will be generated by this project. No impact.

f) The solid waste generated by this project will not exceed the refuse disposal capabilities of local landfill facilities. No impact.

g) All solid waste generated during project construction will be hauled to a designated disposal facility by Council employees or their agents. No impact.

CHAPTER 4 — MANDATORY FINDINGS OF SIGNIFICANCE

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☐	☐	☒	☐
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☐	☐	☒
d) Have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly?	☐	☐	☐	☒

DISCUSSION

a) The proposed project was evaluated for potential significant adverse impacts to the natural environment. It has been determined that the proposed project has the potential to temporarily degrade the quality of the environment and adversely affect special-status plant and animal species. The project also has the potential to temporarily increase erosion; and to reduce the number of a special status plants. However, because four of the seven questions in the Biological Resources checklist have "No Impact" answers; one question has a "Less Than Significant" answer; and the all mitigation measures identified for the plant, tree, amphibian, and bird species of concern to be incorporated into this project will avoid or reduce these potential impacts to a less than significant level, the project will a) not substantially reduce the habitat of a fish and wildlife species; b) not cause a fish or wildlife population to drop below self-sustaining levels; c) not threaten to eliminate a plant or animal community; and d) not reduce the number and not restrict the range of a rare or endangered plant or animal. Therefore, impacts would be less than significant.

b) The proposed project has been evaluated for potential significant impacts to cultural resources. It has been determined that, with implementation of all proposed mitigation

measures, potential impacts to cultural resources would be less than significant. The project does not have potential to eliminate important examples of the major periods of California history or prehistory. No impact.

c) The project will not result in cumulatively considerable impacts. The incremental effects of the project are not measurable when viewed in connection with the effects of past projects, other current projects, and probably future projects. By spreading out trail construction projects over time and in different locations, cumulative effects in any given sub watershed are expected to be minimal. The Council will also conduct routine maintenance of the trail system in this wilderness to reduce or prevent impacts to the environment. The minimal usage of mechanized equipment and the low impacts of hand labor are expected to reduce the likelihood of cumulative impacts. Full implementation of all mitigation measures incorporated into this project will reduce its impacts to a less than significant level. Impacts from environmental issues addressed in this evaluation do not overlap with additional planned projects in such a way as to result in cumulative adverse impacts that are greater than the sum of the parts. No impact.

d) All of the environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from construction accidents and fire (Hazards and Hazardous Waste), landslides and earthquakes (Geology and Soils), sedimentation (Water Quality), and noise, though temporary in nature, have the potential to result in significant adverse effects on individuals working at the site. These potentially significant adverse impacts will be reduced to a less than significant level with the full implementation of all mitigation measures incorporated into this project. Overall, the project will not produce environmental effects that would cause substantial adverse effects on humans, either directly or indirectly.

CHAPTER 5 — SUMMARY OF MITIGATION MEASURES

MITIGATION MEASURES

The following mitigation measures will be implemented by the Council as part of the Public Trails Project in the property.

AESTHETICS

No Mitigation Measures Required.

AGRICULTURAL RESOURCES

No Mitigation Measures Required.

AIR QUALITY The following mitigation measures will be implemented to address Air Quality:

1) Construction activities will be restricted to the period July 12 to February 1 in any given year. Vehicles and equipment used in the project shall be allowed to idle only when absolutely necessary.

2) Engines, carburetors, and exhaust systems of project's vehicles and equipment shall be maintained in excellent operating condition.

3) Work crews shall camp at trailhead locations during workweeks to eliminate daily commutes to worksites.

4) Work crews shall not use generators for powering camp lights or appliances. Camp stoves and lights, as well as appliances, utilities, and devices used in the camps shall be gas- or battery-powered instead of generator-powered.

5) Work crews shall carpool weekly to worksites to eliminate taking individual vehicles to the worksites.

6) Use of manual tools shall be maximized, and small-scale construction equipment shall be used only when needed.

7) Project contractors and work crew members shall be hired locally whenever possible to reduce travel distances.

8) Project equipment and materials shall be procured locally whenever possible to reduce travel distances.

9) Project materials shall be procured from project property whenever possible (including wood materials for various trails structures).

BIOLOGICAL RESOURCES

The following mitigation measures will be implemented to address Biological Resources:

Mitigation Measures Plants

1) Provide Department of Fish and Game with results of project surveys at least ten (10) days prior to commencement of project work.

2) Any necessary mitigation measures required by Department of Fish and Game shall be developed on-site, in consultation with DFG.

Mitigation Measures Trees

1) Work crews shall not cut redwood tree roots greater than 2" in diameter within the root health zone of redwood trees (5x stem diameter). Limits of this zone will be marked prior to a crew beginning excavations and crew shall closely monitor its work to ensure no root damage occurs.

2) Cutting of trees (Douglas-fir and tanoak) will be limited to less than ten trees that are estimated to be >10 inches dbh and less than 22" dbh.

3) To minimize impacts to native vegetation, work crews shall limit ground disturbance whenever possible by:
   —Restricting traffic to the trail prisms.
   —Allowing down woody debris already present to remain as much as possible.

Mitigation Measures Amphibians

1) Care will be taken when moving woody material or large stones so that if amphibians are present they can be safely relocated away from the construction area.

2) If are observed in the construction path, amphibians will be carefully relocated only far enough away in order to protect them from disturbance during construction.

3) When working in stream or along banks of streams, silt fences will be utilized. Any amphibians that are found will be moved outside of the fence throughout the construction period. When working in stream or along banks of streams, silt fences will be utilized. Any amphibians that are found will be moved outside of the fence throughout the construction period.

Mitigation Measures Birds

1) Trail construction activities shall be restricted to the period July 12 to February 1 in any given year.

2) If any unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31), the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to DFG.

3) If an unoccupied raptor next is detected outside of the generic critical period then operations shall cease in the vicinity of the next and its location shall be reported to DFG. The Council will then attempt to determine the species of raptor which constructed or used the next and then the measures stated below under Item 12 will

be applied (based on species).

4) If an occupied raptor next is detected in the project area, then the Council will cease operations within ¼ mile of the raptor nest (unless it known to be a peregrine falcon eerie, then a 1 mile buffer shall be applied) and immediately notify qualified biologists. The biologists will then determine the species of raptor and then applicable measures shall be developed in concert with DFG.

CULTURAL RESOURCES

The following mitigation measures will be implemented to address Cultural Resources:

Mitigation Measures Cultural Resources-1

1) A Native American Tribal representative shall be onsite to monitor all construction activities within the four culturally sensitive areas.

2) A professional archaeologist shall be onsite to monitor all construction activities within the four culturally sensitive areas.

3) In the event that previously undocumented cultural resources are encountered during project construction, work within the immediate vicinity (500 feet) of the find will be temporarily halted or diverted. Work would not continue at the site until the archaeologist and Tribal representative have evaluated and or recorded the site and prepared additional recommendations. Construction shall only resume with approval by the Council's board of directors.

4) If any significant cultural resources are found in a project location, a qualified historian, archaeologist and/or appropriate Native American Tribal representative will be brought in to monitor any ground-disturbing work in that area from that point forward.

Mitigation Measures Cultural Resources-2

No human remains or burial sites have been documented or are known to exist at the proposed project sites. No impact is anticipated, but if any human remains or burial artifacts are identified, implementation of Mitigation Measures Cultural Resources-2 below will reduce the impact to a less than significant level.

1) In the event that human remains are discovered, work shall cease immediately in the area of the find and the project manager/site supervisor will notify the Council's Executive Director. Any human remains and/or funerary objects shall be left in place or returned to the point of discovery and covered with soil. The Executive Director will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the Council, which in turn will notify the appropriate authorities.

2) If the coroner or tribal representative determines the remains represent Native American interment, the Council will contact the most likely descendants and work with

appropriate parties to carry out appropriate disposition of the remains. Work shall not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination. Only authorized persons shall handle the human remains or funerary objects.

3) If it is determined the find indicates a sacred or religious site, the site shall be avoided. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives shall also occur as necessary to define additional site mitigation or future restrictions.

GEOLOGY AND SOILS

No Mitigation Measures Required.

HAZARDS AND HAZARDOUS MATERIALS

The following mitigation measures will be implemented to address Hazards and Hazardous Materials:

Mitigation Measures Hazmat-1

1) All equipment will be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.

2) The contractor(s) will prepare an emergency spill response plan prior to the start of construction. Council will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the ITSW during construction, the contractor will immediately notify the appropriate Council staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.

3) No maintenance or fueling activities shall be permitted within 200 feet of a stream.

4) Equipment will be cleaned and repaired (other than emergency repairs) outside the ITSW boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside ITSW boundaries, at a lawfully permitted or authorized designation.

Mitigation Measures Hazmat-21) If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the ITCWC Executive Director will be contacted. Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established procedures and in compliance with all

local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.

Mitigation Measures Hazmat-3

1) A fire safety plan will be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.
2) Smoking will not be allowed on any portion of the InterTribal Sinkyone Wilderness property at any time during the project, including at the work crew camps. Campfires will not be allowed at work crew camps located on the InterTribal Sinkyone Wilderness property.
3) Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.

4) Construction crews will be required to park vehicles away from flammable material such as dry grass and brush. At the end of each workday, trail equipment will be parked over mineral soil to reduce the chance of fire. Equipment will also be required to park in locations that will minimize prolonged exposure to slope failure. All equipment will be required to be mechanically sound and free of flammable debris.

5) Contractors will be required to have a radio on site capable of direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

HYDROLOGY AND WATER QUALITY

The following mitigation measures will be implemented to address Hydrology and Water Quality:

1) All mechanized trail equipment work will occur in the dry season, before October 15th.

2) Trail Construction work will not occur in locations where surface runoff occurs due to rainfall.

LAND USE AND PLANNING

No Mitigation Measures Required.

MINERAL RESOURCES

No Mitigation Measures Required.

NOISE

The following mitigation measures will be implemented to address Noise:

1) Construction activities will be limited to the hours between sunrise and sunset.

2) Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer.

3) Equipment and trucks used for construction will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.

4) Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

POPULATION AND HOUSING

No Mitigation Measures Required.

PUBLIC SERVICES

No Mitigation Measures Required.

RECREATION

No Mitigation Measures Required.

TRANSPORTATION/TRAFFIC

No Mitigation Measures Required.

UTILITIES AND SERVICE SYSTEMS

No Mitigation Measures Required.

CHAPTER 6 — MONITORING PLAN

Two types of monitoring will be carried out in conjunction with the activities proposed under the property's Trails Project. One type of monitoring will consist of the trail crew visiting the trail reroute during or directly after all large storms during the first year after construction. The crew will be responsible for doing any emergency maintenance and repairs, and will report to the Executive Director of the InterTribal Sinkyone Wilderness Council for any major repairs.

The other type of monitoring will take place during construction operations to ensure that work is carried out in compliance with the terms of this MND. If the Council determines that work is not in compliance then the contractors, trail crew and trails supervisor will be notified so that corrective measures can be taken. If problems continue, work will cease while the project is reevaluated and workers are instructed on measures necessary to improve work standards. Persistent difficulties will result in termination of the contract. Reports will be filed with the InterTribal Sinkyone Wilderness Council and the California Coastal Conservancy and will summarize the quality and quantity of work accomplished. Any difficulties regarding compliance with the terms of the InterTribal Sinkyone Wilderness Public Trails Project MND will be noted along with recommendations to improve future efforts. See *Appendix F—InterTribal Sinkyone Wilderness Public Trails Project—Mitigation, Monitoring and Reporting Plan*.

CHAPTER 7 — GLOSSARY, REFERENCES, & LIST OF PREPARERS

GLOSSARY

ABUTMENT: Foundation at either extreme end of bridge that supports the mud sill and stringers.

AGGRADE: the filling of a stream channel with sediment. This usually happens when the supply of sediment is greater than the stream is transporting. Compare to "degrade" and "graded stream."

ALIGNMENT: the area affected by a road or trail including the fill slopes, road bench, and cut bank. Also a linear representation of features on a map such as a stream channel.

BACK SLOPE: The bank along the uphill side of trail, usually sloped back a varying degree, depending on bank composition and slope stability.

BERM: The ridge of material formed on the outer edge of the trail which projects higher than the center of the trail tread.

BORROW: Soil, gravel or rock materials taken from approved locations away from the trail.

BRIDGE: A structure, including supports, erected over a depression or stream and having a deck for carrying traffic. May have railings.

BRUSHING: Removal of living and dead vegetation from trail

CHECK DAMS: Log, rock or wood barriers placed in deeply eroded trails or erosional channels to slow flow of water to allow accumulation of fine fill material behind it.

CLEARING LIMITS: The outer edges or a clearing area as specified by trail class, shown on drawings or explained in class definition.

CLEARING: Removal of windfall trees, uproots, leaning trees, loose limbs, wood chunks, etc. from trail.

CLIMBING TURN: A turn which is constructed on a slope of 30 per cent or less when measured between the exterior boundaries of the turn and changes the direction of the trail 120 - 180 degrees.

COMPACTED: The degree of consolidation that is obtained by tamping with hand tools or by stomping mineral soil and small aggregate in successive layers not more than 6 inches in depth.

CURVILINEAR: road or trail alignments following the contours of the land and crossing those contours at low angles. The curvilinear layout keeps the alignment perpendicular to the overland sheet flow or runoff.

CUTBENCH: the portion of a roadway that has been cut into bedrock or native soil. Compare with embankment.

DEGRADE: refers to the erosion of a stream channel. This usually happens when the supply of sediment is less than the amount the stream is transporting. Compare to "aggrade" and "graded stream." Also refers to poor water quality or a disturbed watershed function.

DRAINAGE DIP: A reverse in the grade of the trail bed accompanied by outslope which will divert water off the trail bed.

DUFF: A layer of decaying organic plant material deposited on the surface of the ground principally comprised of leaves, needles, woody debris and humus.

