Tahoe National Forest
Gold Valley Connector Trail Project
Negative Declaration

March 2015

State of California
Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division

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Prepared for:

State of California, Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division
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NEGATIVE DECLARATION

Project: Gold Valley Connector Trail Project

Project Sponsor: Tahoe National Forest

Lead Agency: California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division

Availability of Documents: The Initial Study (IS) for this Negative Declaration (ND) is available for review at:

Tahoe National Forest
631 Coyote Street
Nevada City, CA 95959
Contact: Joe Chavez, Trails and Recreation Specialist
Phone: (530) 478-6158

CDPR, OHMVR Division
1725 23rd Street, Suite 200
Sacramento, CA 95816
Contact: George MacDougall, Grant Administrator
Phone: (916) 324-3788

PROJECT DESCRIPTION

The OHMVR Division proposes to award grant funds to the Tahoe National Forest, Yuba River Ranger District for construction of an approximately 1.8 mile motorized (motorcycle) and multiple-use (hike, mountain bike, horses) single-track trail (24"-30" in width). The trail will utilize a self-draining sustainable design and will connect the ridge above Deer Lake, near the Sierra Buttes, to the beginning of the Gold Valley OHV Trail (north of Packer Saddle). All work will be done using hand labor and tools.

REGULATORY GUIDANCE

The Tahoe National Forest previously prepared the Pacific Crest Trail Realignment Project Environmental Assessment (March 2013) and Decision Notice and Finding of No Significant Impact (July 2013), which covered the entire project, pursuant to the National Environmental Policy Act (NEPA). Awarding grant funds is a project under the California Environmental Quality Act (CEQA; Public Resources Code (PRC) §21000 et seq.) and the CEQA Guidelines (14 CCR §15000 et seq.).

According to CEQA Guidelines section 15070, a public agency shall prepare a proposed ND or a Mitigated ND for a project when:

1. The IS shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
2. The IS identifies potentially significant effects, but:

   - Revisions in the project plans made before a proposed Mitigated ND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

   - There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

CEQA and the CEQA Guidelines establish the OHMVR Division as the lead agency. The lead agency is defined in CEQA Guidelines section 15367 as “the public agency which has the

principal responsibility for carrying out or approving a project." The lead agency shall conduct an IS to determine if the project may have a significant effect on the environment (CEQA Guidelines §15063(a)). To meet this requirement, "the lead agency may use an environmental assessment or similar analysis prepared pursuant to [NEPA]" (CEQA Guidelines §15063(a)(2)). The OHMVR Division prepared a Supplement to the Environmental Assessment using the Environmental Checklist in CEQA Guidelines Appendix G to provide additional environmental analysis. The Environmental Assessment in conjunction with the Supplement comprise the IS used by the OHMVR Division to evaluate the potential for the project to have significant effects pursuant to CEQA Guidelines section 15063(a)(2).

PROPOSED FINDING

The OHMVR Division has reviewed the attached IS and determined that there is no substantial evidence, in light of the whole record before the agency, that the project could not have a significant effect on the environment. Pursuant to CEQA Guidelines sections 15064(f)(3) and 15070(a), a ND has been prepared for consideration as the appropriate CEQA document for the project.

BASIS OF FINDING

Based on the environmental evaluation presented in the attached IS, the project would not cause significant adverse effects related to aesthetics, agriculture/forestry resources, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation/traffic, and utilities/service systems. The project does not affect any important examples of the major periods of California prehistory or history. The project does not have impacts that are individually limited, but cumulatively considerable. In addition, substantial adverse effects on humans, either direct or indirect, would not occur.

RECORD OF PROCEEDINGS AND CUSTODIAN OF DOCUMENTS

The record, upon which all findings and determinations related to the approval of the project are based, includes the following:

1. The ND and all documents referenced in or relied upon by the ND.
2. All information (including written evidence and testimony) provided by OHMVR Division staff to the decision maker(s) relating to the ND, the approvals, and the project.
3. All information (including written evidence and testimony) presented to the OHMVR Division by the environmental consultant who prepared the ND or incorporated into reports presented to the OHMVR Division.
4. All information (including written evidence and testimony) presented to the OHMVR Division from other public agencies and members of the public related to the project or the ND.
5. All applications, letters, testimony, and presentations relating to the project.
6. All other documents composing the record pursuant to PRC section 21167.6(e).

The OHMVR Division is the custodian of the documents and other materials that constitute the record of the proceedings upon which the OHMVR Division's decisions are based. The contact for this material is:

George MacDougall
CDPR, OHMVR Division
1725 23rd Street, Suite 200
Sacramento, CA 95816
George.macdougall@parks.ca.gov

Pursuant to CEQA section 21082.1, the OHMVR Division has independently reviewed and analyzed the IS and ND for the proposed project and finds these documents reflect the independent judgment of the OHMVR Division.

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Tahoe National Forest
Gold Valley Connector Trail Project
Supplement to
Environmental Assessment

March 2015

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Department of Parks and Recreation
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TAHOE NATIONAL FOREST, YUBA RIVER RANGER DISTRICT
GOLD VALLEY CONNECTOR TRAIL PROJECT
SUPPLEMENT TO ENVIRONMENTAL ASSESSMENT

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Chapter 1 INTRODUCTION AND PROJECT DESCRIPTION

1.1 INTRODUCTION

The Tahoe National Forest plans to realign a portion of the Pacific Crest Trail (PCT) near the Gold Valley OHV Trail in Sierra County. The Tahoe National Forest prepared a National Environmental Policy Act (NEPA) Environmental Assessment (EA) for the PCT Realignment Project in March 2013 (Appendix A) and issued a Decision Notice and Finding of No Significant Impact (FONSI) for the project in July 2013 (Appendix A).

The California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division proposes to award Off-Highway Vehicle (OHV) Trust Funds through the Grants and Cooperative Agreements Program to the Tahoe National Forest in support of constructing the 1.8-mile single track Gold Valley Connector Trail, which is one component of the PCT Realignment Project. This action is a project subject to review under the California Environmental Quality Act (CEQA).

The OHMVR Division has prepared this supplemental environmental analysis to provide the additional review necessary to meet CEQA requirements for the Gold Valley Connector Trail portion of the PCT Realignment project. The EA together with this supplemental CEQA analysis functions as an Initial Study (IS) pursuant to CEQA Guidelines section 15063 (a)(2).