ENDHAULING: the transportation of excavated material to a stable storage location using manual or motorized wheelbarrows.

ENERGY DISSIPATER: material such as rock riprap or a structure made of logs, metal pipe, or poured concrete that is used to reduce the energy of flowing water below culvert outlets or dips.

ENTRENCHED TRAIL: A cupping, rutting or trenching in the trail tread surface resulting from trampling, standing water, uncontrolled surface runoff or a combination of these factors.

EROSION CONTROL: activities that prevent soil from being detached and moved down slope including, but not limited to, road removal, revegetation, mulching with brush, out sloping, and compaction of unstable fill.

EROSION PREVENTION: cost effective techniques used to prevent erosion before it happens.

FALL LINE: an imaginary line on a sloped surface that follows the steepest angle. You can think of the fall-line as the line that would be made by a ball rolling down the slope.

FILL: material used to construct roads and related structures. Fill can include soil, rock, and large organic debris.

FILL-SLOPE: Area of excavated material cast on the down slope side of trail cut (also called embankment).

FORD: A water level stream crossing constructed to provide a level surface for safe traffic passage.

FULL BENCH: Where the total width of the trail bed is excavated into slope and the trail bed width is not made of compacted fill slope.

GEOMORPHOLOGIST: a person who studies geomorphology.

GEOMORPHOLOGY: the study of the earth's surface and the processes that shape it. Geomorphology is closely related to geology.

GRADE: the natural, proposed, or planned ground surface. Usually grade is set to match the surrounding topography.

GRADED STREAM: a stream that, over a long period of time can move as much sediment as is supplied to it. Compare to "aggrade" and "degrade."

GRADIENT: the measurement of the angle along the length of a road or a stream. This term is often confused with grade (see grade).

GULLY: a steeply sided channel caused by concentrated surface runoff erosion. Gullies can usually be identified by their location away from natural stream valleys. Gullies are at least 1 square foot in cross-sectional area. Compare with rill.

HAZARDOUS TREE: An unstable tree 5 inches or greater in diameter at breast height which is likely to fall across the trail.

HYDROLOGY: the science dealing with the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rock, and in the atmosphere. This term is often confused with hydrogeology, which is the science of groundwater.

INBOARD: refers to the upslope side of a road, trail or other feature.

INSLOPE: Where the trail bed is sloped downward toward the backslope of the trail.

LARGE WOODY DEBRIS (LWD): also known as large organic debris (LOD) refers to logs and stumps found in stream channels, road fills, etc., having a diameter greater than 12 inches and a length greater than 6 feet.

MASS WASTING: a general term that includes many types of massive earth movements. These include rock slides, debris slides, debris flows, and earthflows, etc.

MEANDER: a series of gentle curves in a stream, road, or trail.

MEMORY: a subsurface zone where water will preferentially flow due the presence of a gully or inboard ditch buried in recontoured fill. Also see ditch memory.

MINERAL SOIL: Soil or aggregate that is free from organic substance and contains no particles larger than 2 inches in greatest dimension.

MUD SILL: Foundation on which a bridge is built.

OBLITERATION: to completely remove the road feature from the landscape. This is accomplished by full recontouring. See full recontouring.

OPERATOR: the person operating heavy equipment or other machines.

OUTBOARD: refers to the downslope side of a road, trail or other feature.

OUTSLOPE: The trail bed is sloped downward toward the embankment or daylight side of the trail.

OUTSLOPING: the treatment of a road to eliminate diversion potential along the roadbed during road reengineering. Outsloping includes excavation of some of the road fill along the outboard edge of the road and placing it against the cutbank to eliminate the inboard ditch and provide drainage toward the outside of the road. Outsloped roads are commonly graded and covered with compacted road base to harden the surface.

PARALLEL DITCHING: A lateral drainage ditch constructed adjacent to the trail tread to catch surface water sheeting from the tread surface and divert it away from the trail. Generally this drainage system is utilized in low flat areas or areas where multiple entrenched trails have developed.

PARTIAL RECONTOURING: similar to outsloping, this term is reserved for roads that are to be removed or decommissioned. The partial recontour often has a steeper cross slope on the former roadbed to ensure proper drainage. Partially recontoured roads are not matched at the top of the cutbank like fully recontoured roads.

PERMEABILITY: a measure of the rate at which water can pass through soil.

PRE-FIELD: Performing a physical examination of the project work site in order to evaluate solutions to trail deficiencies, select the appropriate course of action, formulate the design and quantify the material, equipment and person hour requirements.

PROJECT SCHEDULE: A summary of quantities of work to be performed listed by individual trails.

PUNCHEON: A log or timber structure built to cross a swamp. Usually consists of sills, stringers and a log deck.

RETAINING WALL OR CRIB: Log or rock construction to support trail tread or retain back slope.

RILL: a small erosional feature similar to a gully in morphology but less than 1 square foot in cross-sectional area. Rills often form on soft bare soil or road surfaces. Compare with gully.

RIPPING: decompaction of the soil by means of rippers mounted on the rear of a dozer.

ROADWAY: the corridor including the cutbank, the inboard ditch, the roadbed, and the embankment.

RUNOFF: rainwater flowing on the surface of the ground. Runoff can be generated by rain falling on saturated ground or from heavy rain that cannot soak in fast enough.

SAFETY RAILINGS: Safety railings are horizontal or diagonal structural members which are attached to vertical posts for the purpose of delineating trails, protecting vegetation, providing safety barriers for hikers at overlook areas and assisting hikers in negotiating trail structures such as bridges and steps.

SEDIMENT: Silt, sand, clay, and gravel that is moved by water and deposited at some location.

SEDIMENT CONTROL: activities that filter dirt out of water, including silt fence and sediment retention basins.

SIDESLOPE: The natural slope of the ground measured at right angle to the center line of the trail.

SLOPE ANGLE: the angle of the hill slope measured in percent along the fall line.

SOIL: clay, silt, sand, compost, air, water, and weathered rock mixed in various proportions. Soil consists of horizons or layers that display different amounts of weathering and fertility.

SPECIFICATIONS: Standards to which trails and trail structures are built and maintained according to class.

SPOILS: soil and organic material that is excavated from stream crossings or road embankments that is used for recontouring or can be end-hauled to a stable storage location.

STREAM CROSSING: a constructed road section across a natural stream. There are many types of crossings such as bridges, culverts, Humboldt (see definition), and fill crossings.

STRINGER: Log or timber that rests on mud sill and spans water course, muddy area, etc. Supports tread surface.

SURFACING: rock aggregate or paving that is placed on the road surface to reduce erosion and weather-proof a road for winter use.

SWITCHBACK: A turn which is constructed on a slope of more than 30 per cent when measured between the exterior boundaries of the trail 120 to 180 degrees. The landing is the turning portion of the switchback. The approaches are the 20 foot trail sections upgrade and downgrade from the landing.

THROUGH-CUT: a portion of a road that has cutbanks on both sides with drainage flowing down the road or inside ditch.

TRAIL BED: The portion of trailway between hinge point of the back slope and the hinge point of the fill slope or daylight.

TRAIL HARDENING: The manual, mechanical or chemical compaction/firming up of the trail tread surface resulting in a hard and flat surface that sheets water effectively and resists the indentations that are created by trampling.

TRAIL LOG: An inventory of physical features along or adjacent to a trail. An item by item footage record of trail features and facilities or improvements on a specific trail.

TRAILWAY: That portion of the trail within the limits of excavation and embankment.

TRAVEL WAY OR CORRIDOR: Includes tread surface and clearing limits.

TURNPIKE: Tread made stable by raising trail bed above wet, boggy areas by placing mineral soil between parallel side logs. Usually includes ditches alongside the trail.

WATER BAR: A device used for turning water off the trail, usually made of logs or stones.

WATER COURSE: Any natural or constructed channel where water will collect and flow.

WING WALL: A structural component of a retaining wall which is interlocked with the facer or front of the wall. The wing generally intersects with the facer at a 45 degree angle but may be at an angle between 1 and 90 degrees. This component is anchored by tie logs and assists the facer in retaining the fill material.

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http://soildatamart.nrcs.usda.gov/Manuscripts/CA694/0/MendocinoWP_CA.pdf