1.2 PROJECT DESCRIPTION

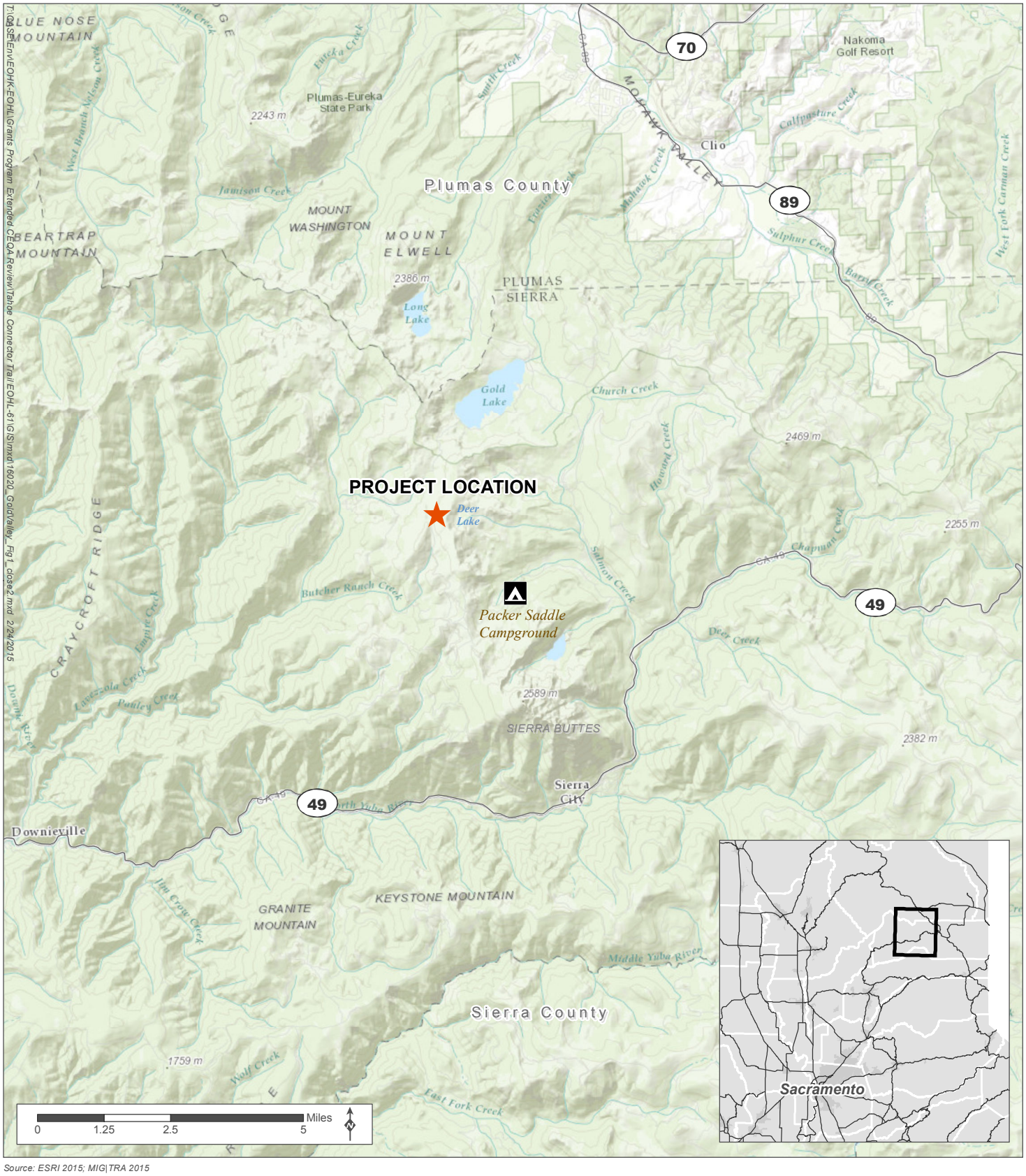
The proposed Gold Valley Connector Trail is located north of the towns of Sierra City and Downieville in Sierra County in the Yuba River Ranger District of the Tahoe National Forest (Figure 1). The existing OHV trail network in this area includes 40 miles of single-track trail, 57 miles of 4x4 trail, as well as other Maintenance Level 2 Forest Service roads open and accessible to OHVs as defined in California Vehicle Code section 38006. Packer Saddle (Figure 2) is currently used as a motorcycle staging area (no facilities) and is the common starting point for dirt bike riders accessing this network of single-track trails on its eastern edge. The Yuba River Ranger District would construct a single-track trail (24"-30" in width) for motorized (motorcycle) and multiple-use (hike, mountain bike). The trail would be 1.8 miles long and connect the ridge above Deer Lake near the Sierra Buttes to the beginning of the Gold Valley OHV Trail north of Packer Saddle (Figure 2). An example of a single track trail is shown in Photograph 1 (Figure 3). The ridge above Deer Lake is shown in Photograph 2 (Figure 3).

The proposed trail tread would be constructed using the native soil and locally available rock to armor trail drainage approaches and for any rock wall sections of the trail. The trail construction would be implemented using almost entirely human power and non-mechanized hand tools (i.e., Polaskis, McClouds, picks, rock bars, pruners, etc.). Chainsaws, a power wheelbarrow, and possibly a gas powered jack hammer in one rocky segment would also be used. The trail connector would be constructed by Forest Service employees and volunteers. The ground would be cleared and the soil compacted to create the trail. Vegetation would be trimmed in a corridor six feet wide and 10 feet high. Construction would disturb approximately 0.9 acres of land. Construction details are provided in Figure 4. Typical Trail Cross Sections – Figure 7. Climbing Turn.

The trail would be constructed in accordance with Forest Service standards and guidelines for trail construction. Best Management Practices (BMPs) and project-specific management requirements would be implemented as described in the EA (pp. 11-42). The trail design and location were developed to be sustainable with general grades no more than 5-8% with an undulating alignment. The trail design incorporates frequent drainage points along the entire trail (less than 100 feet apart) to minimize runoff from the trail.

Directional signs would be installed made from recycled aluminum. The directional signs would be mounted on steel post containing at least 25% recycled steel. The pin flags or wooden stakes used for construction staking would be recycled after this project by using them on other trail projects.

The project activity would occur during the typical dry season for the Packer Saddle area and after the typical snow melt, which includes the months of June through October. The project activity could potentially start in the year of 2015, but would be completed no later than the year 2017. The Gold Valley Connector Trail Project would help sustain and enhance the existing 1,932-mile Tahoe National Forest OHV road/trail system.



Source: ESRI 2015; MIG|TRA 2015

- Project location
- Packer Saddle Campground
- County boundary
- Major road

Figure 1 Regional Location

Gold Valley Connector Trail Project

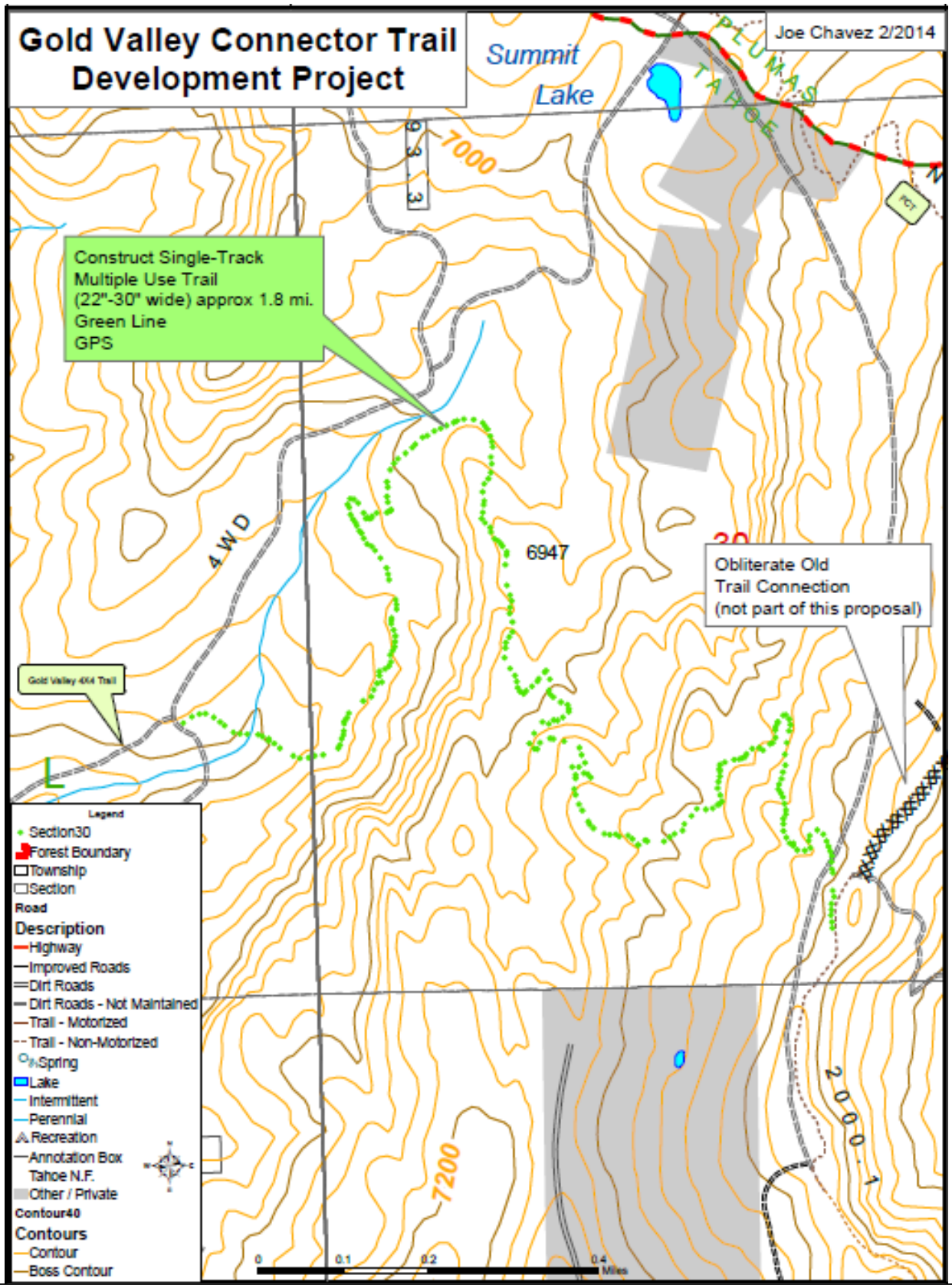


Figure 2 Gold Valley Connector Trail Alignment

Gold Valley Connector Trail Project

Photograph 1: Single Track Trail Example

Photograph 2: Ridge above Deer Lake

Figure 3 Photographs

Gold Valley Connector Trail Project

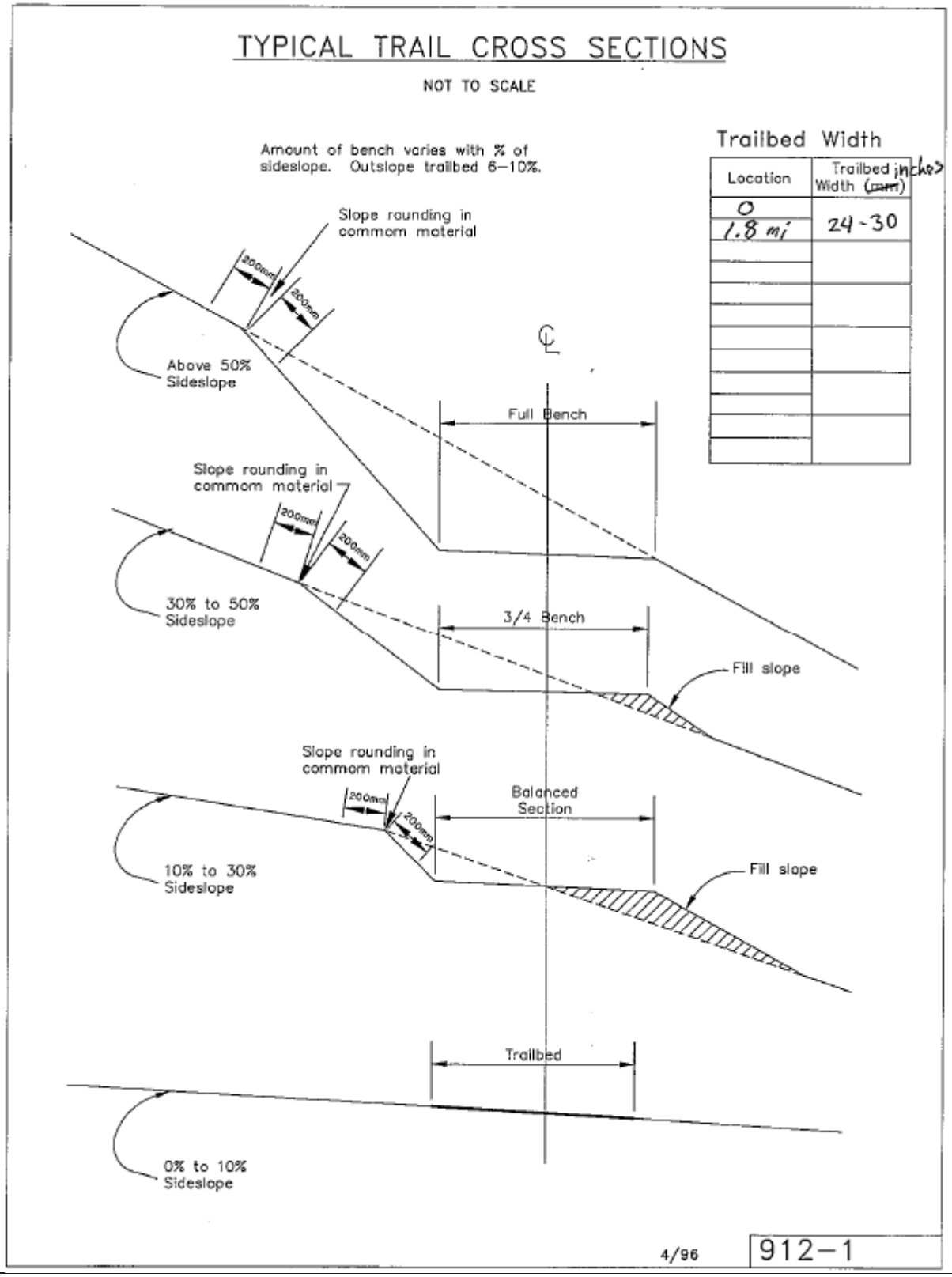


Figure 4 Typical Trail Cross Sections

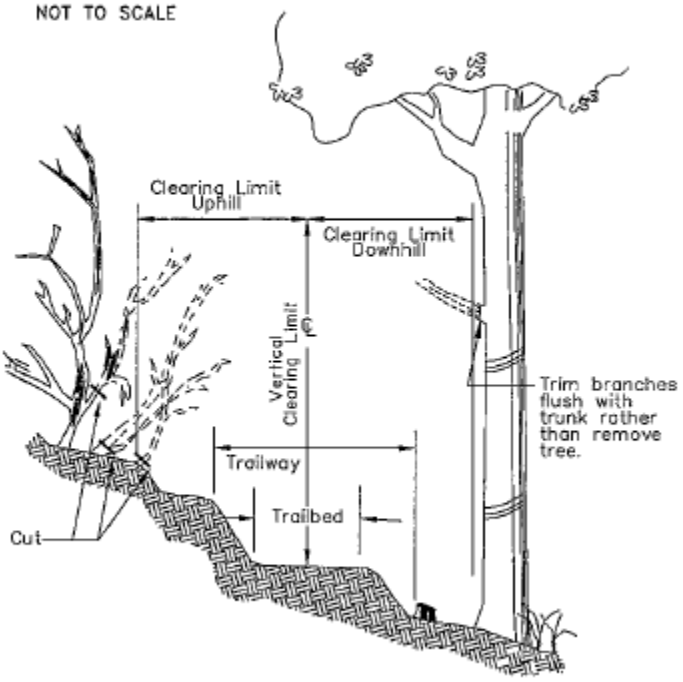
Gold Valley Connector Trail Project

CLEARING LIMITS

NOT TO SCALE

Clearing Limits (~~mm~~ feet)

Location	Uphill	Downhill	Height
0 / 1.8 mi	3	3	10



Do not remove trees over 10 ~~mm~~ diameter if they are over 3 ft ~~m~~ from the centerline (both sides).

Remove all trees 10 in ~~mm~~ or less in diameter if they are within 3 ft ~~m~~ of centerline (both sides).

Stump Height Requirements* (~~mm~~) inches

Stump Position	Side Slope	Uphill	Downhill
Stumps between the trailway and clearing limits.	Side slope less than or=to 10%	4	6
	Side slope over 10%	4	6
Stumps outside the clearing limits	Side slope less than or=to 10%	6	6
	Side slope over 10%	6	6

*All heights measured on uphill side of stumps.