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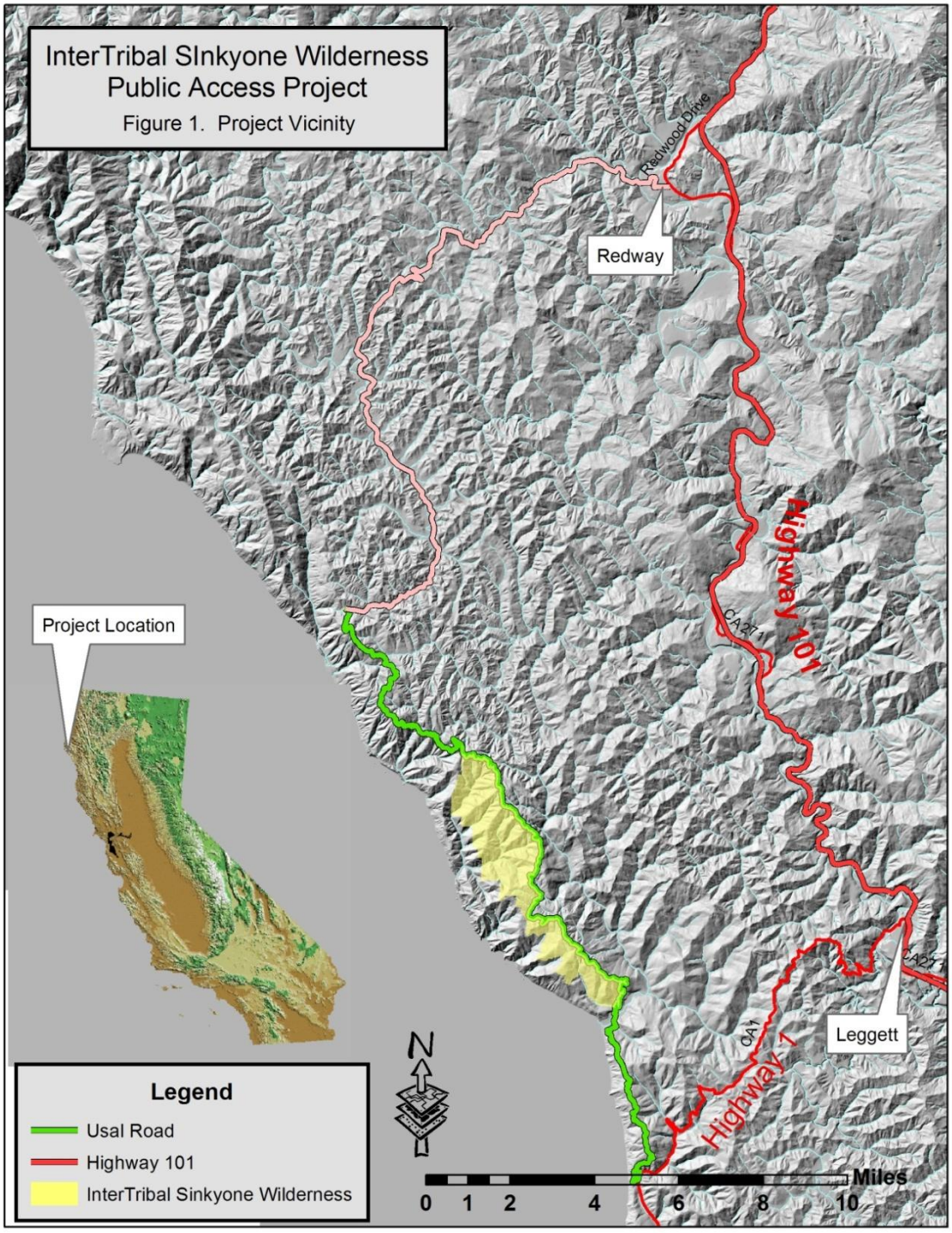
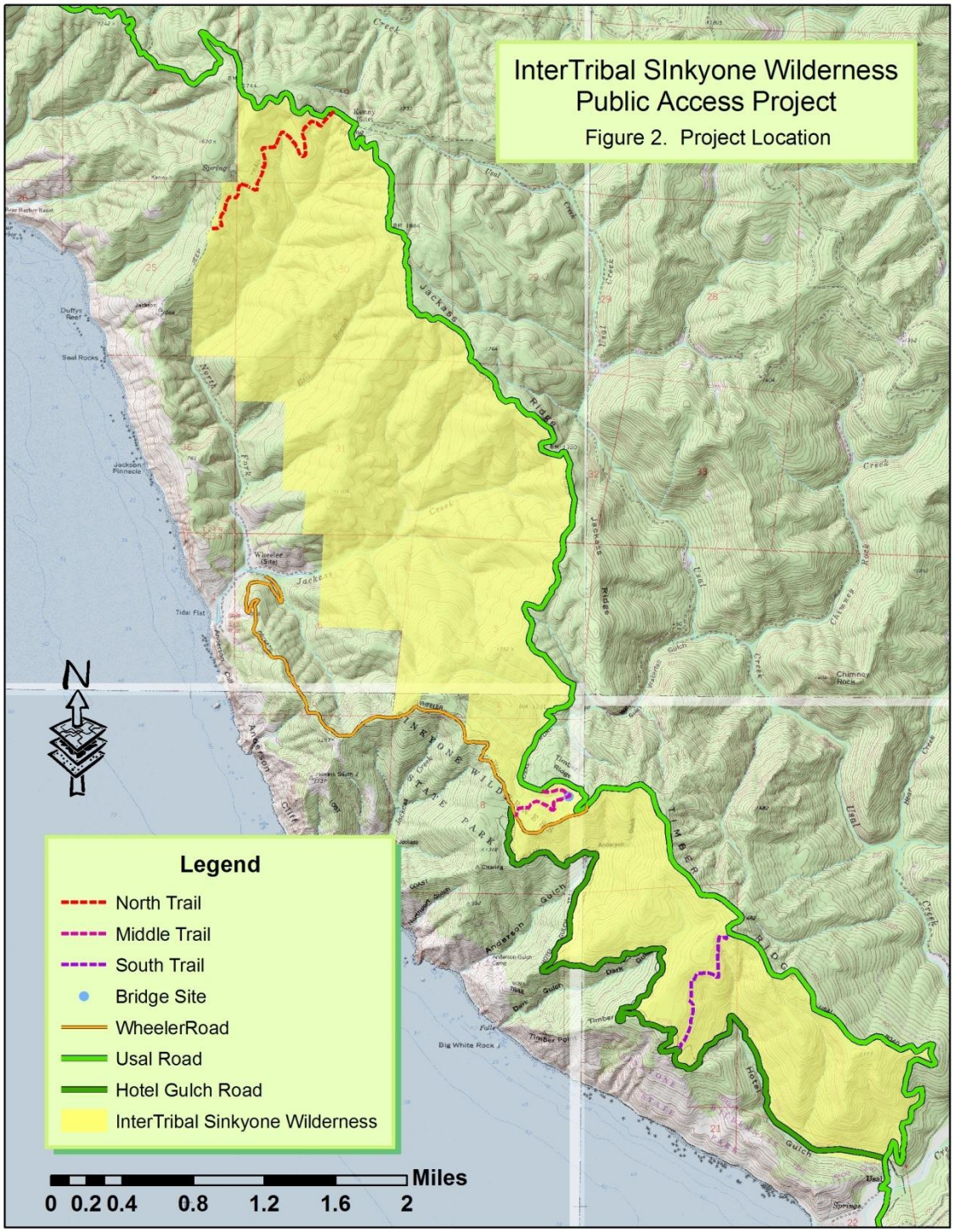
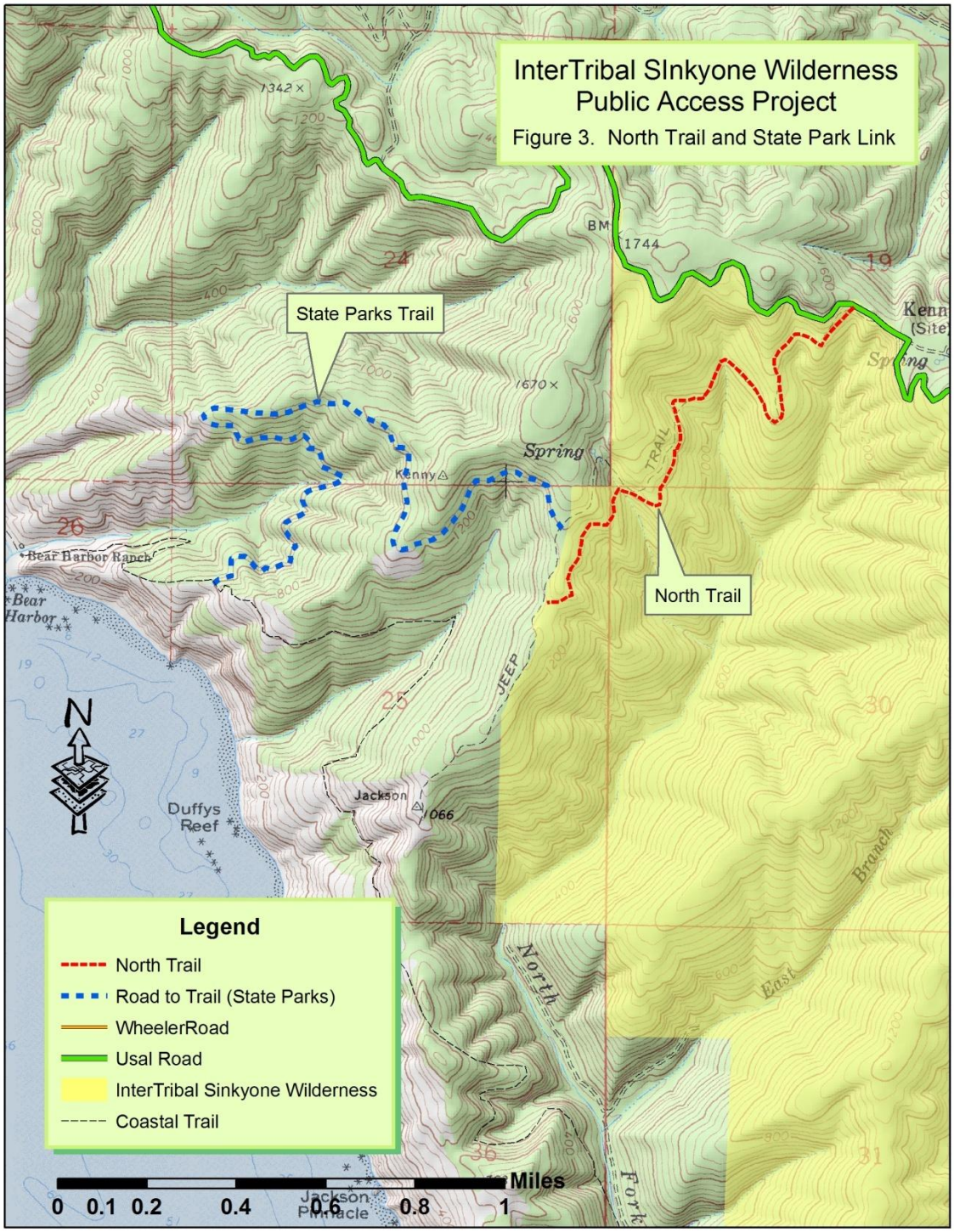
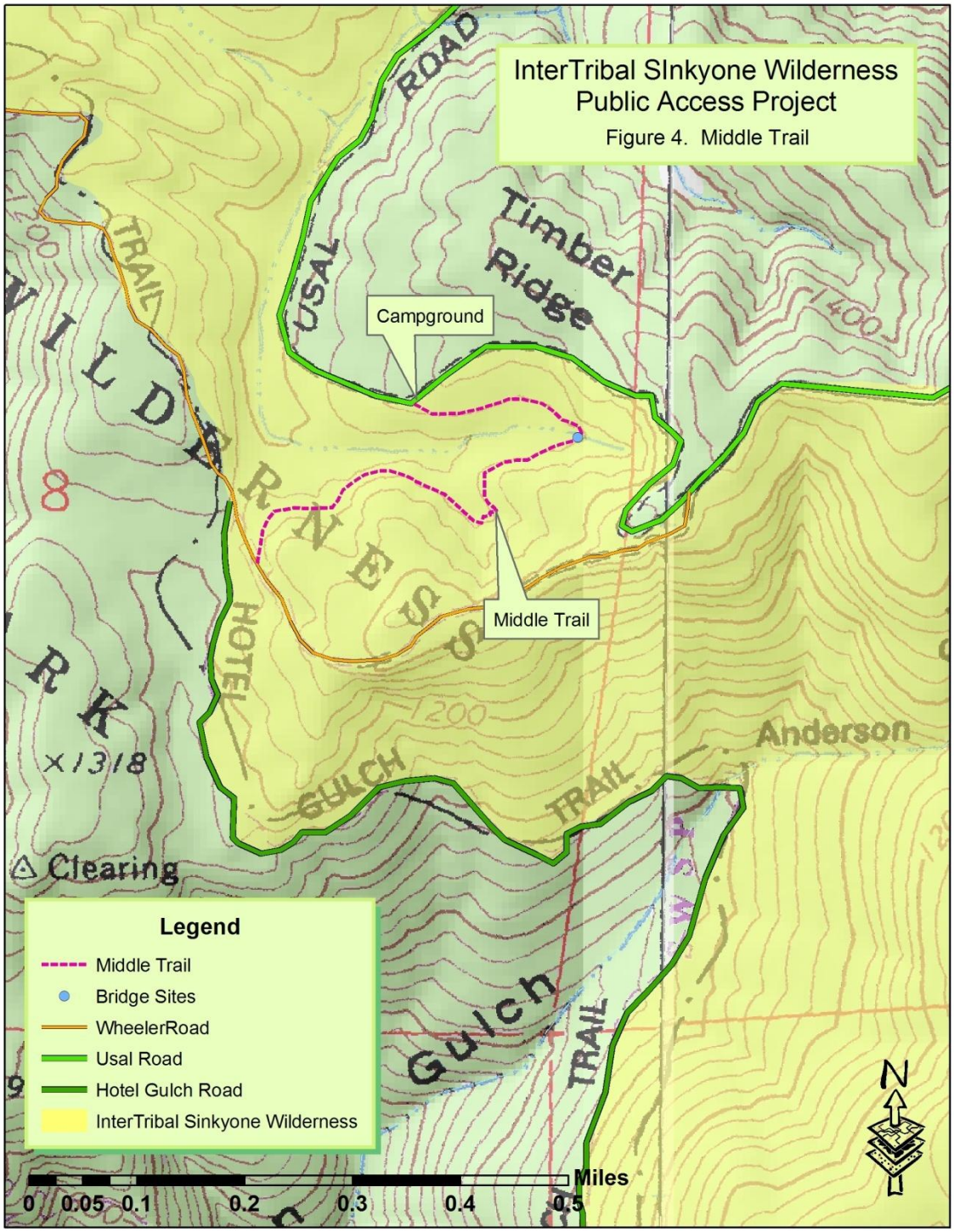
APPENDIX A — PROJECT MAPS



Mitigated Negative Declaration for InterTribal Sinkyone Wilderness Public Trails Project—September 2012




InterTribal SInkyone Wilderness
Public Access Project
Figure 3. North Trail and State Park Link
State Parks Trail
North Trail
Legend
North Trail
Road to Trail (State Parks)
WheelerRoad
Usal Road
InterTribal Sinkyone Wilderness
Coastal Trail
Miles
0 0.1 0.2 0.4 0.6 0.8 1
N
Bear Harbor Ranch
Bear Harbor
Duffys Reef
Jackson
Spring
Kenny
JEEP TRAIL
North Fork East Branch


InterTribal SInkyone Wilderness
Public Access Project
Figure 4. Middle Trail
Campground
Middle Trail
Timber Ridge
USAL ROAD
TRAIL
HOTEL GULCH TRAIL
Anderson
Clearing
Gulch
Legend
Middle Trail
Bridge Sites
WheelerRoad
Usal Road
Hotel Gulch Road
InterTribal Sinkyone Wilderness
0 0.05 0.1 0.2 0.3 0.4 0.5
Miles
N

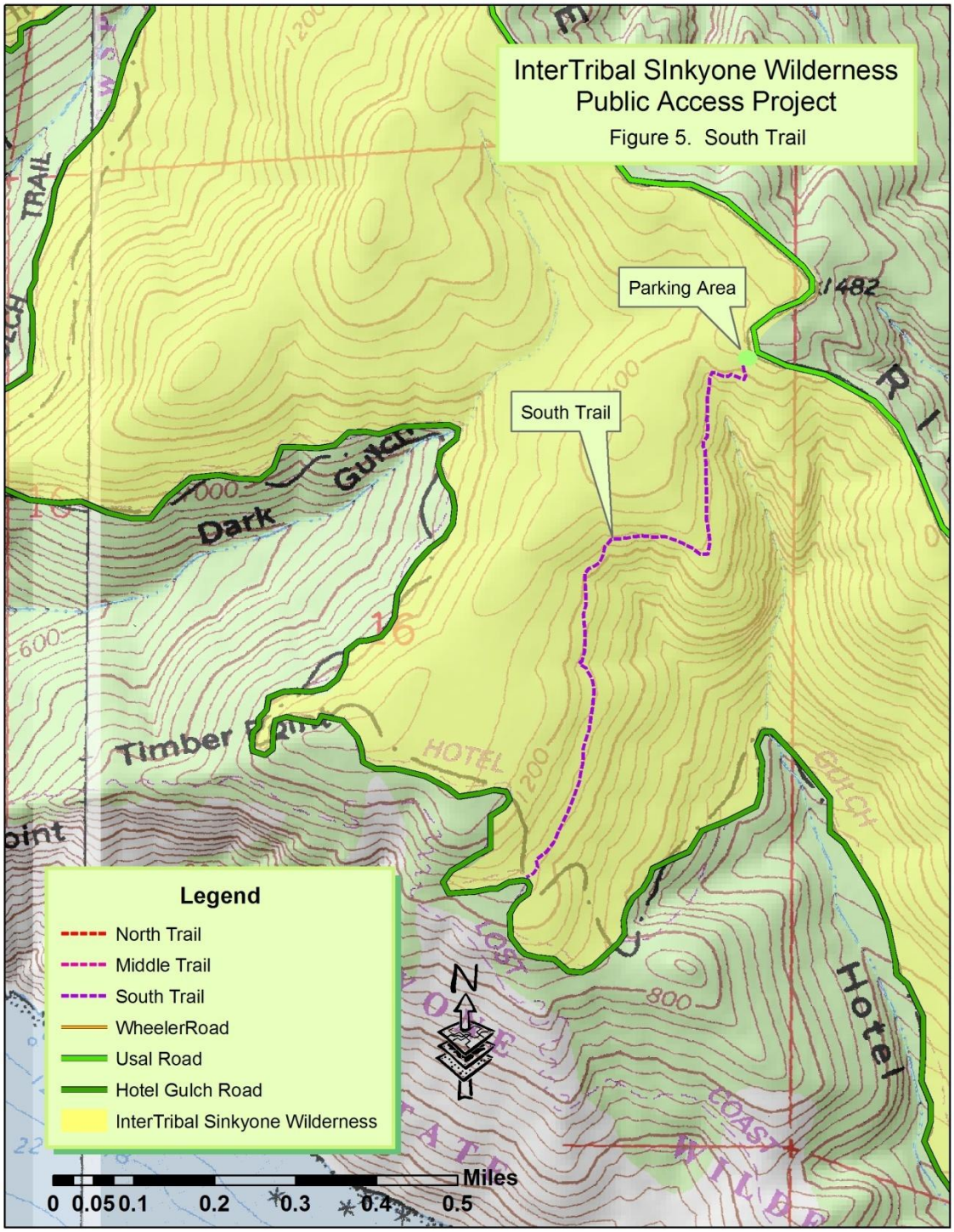
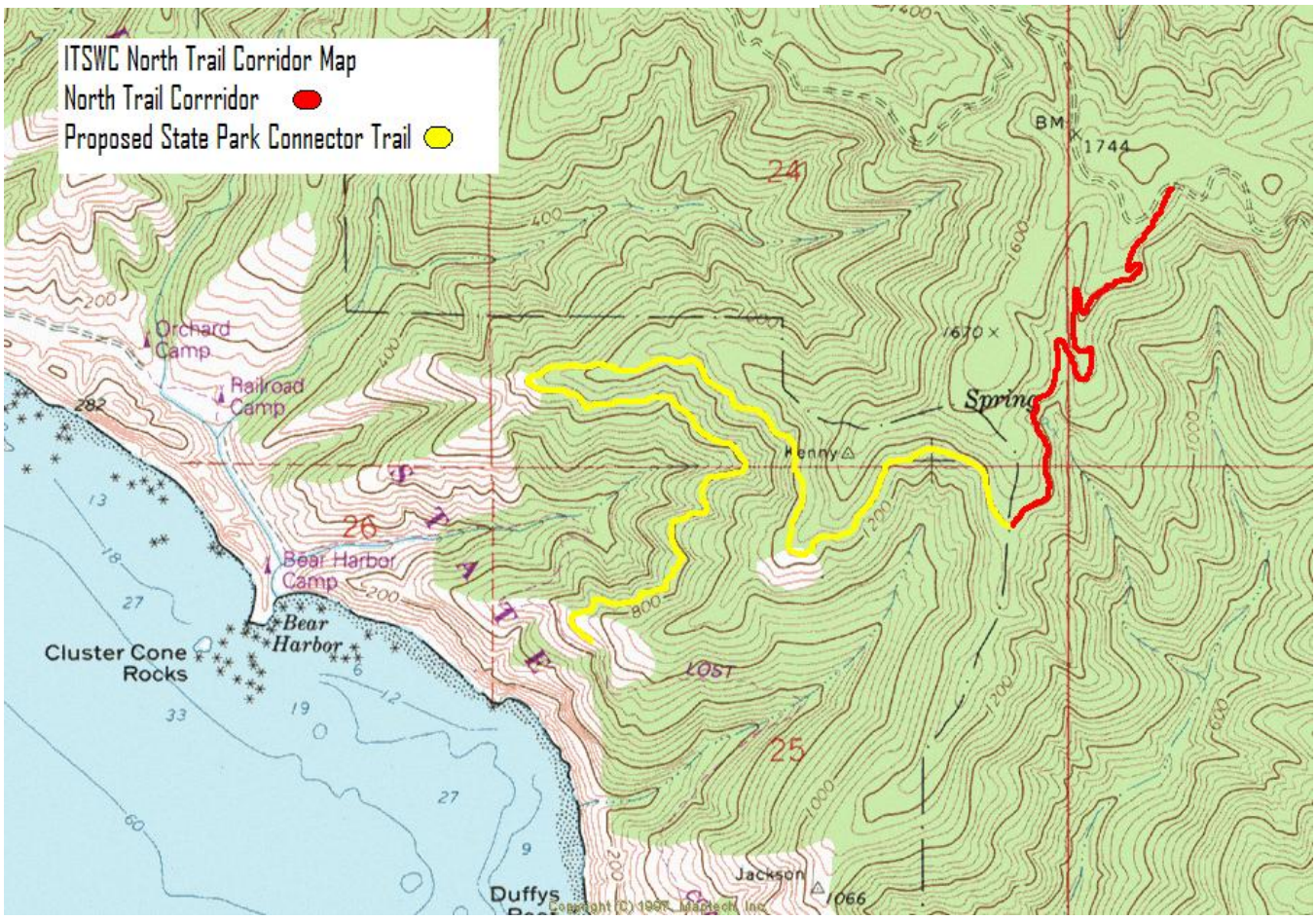

InterTribal SInkyone Wilderness
Public Access Project
Figure 5. South Trail
Parking Area
South Trail
Dark Gulch
Timber Point
HOTEL
Hotel
Legend
North Trail
Middle Trail
South Trail
WheelerRoad
Usal Road
Hotel Gulch Road
InterTribal Sinkyone Wilderness
N
Miles
0 0.05 0.1 0.2 0.3 0.4 0.5

Figure 6
Planned Future Optimum Alignment for North Trail
Red line = InterTribal Sinkyone Wilderness segment
Yellow line = Sinkyone Wilderness State Park segment



APPENDIX B — PROJECT PHOTOGRAPHS

South Trail Parking Lot & Trailhead. Photo courtesy of Sanctuary Forest.

Middle Trail Parking Lot & Trailhead. Photo courtesy of Sanctuary Forest.

North Trail Parking Lot & Trailhead (current, road-based alignment). Photo courtesy of Sanctuary Forest.

6-5

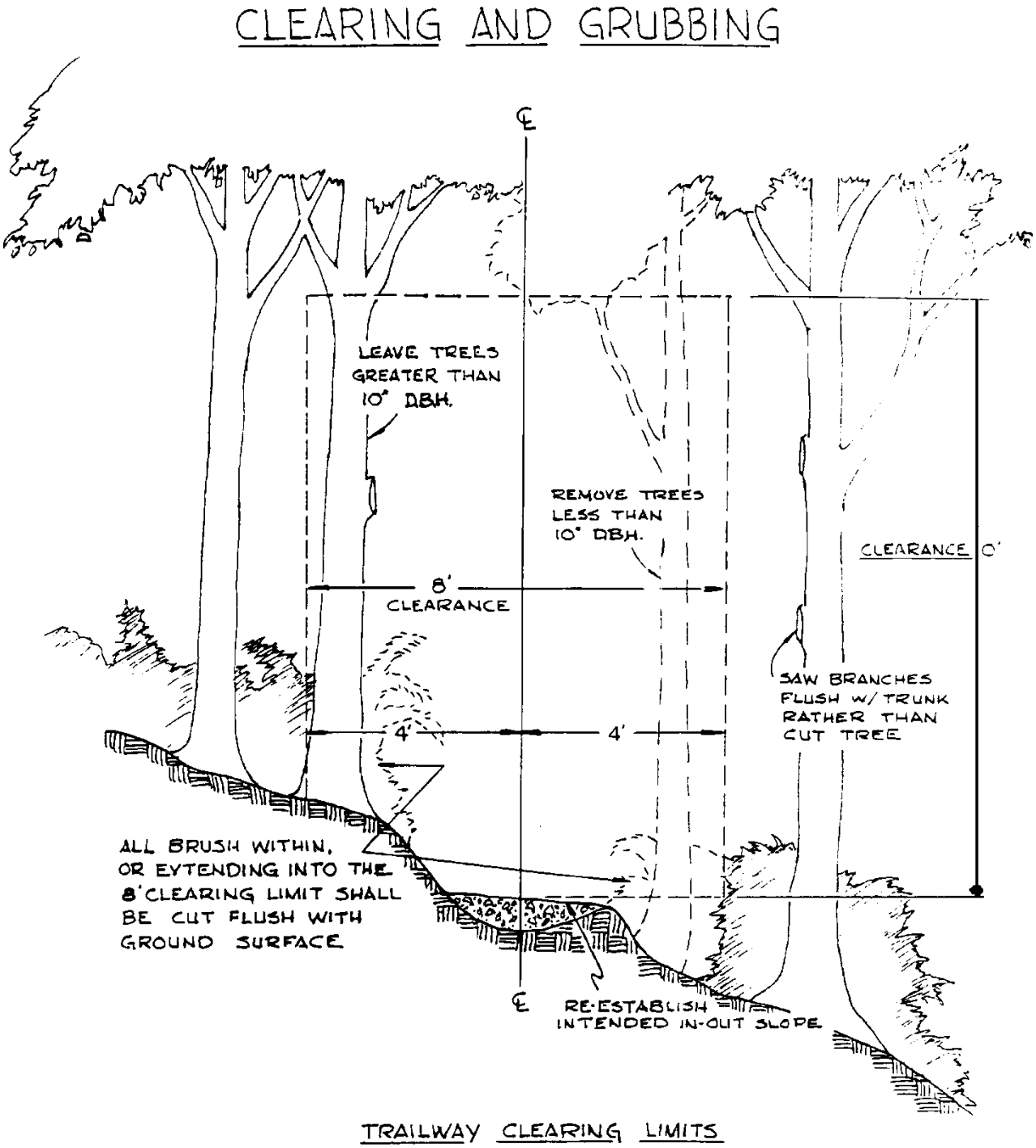
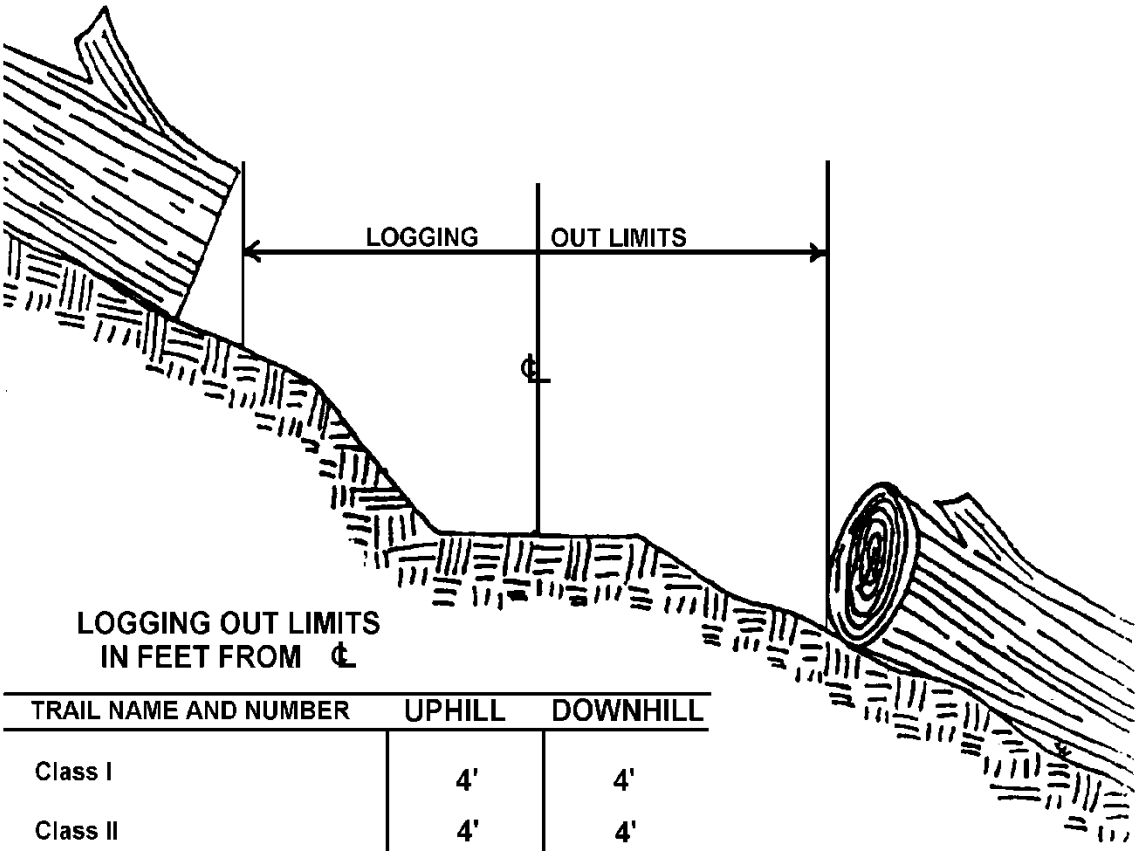

CLEARING AND GRUBBING
℄
LEAVE TREES GREATER THAN 10" DBH.
REMOVE TREES LESS THAN 10" DBH.
CLEARANCE 0'
8' CLEARANCE
SAW BRANCHES FLUSH W/ TRUNK RATHER THAN CUT TREE
4'
4'
ALL BRUSH WITHIN, OR EXTENDING INTO THE 8' CLEARING LIMIT SHALL BE CUT FLUSH WITH GROUND SURFACE
℄
RE-ESTABLISH INTENDED IN-OUT SLOPE
TRAILWAY CLEARING LIMITS
NOT TO SCALE