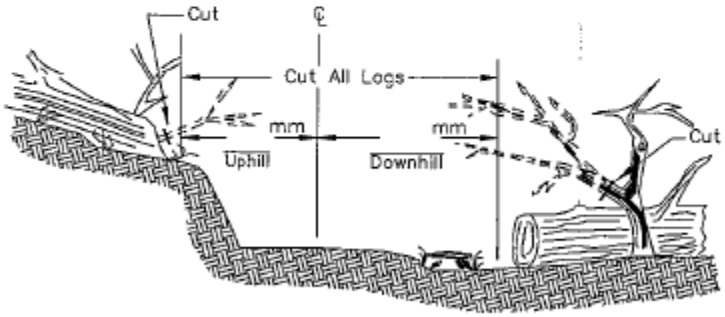


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Figure 5 Clearing Limits

Gold Valley Connector Trail Project

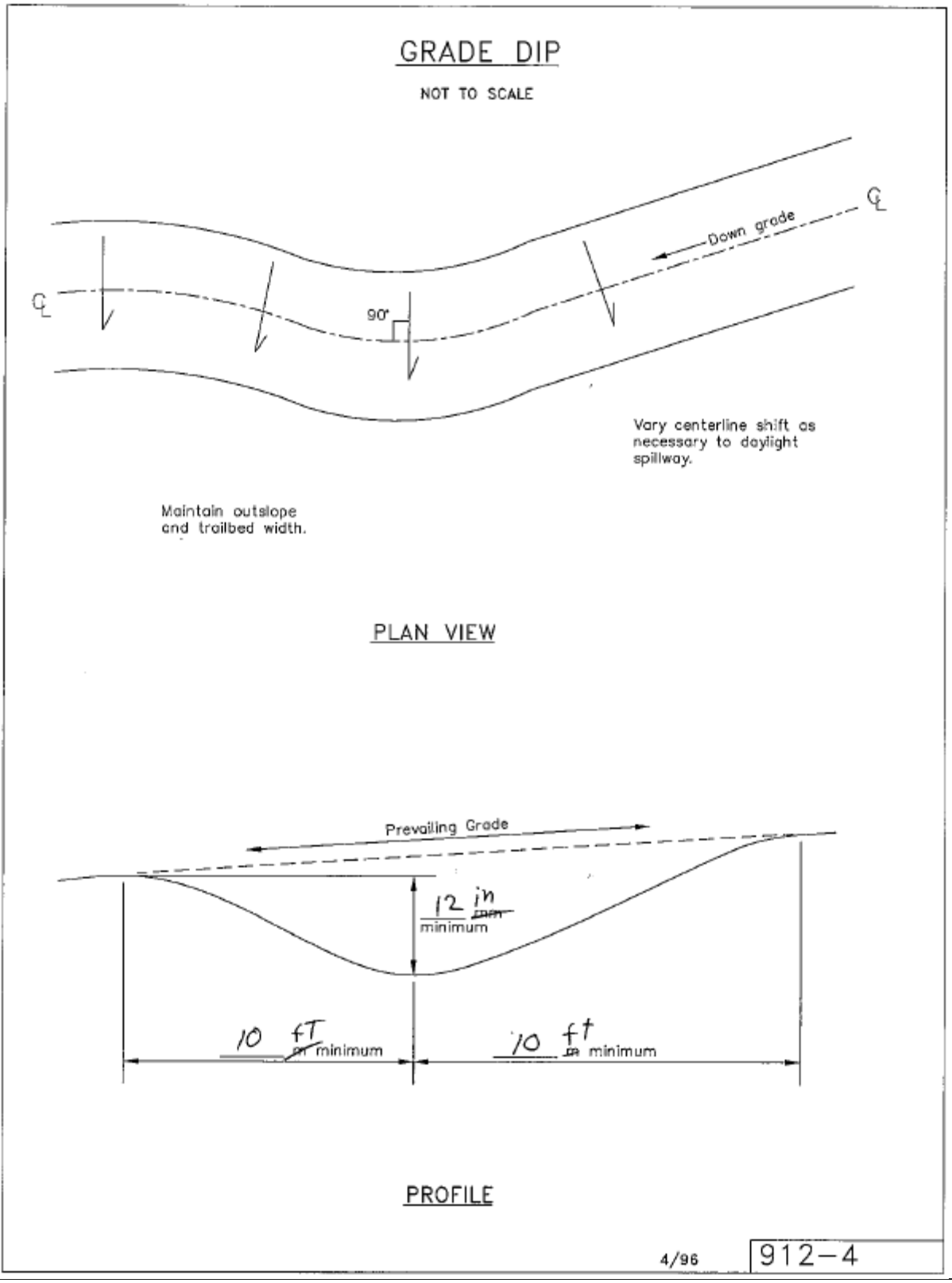

Figure 6 Grade Dip

Gold Valley Connector Trail Project

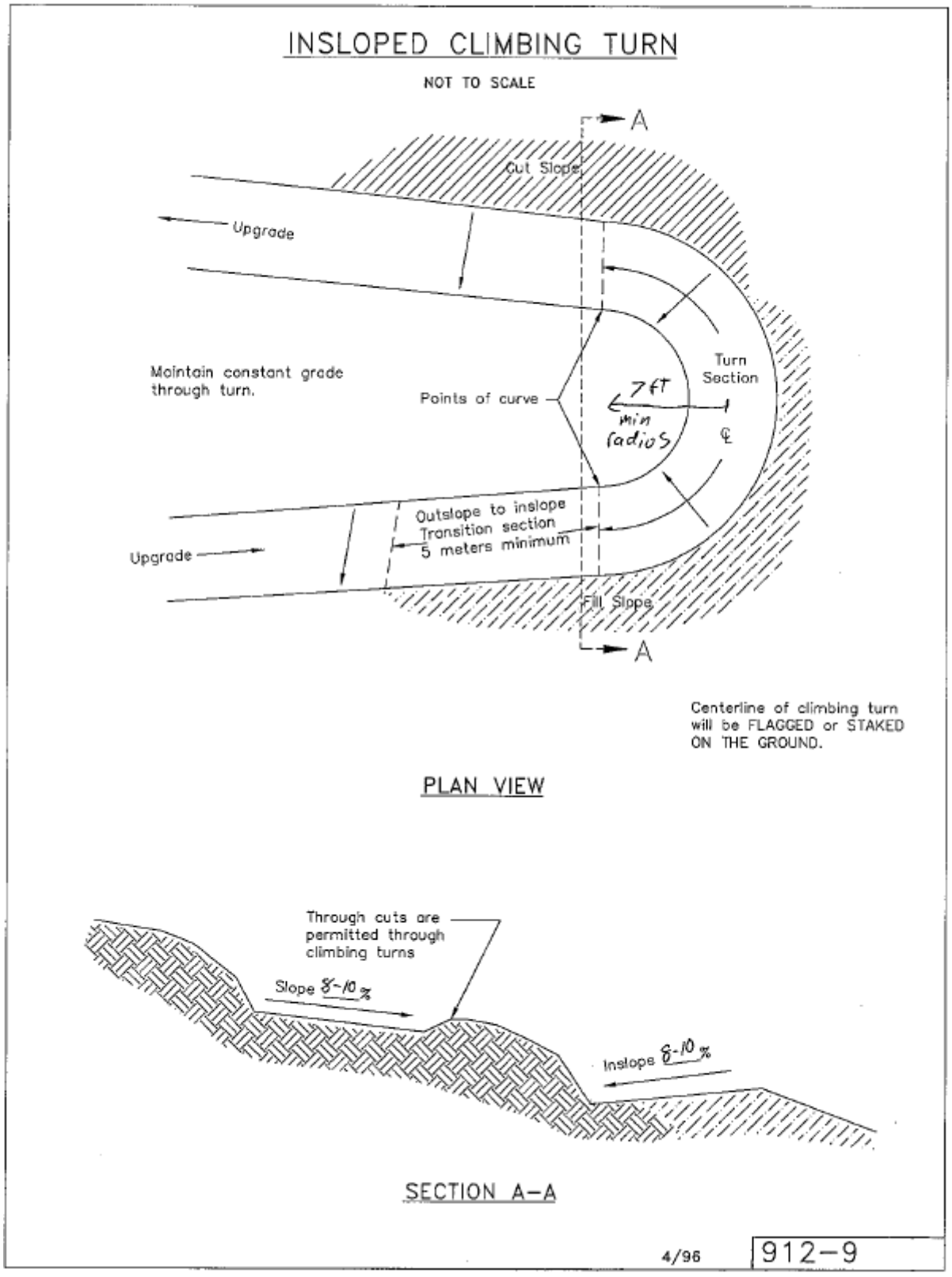

Figure 7 Climbing Turn

Gold Valley Connector Trail Project

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Chapter 2 SUPPLEMENTAL ENVIRONMENTAL ANALYSIS

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist contained in the supplemental environmental analysis on the following pages.

☐ Aesthetics	☐ Agricultural and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ 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, because 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, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

_____

Phil Jenkins, Chief, Off-Highway Motor Vehicle Recreation Division

_____

Date

2.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒

Aesthetic impacts on PCT users were evaluated in the EA (EA Appendix E, Final Optimal Location Review [OLR] Report) and the FONSI. The FONSI (p. 2) concluded that "Alternative A [the project] would improve the overall visual quality, as well as reducing the distance spent crossing private lands for the PCT users." A discussion of the other CEQA aesthetic factors of consideration is presented below.

Discussion:

The project is situated within mountainous, heavily forested lands in the Yuba River Ranger District of the Tahoe National Forest at an elevation above 7,000 feet. No buildings or structures are in the project area.

The project area contains scenic resources such as trees and rock outcroppings; however, none of the specific work sites are located in or designated as a scenic vista or within view of a state scenic highway. Construction of the connector trail requires ripping and compacting soil in a narrow (up to 30") swath of ground for 1.8 miles. The completed trail would not significantly change the visual quality of the project area and its surroundings, as its narrow width would require minimal ground disturbance and vegetation clearance; the trail would blend in with the existing environment and would only be visible to trail users. The project would not create a new source of substantial light or glare affecting day or nighttime views in the area as no exterior lighting, reflective surfaces, or nighttime construction is proposed.

2.2 AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code (PRC) section 12220(g)), timberland (as defined by PRC section 4526), or timberland (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Agriculture and forestry resource impacts were not evaluated in the project NEPA documents (EA and FONSI). The EA (p. 44) states, "there are no prime farmlands within the project area." A discussion of these CEQA factors of consideration is presented below.

Discussion:

The project is located on Forest Service land in mountainous areas of the Tahoe National Forest. There is no farmland within or near the project area. Neither the project area nor the surrounding lands contain any farmland, any lands under Williamson Act contracts, or any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as defined by the Farmland Mapping and Monitoring Program.

Although the connector trail would occur in a forested area, no commercial timberland would be affected by the work. All trail construction work would occur in areas that will be used for OHV recreation. The project would not cause the rezoning of forest or timberland. There would be no

conversion of forest land to a non-forest use. No large living trees (timber resources) would be removed as a result of this project (EA Appendix C, RCO #3).

2.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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 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) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Air quality is not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Environmental Setting

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality. Federal, state, and local governments control air quality through the implementation of laws, ordinances, regulations, and standards.

Mountain Counties Air Basin (MCAB). The project area is located in Sierra County within the MCAB, where topography and climate varies dramatically. Covering an area of roughly 11,000 square miles, the MCAB lies along the northern Sierra Nevada mountain range close to or contiguous with the Nevada border. Elevations range from a few hundred feet at the Sacramento County boundary to more than 10,000 feet above sea level at the Sierra Crest.

The foothills, mountain peaks, and valleys of the Sierra Nevada range influence and cause local differences in rainfall, temperature, and wind patterns. In general, high elevation areas in close proximity to the Sierra Crest have cooler temperatures and receive much more precipitation than lower elevation foothill areas. During the summer, strong eastward flowing winds transport pollutants from the San Francisco Bay Area Air Basin and Sacramento and San Joaquin Valley Air Basins into the MCAB (NSAQMD 2014c). The California Air Resources Board (CARB) officially recognizes the MCAB as an area impacted by ozone transport from upwind air basins (17 CCR §70500).

Northern Sierra Air Quality Management District (NSAQMD). The NSAQMD is comprised of Nevada, Plumas, and Sierra Counties. Currently, the NSAQMD has nine regulations containing over 140 rules designated to control and limit emission from sources of air pollutants and

administer state and federal air pollution control requirements (NSAQMD 2014a). Attainment status within the northern portion of the MCAB under the jurisdiction of the Northern Sierra AQMD, is either unclassified or in-attainment of all state and federal ambient air quality standards except national and state ozone, state PM10 and state PM2.5 (NSAQMD 2014b).

Regulatory Setting

The federal and state governments have established ambient air quality standards for "criteria" pollutants considered harmful to the environment and public health. National Ambient Air Quality Standards (NAAQS) have been established for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), fine particulate matter (particles 2.5 microns in diameter and smaller, or PM2.5), inhalable coarse particulate matter (particles between 2.5 and 10 microns in diameter, or PM10), and sulfur dioxide (SO_2). California Ambient Air Quality Standards (CAAQS) are more stringent than the national standards for the pollutants listed above and include the following additional pollutants: hydrogen sulfide (H_2S), sulfates (SO_X), and vinyl chloride. In addition to these criteria pollutants, the federal and state governments have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), such as asbestos.

Attainment Plans. Under the federal Clean Air Act (CAA), the Northern Sierra AQMD has adopted a variety of plans to achieve, demonstrate, or maintain attainment status for nonattainment pollutants. The southern portion of the Northern Sierra AQMD is in nonattainment for the federal 8-hour ozone standard in western Nevada County, and all of Nevada County is in nonattainment for the state one-hour ozone standard. The ozone exceedances are primarily due to transportations emissions from the Broader Sacramento and San Francisco Bay Areas. The federally mandated State Implementation Plan (SIP) for achieving ozone attainment states most ozone reductions necessary for attainment status are expected to come from motor vehicles becoming cleaner and from state regulations (NSAQMD 2014c).

Major contributors to the particulate matter nonattainment status in the District are woodstoves and fireplaces, residential open burning, dust emissions from construction and earth-moving equipment, forestry management burns, transport from agricultural burns, vehicles traffic and windblown dust (NSAQMD 2009). Rule 207, Particulate Matter (1991), and Rule 226, Dust Control (1994), in the *Northern Sierra AQMD Rules & Regulations,* discusses methods to alleviate and control fugitive dust that would work to achieve attainment status (further discussed below).

Vehicle Emissions. In addition to ambient air quality standards, the federal and state governments have established exhaust emission standards for on- and off-road vehicles, such as cars, trucks, recreational vehicles, and heavy-duty diesel construction equipment as well as the fuels these vehicles use.

Naturally Occurring Asbestos (NOA). The Statewide *Asbestos Airborne Toxic Control Measure for Surfacing Applications,* codified in the California Code of Regulations, Title 17, §93105, contains requirements for projects located in areas mapped as having, or observed to have, ultramafic rock or serpentine.

Fugitive Dust Control. Rule 207, *Particulate Matter* (1991), in the *Northern Sierra AQMD Rules & Regulations*, prohibits excessive release or discharge into the atmosphere from any source or single processing unit. Rule 226, *Dust Control* (1994), further establishes guidelines that may be used to address the nonattainment levels of state PM10 by controlling various source categories, such as the implementation of chemical soil stabilization/suppression materials.

General requirements of this rule include taking all reasonable precautions to prevent dust emissions, including, but not limited to, cessation of operations, cleanup, sweeping, sprinkling, compacting, enclosure, chemical or asphalt sealing, and the use of wind screens or snow

fences. Additionally, among other provisions, Rule 226 limits visible emissions, vehicle use, dust sources, and activities under sustained winds that result in visible dust emissions. Additionally, submission of a Dust Control Plan to the District for approval prior to any surface disturbance, including clearing vegetation, is required.

Discussion:

Air Quality Plan. The Northern Sierra AQMD is responsible for maintaining air quality and regulating emissions of criteria pollutants and TACs within Sierra County. The proposed project would not conflict with or obstruct implementation of the regional and federal ozone or particulate matter attainment plans of the Northern Sierra AQMD, as described in the previous section. The project would not increase urban growth, introduce new stationary sources of air pollutants, or result in new land uses within the Northern Sierra AQMD. Therefore, the project does not conflict with or obstruct an applicable air quality plan.