Figure 6.3

970—LOGGING OUT

6-3



LOGGING OUT LIMITS
IN FEET FROM ℄

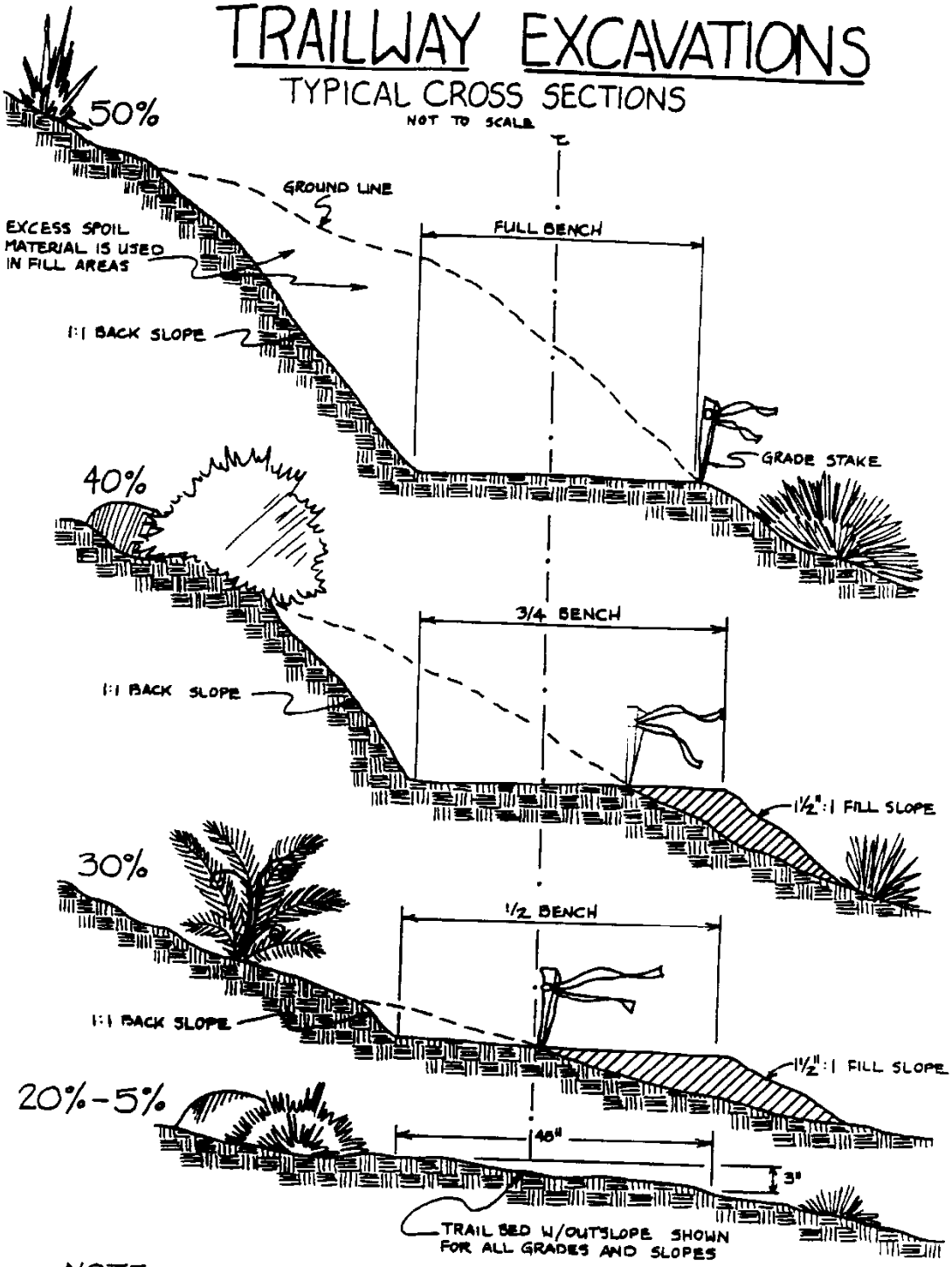
TRAIL NAME AND NUMBER	UPHILL	DOWNHILL
Class I	4'	4'
Class II	4'	4'
Class III	3'	3'
Class IV	Minimal For	Passage

NOT TO SCALE

970—3 (3/80)

Figure 6.1

10-11



NOTE: AMOUNT OF BENCH VARIES LINEARLY W/% OF SIDE SLOPE. ALL GRADE STAKES INDICATE GRADE AT MINERAL SOIL. ALL FILL TO BE MINERAL SOIL W/NO VEGETATION DEBRIS.

TYPICAL SWITCHBACK DETAILS

NOT TO SCALE

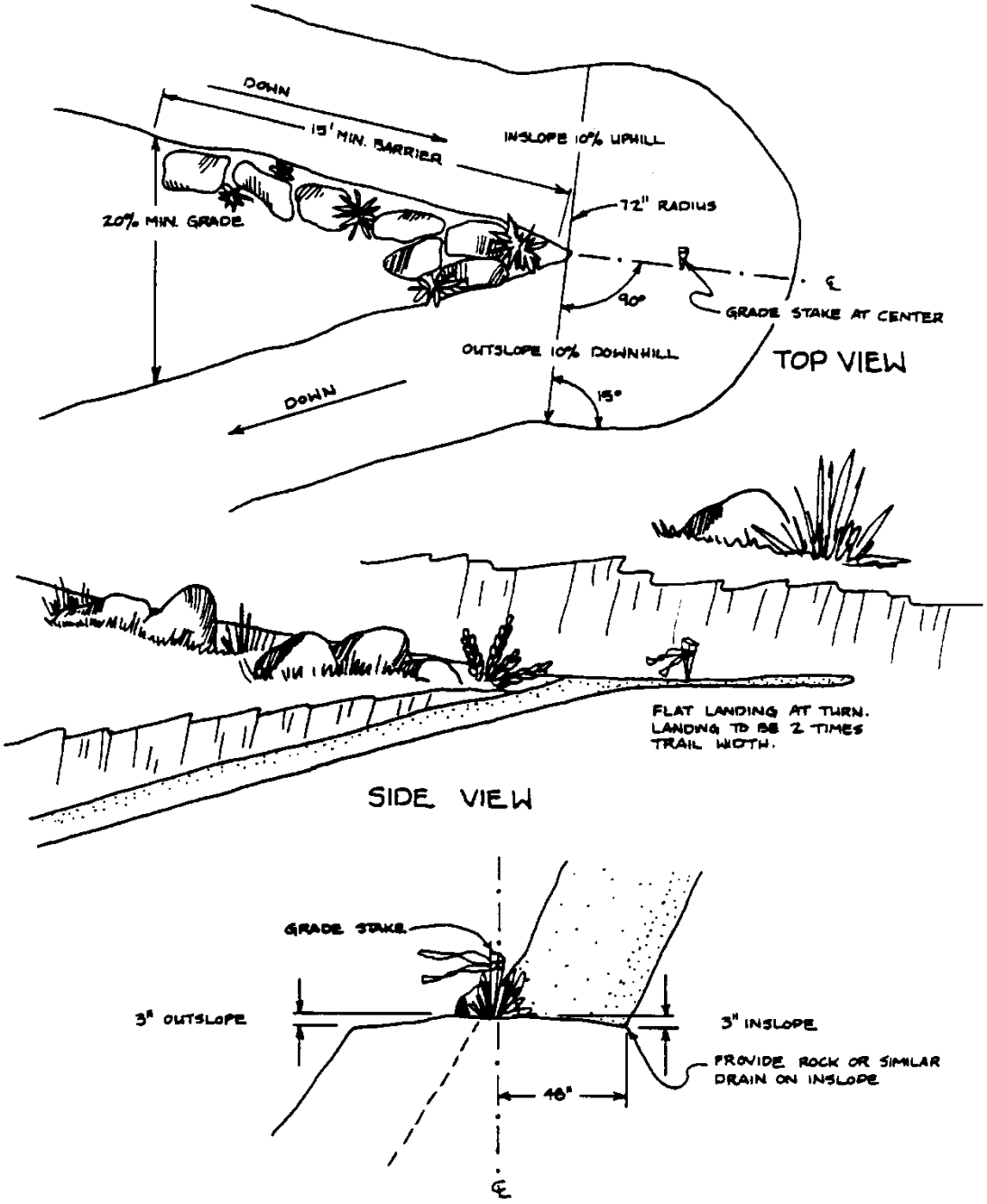
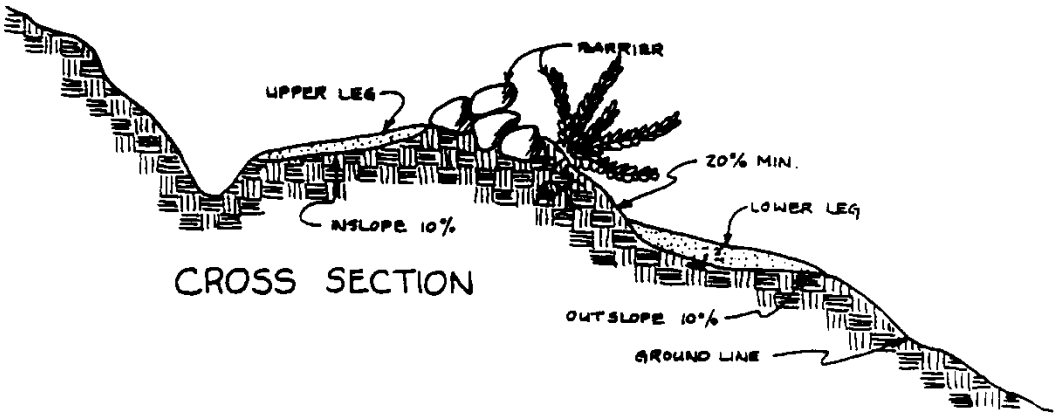