Air Quality Standards and Violations. The Tahoe National Forest proposes to enhance the existing 40 miles of single-track OHV trail in the current network north of Downieville and Sierra City by adding approximately five additional miles of new single-track trail to the network. The additional section would consist of the 1.8-mile Gold Valley Connector Trail, in conjunction with a 3-mile segment of former PCT. Ridership within the vicinity of the project area is not expected to increase.

Potential temporary project emissions from construction would include trail construction. The trail connector would be construction using primarily hand tools, with some use of chainsaws and gas powered combination rock drill/hammer. Temporary additional emissions from light duty vehicles used to transport the crew and equipment to the new trail segment is expected. No heavy equipment will be used. Construction travel could potentially result in fugitive dust emissions. The additional emissions would not exceed air quality standards due to the nominal size of trail segment, small portion of land affected, and short duration of project construction.

Project activities involve a combined ground disturbance of 0.9 acres over 1.8 miles of linear trail, which would generate fugitive dust emissions. However, given the remote location of the project site and distance from Forest Service property lines, project construction activities would not result in visible dust emissions outside of the Tahoe National Forest, and therefore the construction dust emissions would not create a significant impact. The trail construction project is not expected to increase the number of visitors to the Tahoe National Forest or increase the level of OHV recreation occurring on the Gold Valley OHV Trail System. Therefore, the project would not increase operational fugitive dust emissions such as emissions related to OHV use. The fugitive dust emission from the project is therefore less than significant.

Non-Attainment Criteria Pollutants. The proposed construction would meet the Forest Service standards and guidelines for trail construction. Trail connector construction would be completed using hand tools and only chainsaws and gas-powered rock drill/hammers as power-tools with emissions. The short duration and low equipment use of the activity would not result in emissions of criteria pollutants that would have a significant impact on the environment.

Sensitive Receptors. A sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons, are situated where there is reasonable expectation of continuous human exposure to air pollutants. These typically include residences, hospitals, and schools. There are no sensitive receptors located at or near the project site. The project would not expose sensitive receptors to substantial pollutant concentrations. There is no impact to sensitive receptors.

Odors. The project is in a remote location absent of sensitive receptors and populated areas. The project, therefore, would not expose sensitive receptors to potential odors associated with fuel combustion of construction equipment.

2.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 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?	☐	☐	☐	☒

The Tahoe National Forest analyzed project impacts to federal and Forest Service special-status species in the PCT Realignment Project EA (pp. 38-43, 53, 56-57, and Appendix E, Biological Evaluation Executive Summaries). The EA and resulting Decision Memo and FONSI conclude there are no federally endangered, threatened, or proposed species or their designated critical habitat within the project area that may be affected by the proposed actions. There is no Critical Habitat, or Proposed Critical Habitat, present within this project area.

There is one stream crossing of the motorized trail, Pauley Creek. The EA concludes riparian habitat and wetlands would not be affected by the project (EA, p. 44) due to implementation of a

BMP protecting streams (EA, p. 12). One specific BMP (1.19 Streamcourse and Aquatic Protection) relevant to this project is described below:

> *[S]treamcourse protection measures will be implemented during all aspects of the project to protect the natural flow of streams, to provide unobstructed passage of stormflows, and to reduce sediment and other pollutants from entering streams. Rocking and/or use of paver blocks on the trail tread will occur within identified riparian buffers and stream crossings. Bridge installation would be considered at specific stream crossings to keep sediment and other pollutants from entering perennial and intermittent streamcourses. A riparian specialist will be consulted during streamcourse protection work including stream crossing designation.*

The CEQA discussion below focuses on state species of concern not addressed by the EA.

The Tahoe National Forest addressed project impacts to riparian habitat and wetlands in the PCT Realignment Project EA (p. 37 and Appendix C, Riparian Conservation Objective Analysis). There is one perennial stream crossing (Pauley Creek) associated with the construction of the new motorized and multiple-use single track trail. The new construction project crosses through 600 feet of perennial Riparian Conservation Areas (RCAs). BMPs would be applied as identified in EA Chapter 2 (also in EA Appendix C) and above to avoid impacts to streamcourses and aquatic resources. The RCO analysis concludes potential for direct, indirect, and cumulative effects from the proposed project on riparian areas would be minimized with implementation of identified protection measures.

Regulatory Setting

California Endangered Species Act. The California Endangered Species Act (CESA), administered by California Department of Fish and Wildlife (CDFW), protects wildlife and plants listed as “threatened” or “endangered” by the California Fish and Game Commission, as well as species identified as candidates for listing. CESA restricts all persons from taking listed species except under certain circumstances. The state definition of take is similar to the federal definition, except that CESA does not prohibit indirect harm to listed species by way of habitat modification. Under CESA, an action must have a direct, demonstrable detrimental effect on individuals of the species.

CDFW maintains lists of animal species of special concern (CSSC) that serve as "watch lists." A CSSC is not subject to the take prohibitions of CESA. The CSSC are species that are declining at a rate that could result in listing under the federal ESA or CESA and/or have historically occurred in low numbers, and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals and is intended to focus attention on the species to help avert the need for costly listing under federal and state endangered species laws. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them (Comrack et al. 2008).

State agencies should not approve projects as proposed that would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy (Fish and Game Code §2053). Under California Fish and Game Code sections 2080.1 and 2081(b), CDFW may permit incidental take of species listed under CESA, except for species that are designated as fully protected.

California Fish and Game Code. The California Fish and Game Code protects a variety of species, separate from the protection afforded under CESA. The following specific statutes afford some limits on take of named species: Section 3503 (nests or eggs), 3503.5 (raptors and

their nests and eggs), 3505 (egrets, osprey, and other specified birds), 3508 (game birds), 3511 (fully protected birds), 4700 (fully protected mammals), 4800 et seq. (mountain lions), 5050 (fully protected reptiles and amphibians), and 5515 (fully protected fish). Fully protected species may not be taken or possessed except for scientific research or through approval and implementation of a Natural Communities Conservation Plan.

Section 3503 simply states, “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” The exceptions generally apply to species that are causing economic hardship to an industry. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order 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.” Section 3505 prohibits taking, selling, or purchasing egrets, osprey, and other named species or any part of such birds.

California Native Plant Protection Act. The California Native Plant Protection Act (CNPPA) of 1977 preserves, protects, and enhances endangered and rare plants in California by specifically prohibiting the importation, take, possession, or sale of any native plant designated by the California Fish and Game Commission as rare or endangered, except under specific circumstances identified in the Act. Various activities are exempt from the CNPPA, although take as a result of these activities may require other authorization from CDFW under the California Fish and Game Code.