Figure 10.6

TYPICAL SWITCHBACK DETAILS

10-15

NOT TO SCALE



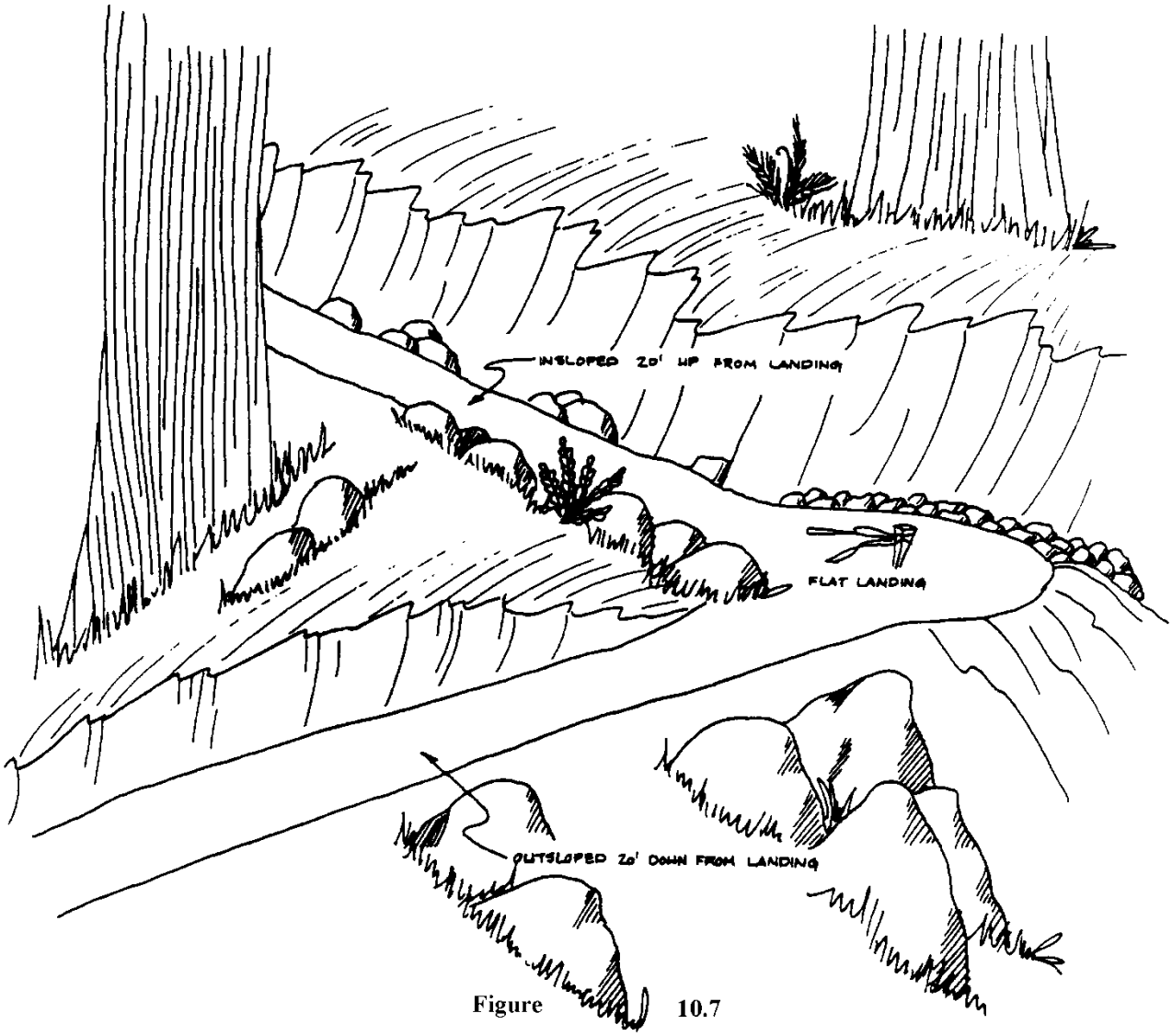


Figure 10.7

12-2

TYPICAL PUNCHEON DETAIL

NOT TO SCALE

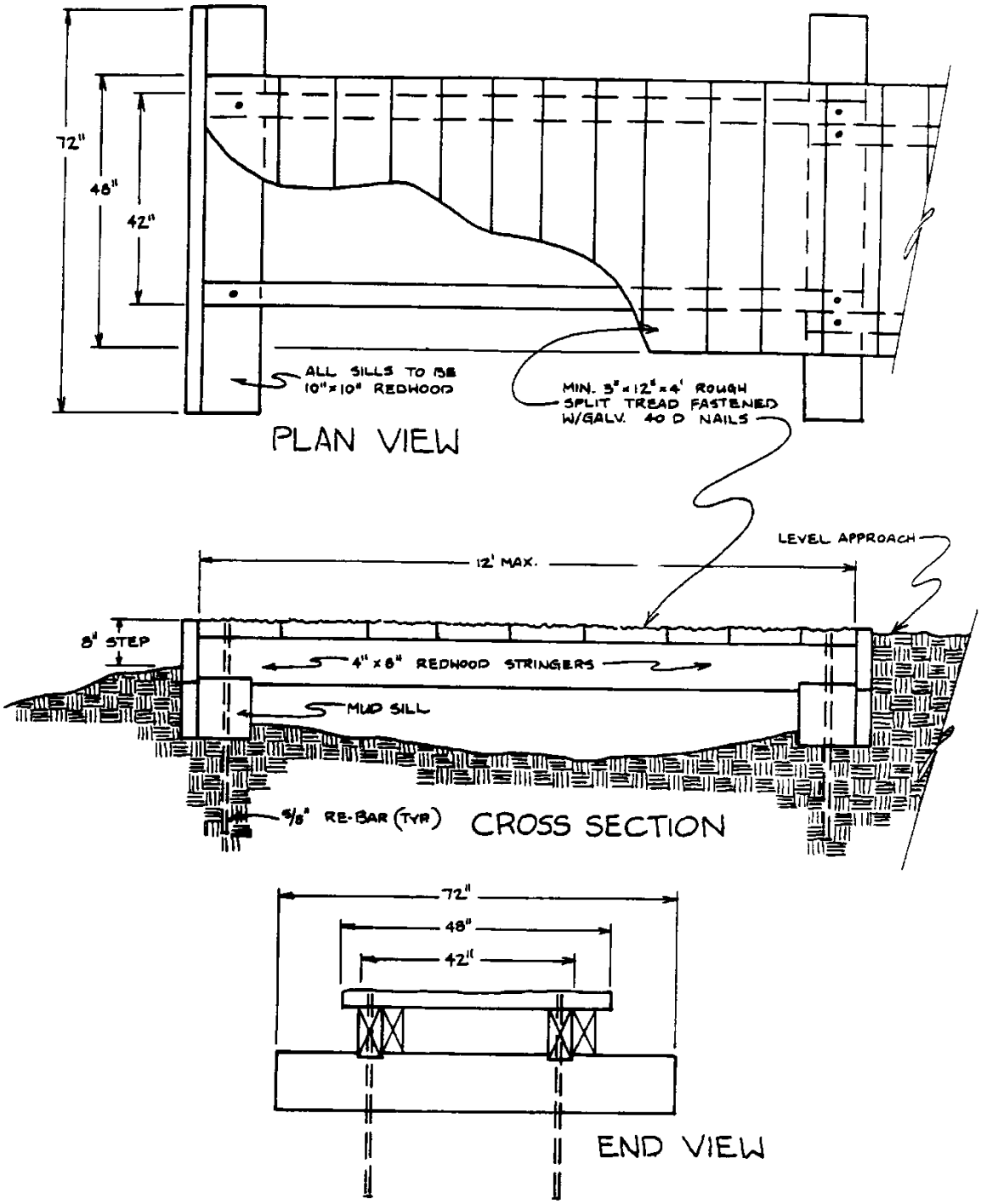
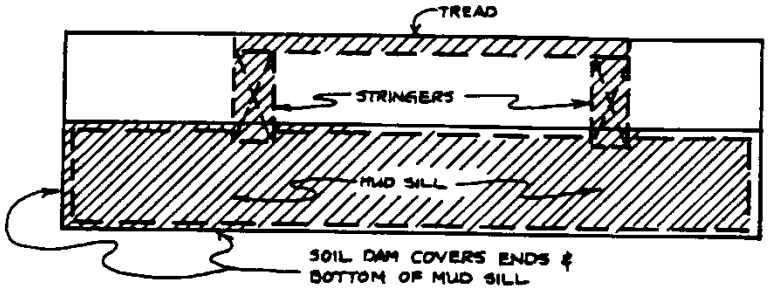


Figure 12.1

SOIL DAM DETAIL



END VIEW

CROSS SECTION

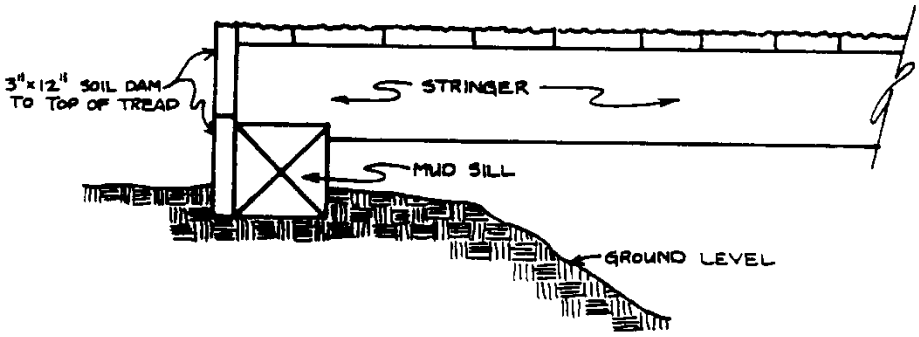


Figure 13.1

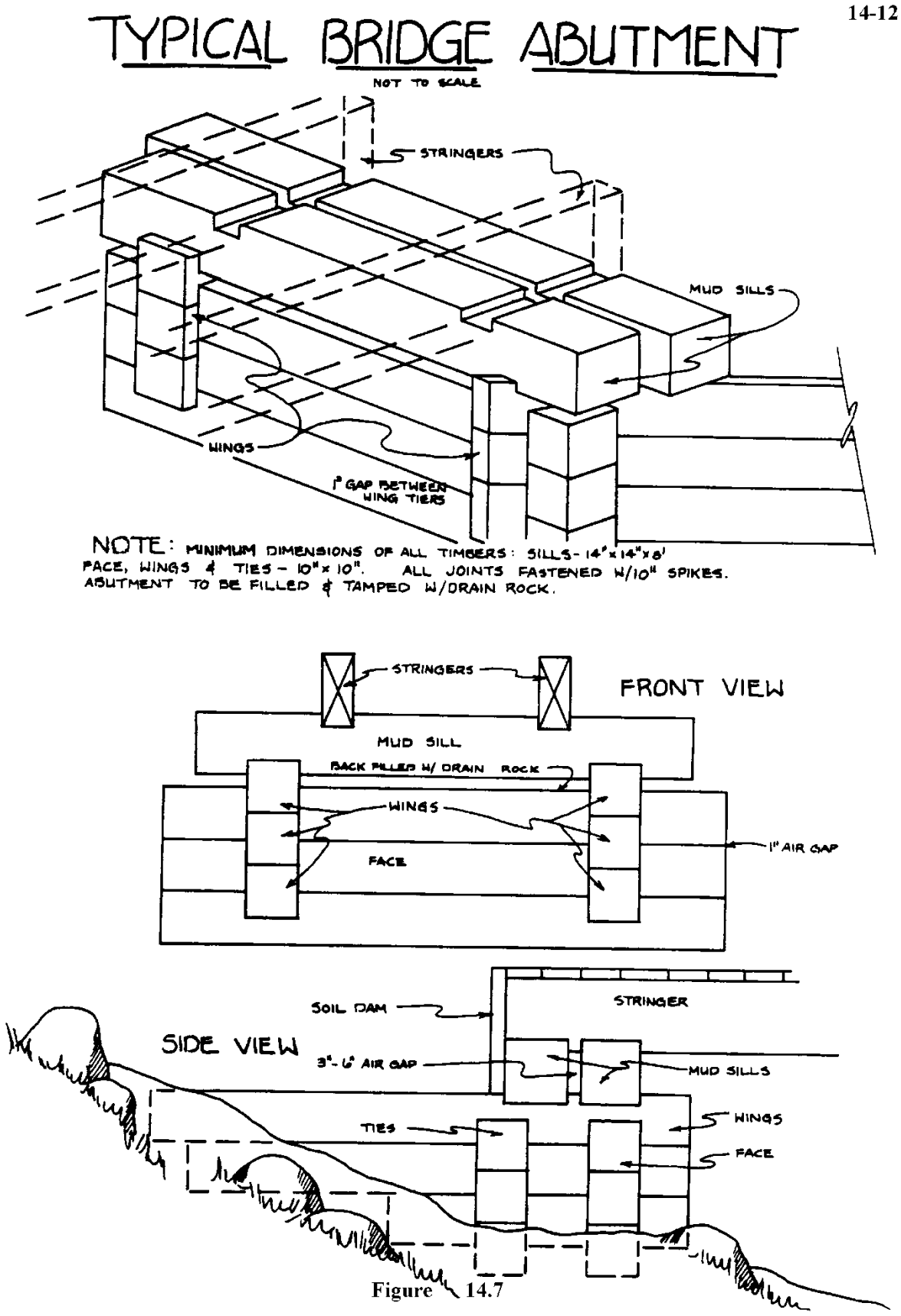

TYPICAL BRIDGE ABUTMENT
NOT TO SCALE
STRINGERS
MUD SILLS
WINGS
1" GAP BETWEEN WING TIERS
NOTE: MINIMUM DIMENSIONS OF ALL TIMBERS: SILLS - 14" x 14" x 8' FACE, WINGS & TIES - 10" x 10". ALL JOINTS FASTENED W/10" SPIKES. ABUTMENT TO BE FILLED & TAMPED W/DRAIN ROCK.
STRINGERS
FRONT VIEW
MUD SILL
BACK FILLED W/ DRAIN ROCK
WINGS
FACE
1" AIR GAP
SOIL DAM
STRINGER
SIDE VIEW
3"-6" AIR GAP
MUD SILLS
TIES
WINGS
FACE

Figure 14.7

MUD SILL ASSEMBLY DETAIL

NOT TO SCALE

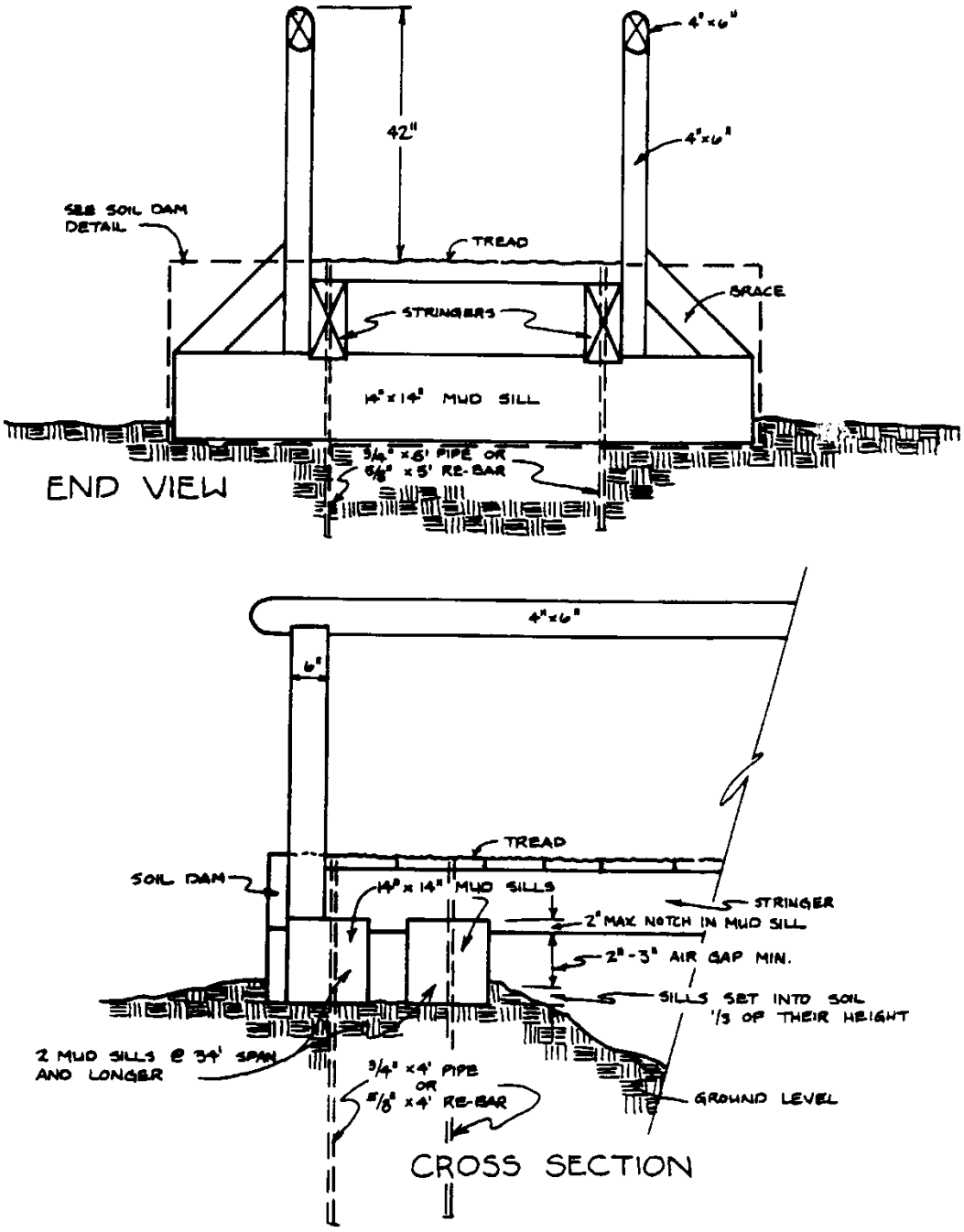


Figure 13.5

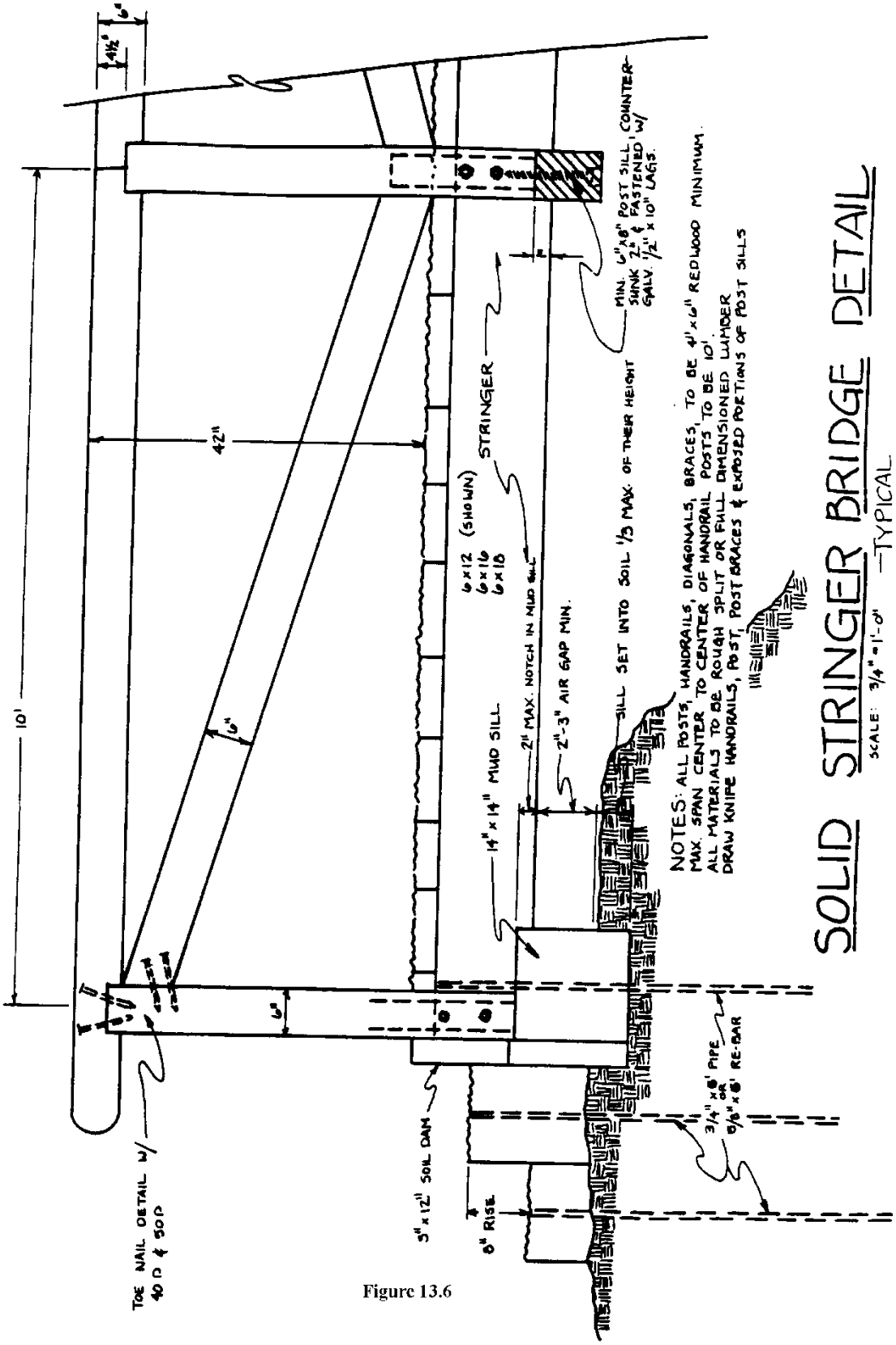
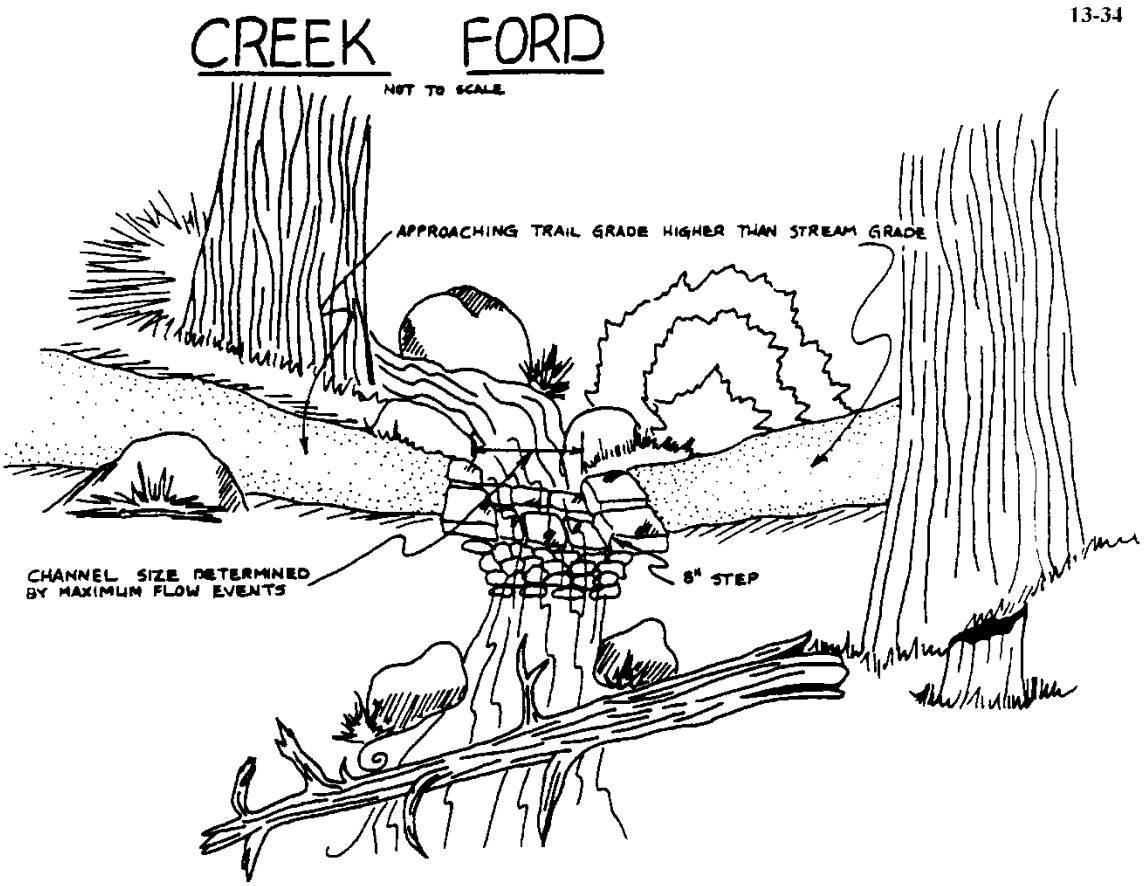

SOLID STRINGER BRIDGE DETAIL
SCALE: 3/4" = 1'-0" —TYPICAL
NOTES: ALL POSTS, HANDRAILS, DIAGONALS, BRACES, TO BE 4"x6" REDWOOD MINIMUM.
MAX. SPAN CENTER TO CENTER OF HANDRAIL POSTS TO BE 10'.
ALL MATERIALS TO BE ROUGH SPLIT OR FULL DIMENSIONED LUMBER
DRAW KNIFE HANDRAILS, POST, POST BRACES & EXPOSED PORTIONS OF POST SILLS
MIN. 6"x8" POST SILL, COUNTERSUNK 2" & FASTENED W/ GALV. 1/2" x 10" LAGS.
STRINGER
6x12 (SHOWN)
6x16
6x18
SILL SET INTO SOIL 1/3 MAX. OF THEIR HEIGHT
2" MAX. NOTCH IN MUD SILL
2"-3" AIR GAP MIN.
14" x 14" MUD SILL
42"
10'
6"
4 1/2"
3/4" x 8' PIPE
5/8" x 8' RE-BAR
5" x 12" SOIL DAM
8" RISE
TOE NAIL DETAIL W/ 40D & 50D

Figure 13.6

13-34



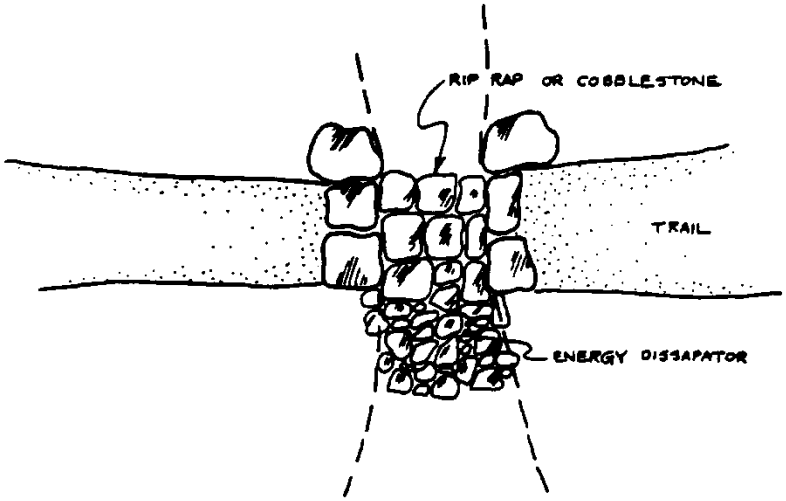
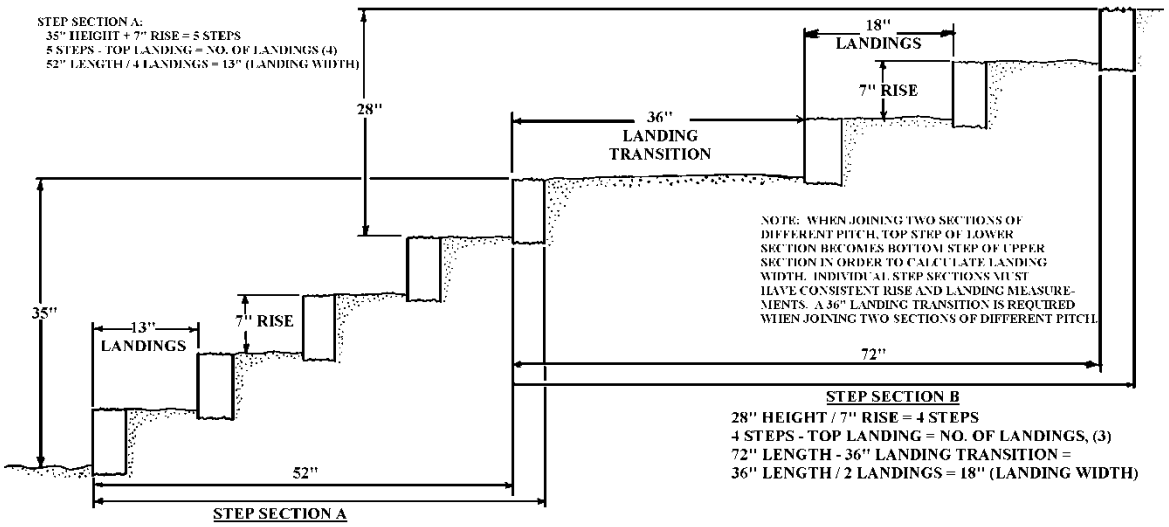


Figure 13.22

Mitigated Negative Declaration for InterTribal Sinkyone Wilderness Public Trails Project—September 2012

Figure 11.1



STEP CALCULATION

SCALE 3/4" = 1'-0"

11-2

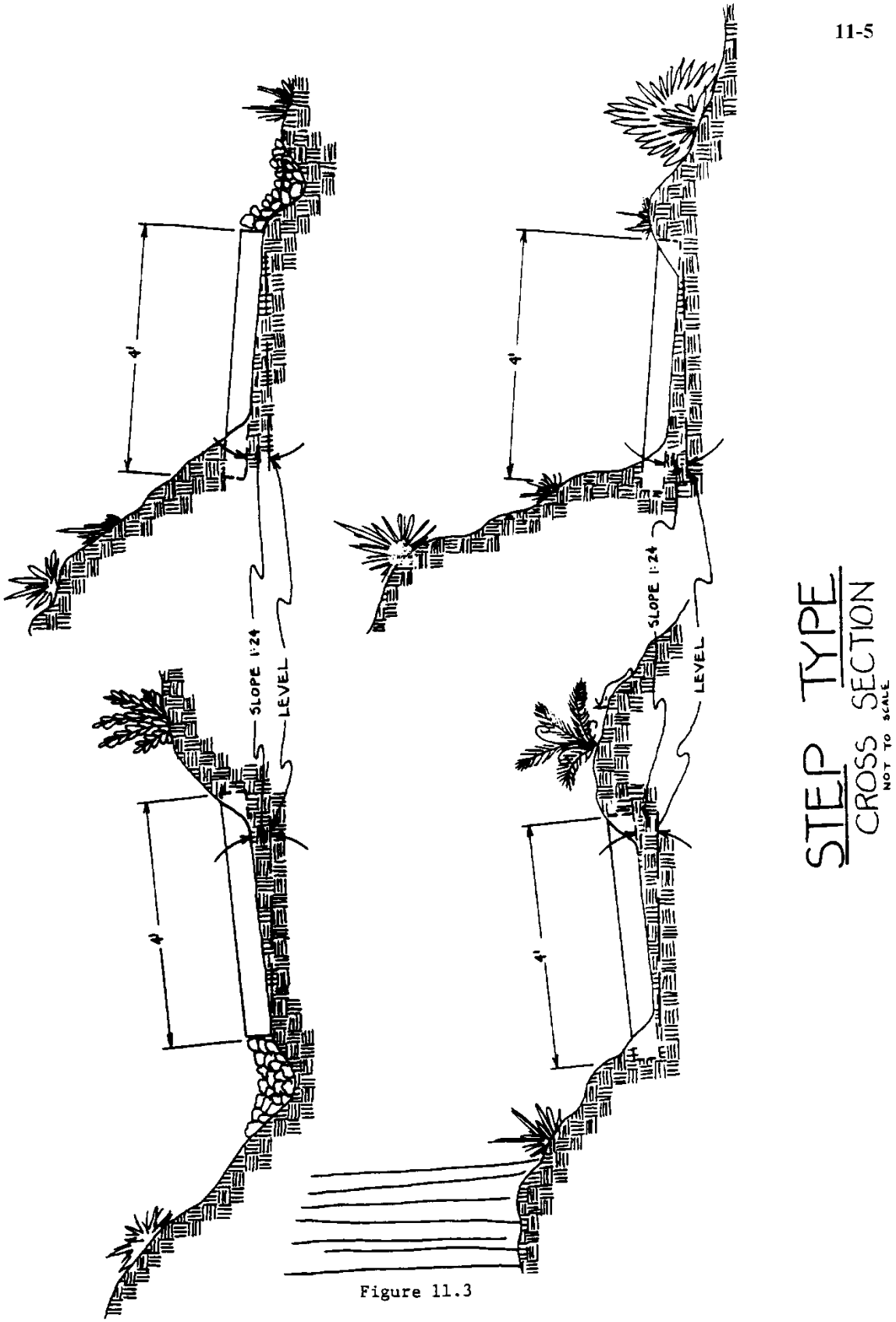

4'
SLOPE 1:24
LEVEL
4'
4'
SLOPE 1:24
LEVEL
4'
STEP TYPE
CROSS SECTION
NOT TO SCALE

Figure 11.3

APPENDIX D — SPECIES LIST

List of Special Status Species in Project Vicinity

Animal Species

Del Norte Salamander *(Plethodon elongatus elongates)*

Southern torrent salamander *(Rhycotriton variegates)*

Tailed Frog *(Ascaphus truei)*

Northern Red-legged Frog *(Rana aurora aurora)*

Foothill yellow-legged Frog *(Rana aurora boylei)*

Osprey (*Pandion haliaetus)*

Golden Eagle *(Aquila chrysaetos)*

Bald Eagle *(Haliaeetus leucocephalus)*

Cooper's Hawk *(Accipiter cooperii)*

Northern Goshawk *(Accipiter gentiles)*

Sharp-shinned Hawk *(Accipiter striatus)*

American Peregrine Falcon *(Falco peregrinus anatum)*

Northern Spotted Owl *(Strix occidentalis caurina)*

Vaux's Swift *(Chaetura vauxi)*

Purple Martin *(Progne subis)*

Sonoma Tree Vole *(Arborimus pomo)*

Pacific Fisher *(Martes pennanti pacifica)*

Plant Species

Leafy Reed Grass (*Calamagrostis foliosa)*

Long Beard Lichen (*Usnea longissima*)

APPENDIX E — BEST MANAGEMENT PRACTICES

Examples of Best Management Practices (BMPs) for trail construction in redwood forest ecosystems that will be followed for this project include:

1) Work crews shall not cut redwood tree roots greater than 2” diameter within the root health zone of redwood trees (5x stem diameter). Limits of this zone will be marked prior to a crew beginning excavations and crew shall closely monitor its work to ensure no root damage occurs.

2) The installation of silt fence, mulching of bare ground and restricting work to times when soils are saturated will prevent discharge of soils into streams.

3) All trail construction within drainages shall be full-bench style construction, and excavated materials shall be exported out of the drainage to a stable location.

4) In order to avoid impacts to possibly-present Northern Spotted Owls during nesting season, the project will confine use of gas-powered and diesel-powered tools of any kind to between July 12 and February 1, and will produce no project noise above ambient noise level outside this period.

APPENDIX F — MITIGATION, MONITORING AND REPORTING PLAN

InterTribal Sinkyone Wilderness Public Trails Project Mitigation, Monitoring and Reporting Plan August 2012					
Mitigation Measures and Project Conditions	**Timing**	**Responsible for Implementing Mitigation**	**Responsible for Ensuring Implementation**	**Required for Task Completion (Deliverable)**	**Date Completed**

Mitigated Negative Declaration for InterTribal Sinkyone Wilderness Public Trails Project—September 2012

InterTribal Sinkyone Wilderness Public Trails Project Mitigation, Monitoring and Reporting Plan August 2012					
Mitigation Measures and Project Conditions	**Timing**	**Responsible for Implementing Mitigation**	**Responsible for Ensuring Implementation**	**Required for Task Completion (Deliverable)**	**Date Completed**
AIR QUALITY					
AIR-1					
• Construction activities will be restricted to the period July 12 to February 1 in any given year. Vehicles and equipment used in the project shall be allowed to idle only when absolutely necessary.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Engines, carburetors, and exhaust systems of project's vehicles and equipment shall be maintained in excellent operating condition.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Work crews shall camp at trailhead locations during workweeks to eliminate daily commutes to worksites.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Work crews shall not use generators for powering camp lights or appliances. Camp stoves and lights, as well as appliances, utilities, and devices used in the camps shall be gas- or battery-powered instead of generator-powered.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Work crews shall carpool weekly to worksites to eliminate taking individual vehicles to the worksites.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Use of manual tools shall be maximized, and small-scale construction equipment shall be used only when needed.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Project contractors and work crew members shall be hired locally whenever possible to reduce travel distances.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Project equipment and materials shall be procured locally whenever possible to reduce travel distances.	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		
• Project materials shall be procured from project property whenever possible (including wood materials for various trails structures).	During Operations.	Trails construction contractor.	InterTribal Sinkyone Wilderness Council.		

Mitigated Negative Declaration for InterTribal Sinkyone Wilderness Public Trails Project—September 2012

InterTribal Sinkyone Wilderness
Public Trails Project
Mitigation, Monitoring and Reporting Plan
August 2012

Mitigation Measures and Project Conditions	Timing	Responsible for Implementing Mitigation	Responsible for Ensuring Implementation	Required for Task Completion (Deliverable)	Date Completed
BIOLOGICAL					
BIO-1 PLANTS					
• Prior to operations surveys shall be conducted by a qualified botanist within the project boundaries (all areas of proposed operations and adjacent areas that could be impacted where sensitive plant habitat is present). Surveys shall be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities" (www.dfg.ca.gov/whdab/pdfs/guideplt.pdf and Appendix D). Results of the survey effort shall be submitted to the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.	Prior to Operations During Floristically Appropriate Season.	InterTribal Sinkyone Wilderness Council.	InterTribal Sinkyone Wilderness Council.	Report documenting results of surveys. Report and document the results and mitigation measures if appropriate.	August 2006.
• The Council's primary means of mitigation for plants listed as Rare, Threatened, and Endangered, or which occur on the CNPS Lists 1A, 1B or 2 shall be avoidance (see below). These measures are dependent on the species' natural history and the potential for adverse affects or the potential for take. CNPS List 3 and 4 plants will be avoided when feasible; however, will not be required. The Council reserves the right to develop site-specific measures in consultation with the DFG. Such measures will be amended into the MND.	During Operations.	InterTribal Sinkyone Wilderness Council and Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
BIO-2 TREES					
• Work crews shall not cut redwood tree roots greater than 2" diameter within the root health zone of redwood trees (5x stem diameter). Limits of this zone will be marked prior to a crew beginning excavations and crew shall closely monitor its work to ensure no root damage occurs.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Cutting of trees (Douglas-fir and tanoak) will be limited to less than ten trees that are estimated to be >10 inches dbh and less than 22 inches dbh.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• To minimize impacts to native vegetation, work crews shall limit ground disturbance whenever possible by: —Restricting traffic to the trail prisms. —Allowing down woody debris already present to remain as much as possible.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		

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BIO-3 AMPHIBIANS					
• Care will be taken when moving woody material or large stones so that if amphibians are present they can be safely relocated away from the construction area. • If observed in the construction path, amphibians will be carefully relocated only far enough away in order to protect them from disturbance during construction. • When working in stream or along banks of streams, silt fences will be utilized. Any amphibians that are found will be moved outside of the fence throughout the construction period.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.	When appropriate, letter of consultation from the Calif. Dept. Fish & Game. Establish appropriate mitigation measures.	
BIO-4 BIRDS					
• Generic Falconiformes and Strigiformes Mitigation Measures 1. Pursuant to Fish & Game Code 3503.5 it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Therefore prior to project operations the Council shall contract with biologists instructed in the identification of raptor nests (both occupied and unoccupied) and raptor breeding to complete bird habitat assessments for the project area.	Annually prior to operations and when seasonally appropriate prior to operations.	InterTribal Sinkyone Wilderness Council.	InterTribal Sinkyone Wilderness Council.	Report documenting results of surveys or habitat assessment and letter of technical assistance from the U.S. Fish & Wildlife Service. Establish appropriate mitigation measures.	January 2007. January 2007.
2. During construction the Council shall be responsible for assuring that no raptor nests are impacted by the proposed treatments by implementing the following measures: a. Trail construction activities shall be restricted to the period July 12 to February 1 in any given year. b. If an unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31), the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to DFG. c. If an unoccupied raptor nest is detected outside of the generic critical period then operations shall cease in the vicinity of the nest and its location shall be reported to DFG. The Council will then attempt to determine the species of raptor which constructed or used the nest and then the measures stated below under Item d will be applied (based on species). d. If an occupied raptor nest is detected in the project area, then the Council will cease operations within ¼ mile of the raptor nest (unless it is known to be a peregrine falcon eerie then a 1 mile buffer shall be applied) and immediately notify qualified biologists. The biologists will then determine the species of raptor and then applicable measures shall be developed in concert with DFG.	During operations	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.	Report as DFG as required. Report as DFG as required. Notify biologists and DFG. Establish appropriate mitigation measures.	

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CULTURAL RESOURCES					
CULTURAL RESOURCES-1					
• Prior to any operations in a given area a qualified archaeologist shall conduct an investigation of the project area to determine the presence of any archaeological or historical resources (cultural resources). A report documenting the location and type of any cultural resources determent shall be developed and submitted to the Council.	Prior to operations.	A qualified Archaeologist or representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Report and document the results and mitigation measures if appropriate.	September 2006.
• The Council's preferred method of addressing potential impacts to cultural resources is through avoidance. Therefore, if any cultural resources are detected as part of the investigation a minimum 25-foot equipment exclusion zone shall be established around the resource.	Prior to operations.	A qualified Archaeologist or representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Report and document the results and mitigation measures if appropriate.	September 2006.
• A Native American Tribal representative shall be onsite to monitor all construction activities within the four culturally sensitive areas.	During operations.	A qualified Native American Tribal representative.	InterTribal Sinkyone Wilderness Council.	Monitor construction activities.	
• A professional archaeologist shall be onsite to monitor all construction activities within the four culturally sensitive areas.	During operations.	A qualified Archaeologist.	InterTribal Sinkyone Wilderness Council.	Monitor construction activities.	
• In the event that previously undocumented cultural resources are encountered during project construction, work within the immediate vicinity (500 feet) of the find will be temporarily halted or diverted. Work would not continue at the site until the archaeologist and Tribal representative have evaluated and or recorded the site and prepared additional recommendations. Construction shall only resume with approval by the Council's board of directors.	During operations.	A qualified Archaeologist and/or Tribal representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Cultural survey and development of appropriate treatments.	
• If any significant cultural resources are found in a project location, a qualified historian, archaeologist and/or appropriate Native American Tribal representative will be brought in to monitor any ground-disturbing work in that area from that point forward.	Prior to and during operations.	A qualified Archaeologist and/or Tribal representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Develop appropriate treatments. Report and document the results and mitigation measures if appropriate.	

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CULTURAL RESOURCES-2					
• In the event that human remains are discovered, work shall cease immediately in the area of the find and the project manager/site supervisor will notify the Council. Any human remains and/or funerary objects shall be left in place or returned to the point of discovery and covered with soil. The InterTribal Sinkyone Wilderness Council will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, Native American Tribal representatives, and the Native American Heritage Commission (NAHC). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the InterTribal Sinkyone Wilderness Council, which in turn will notify the appropriate authorities.	During operations.	A qualified Archaeologist or representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Report and document the results and mitigation measures if appropriate.	
• If the coroner and/or tribal representative determines the remains represent Native American interment, the Council will contact the most likely descendants and work with appropriate parties to carry out appropriate disposition of the remains. Work shall not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination. Only authorized persons shall handle the human remains or funerary objects.	During operations.	A qualified Archaeologist or representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Report and document the results and mitigation measures if appropriate.	
• If it is determined the find indicates a sacred or religious site, the site shall be avoided. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives shall also occur as necessary to define additional site mitigation or future restrictions.	Prior to and during construction.	A qualified Archaeologist or representative working under the supervision of Council.	InterTribal Sinkyone Wilderness Council.	Historian's review of project plans.	

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HAZARDS AND HAZARDOUS MATERIALS					
HAZMAT-1					
• All equipment will be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from project premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.	Prior to operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• The contractor(s) will prepare an emergency spill response plan prior to the start of construction. Council will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the ITSW during construction, the contractor will immediately notify the appropriate Council staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.	Report and document the results and mitigation measures if appropriate.	
• No maintenance or fueling activities shall be permitted within 200 feet of a stream.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Equipment will be cleaned and repaired (other than emergency repairs) outside the ITSW boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside ITSW boundaries, at a lawfully permitted or authorized designation.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
HAZMAT-2					
• If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the ITCWC Executive Director will be contacted. Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		

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HAZMAT-3					
• A fire safety plan will be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.	Prior to operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Smoking will not be allowed on any portion of the InterTribal Sinkyone Wilderness property at any time during the project, including at the work crew camps. Campfires will not be allowed at work crew camps located on the InterTribal Sinkyone Wilderness property.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Construction crews will be required to park vehicles away from flammable material such as dry grass and brush. At the end of each workday, heavy equipment will be parked over mineral soil to reduce the chance of fire. All equipment will be required to be mechanically sound and free of flammable debris.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Contractors will be required to have a radio or cell phone on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
HYDROLOGY AND WATER QUALITY					
HYDRO-1					
• All mechanized trail equipment work will occur during the dry season, before October 15.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Trail Construction work will not occur in locations where surface runoff occurs due to rainfall.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		

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NOISE					
NOISE-1					
• Construction activities will be limited to the hours between sunrise and sunset.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Equipment and trucks used for construction will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		
• Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.	During operations.	Trails Construction Contractor.	InterTribal Sinkyone Wilderness Council.		