CDFW and CEQA. As a trustee agency, CDFW comments on the biological impacts of development projects reviewed under CEQA. CEQA gives CDFW jurisdiction to comment on the protection of habitats deemed necessary for any species to survive in self-sustaining numbers, but does not allow CDFW to govern land use. It stipulates that the state lead agency shall consult with, and obtain written findings from, CDFW in preparing an EIR on a project, as to the impact of the project on the continued existence of any endangered or threatened species (PRC §21104.2).

Discussion:

Special-Status Species: CEQA Guidelines section 15380 defines endangered, threatened, and rare species for purposes of CEQA and clarifies that CEQA review extends to other species that are not formally listed under the CESA or federal ESA but that meet specified criteria. The state and federal governments keep lists of such “special-status” species, which are reflected in the CNDDB. Many of these species are not listed under either ESA but are currently tracked to determine if listing is necessary. Thus, they are not specifically protected by the CESA and federal ESA. They are only protected through measures imposed as a result of CEQA review.

The California Native Plant Society (CNPS) has a list of plants that are considered to be rare, threatened, or endangered in a portion or all of their range; these plants may not have been listed by CDFW or the U.S. Fish and Wildlife Service, but they are considered sensitive under CEQA. Thus, the lead agency should consider impacts to these species when assessing the effects of a particular project, even if the project is otherwise exempt from CEQA.

Special-status species are those plants and animals that are legally protected or otherwise recognized as vulnerable to habitat loss or population decline by federal, state, or local resource conservation agencies and organizations. As noted above, the EA and its supporting documentation analyzed federal special-status species (see attached EA).

For this CEQA analysis special-status species include the following species categories not addressed in the PCT Realignment Project NEPA documents:

- Species that are state listed threatened or endangered
- Species considered as candidates or proposed for state listing as threatened or endangered
- CDFW Species of Special Concern
- Fully protected species per California Fish and Game Code
- Plants considered by CNPS and CDFW to be rare, threatened, or endangered (California rare plant ranked [CRPR]; e.g. CRPR 1B)

The special-status species with potential for occurrence in the project area not addressed by the EA are listed in Table 1 and Table 2. These tables were prepared consistent with the CEQA Guidelines using information from the California Natural Diversity Database (CNDDB 2014) and CNPS Rare Plant Inventory (CNPS 2014). For the CNDDB search, the Gold Lake USGS 7.5 minute quad and eight adjacent quads were searched.

Special-Status Plant Species

Table 1 identifies five California special-status plant species not evaluated by the Tahoe National Forest. All of these species have low potential to occur within the project area because habitat requirements are not met within the project area. There are no California special-status plant species that have a moderate or high potential to occur on or near the project site. Project activities are not likely to result in direct or indirect impacts to the five California special-status plant species identified in Table 1 due to unlikely presence.

Table 1. Special-Status Plant Species Potentially Occurring Within the Project Area

Species	Listing Status[1]	Habitat	Life Form/ Blooming Period	Potential for Occurrence in Project Area
Water bulrush (*Schoenoplectus subterminalis*)	CRPR 2B.3	Bogs and fens, marshes and swamps (montane lake margins)	Perennial rhizomatous herb, June-September	**Low.** Project area does not include suitable water habitat areas.
Slender-leaved pondweed (*Stuckenia filiformis spp. alpina*)	CRPR 2B.2	Marshes and swamps (assorted shallow freshwater)	Perennial rhizomatous herb, May-June	**Low.** Project area does not include suitable water habitat areas.
Wooly fruited sedge (*Carex lasiocarpa*)	CRPR 2B.3	Habitat bogs and fens, marshes and swamps (montane lake margins)	Perennial rhizomatous herb, June-July	**Low.** Project area does not include suitable water habitat areas.
Green spleenwort (*Asplenium viride*)	CRPR 2B.3	Meadows and seeps, upper montane coniferous forest	Perennial rhizomatous herb, June-August	**Low.** Project area does not contain limestone crevices below 8,000 feet.
Buttercup-leaf sutdorfia (*Hemieva ranuculifolia*)	CRPR 2B.2	Mesic, rocky, granitic. Meadows and seeps, upper montane coniferous forest	Perennial herb, June-August	**Low.** Project area does not include suitable water habitat areas.

Table 1. Special-Status Plant Species Potentially Occurring Within the Project Area

Species	Listing Status[1]	Habitat	Life Form/ Blooming Period	Potential for Occurrence in Project Area

[1] Listing Status Key:

California Rare Plant Rank:
CRPR 2: Plants rare, threatened, or endangered in Calif. but more common elsewhere.

CRPR Threat Code extensions and their meanings:
.1 – Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Source: CDFW 2014

Special-status Animal Species

Table 2 identifies the one California special-status animal species that has the potential to occur within the project area and which was not evaluated by the Tahoe National Forest since it is not a Forest Service Sensitive Species or listed under the federal ESA.

As identified in Table 2, the Mt. Lyell salamander requires specialized wetland habitats (caves with seepages from springs or melting snow). These habitats are not found in the Gold Valley Connector Trail corridor, which has one crossing at Pauley Creek; thus the salamander could not occur in the project area. Within the Yuba River Ranger District, the salamander has only been confirmed at a single location, over five miles from the project area in a limestone cave, on the south/east side of the top of the Sierra Buttes, in the headwaters of an unnamed drainage that eventually flows into the North Yuba River at Sierra City.

Table 2. Special-Status Animal Species Potentially Occurring Within the Project Area

Species	Listing Status[1]	Habitat	Potential for Occurrence in Project Area
Mt. Lyell salamander (*Hydromantes platycephalis*)	CSSC	Associated with granite talus with water seeping through it, typically downslope from snowfields that melt well into the summer. Inhabits caves, granite boulders, rock fissures, rocky stream edges, and seepages from springs and melting snow. Frequents cliff faces, vertical cavern walls, and level ground.	**Low.** Project area does not include suitable habitat for this species

[1] Listing Status Key:

CSSC: California Species of Special Concern

Source: CNDDB 2014; Stebbins, Robert C., and McGinnis, Samuel M. Field Guide to Amphibians and Reptiles of California: Revised Edition (California Natural History Guides) University of California Press, 2012.

Wildlife Movement. Habitat corridors facilitate wildlife migration and movement within landscapes and are essential to the viability and persistence of many wildlife populations. Wildlife movement includes migration (i.e., usually one-way per season), inter-population movement (i.e., long-term genetic flow), and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide

connection between outlying populations and the main corridor, permitting an increase in gene flow among populations. These linkages among habitats can extend for miles and occur on a large scale throughout California.

Project activities could impact wildlife in adjacent areas by temporarily altering movement patterns, or causing animals to temporarily avoid those areas. Mobile species including birds and larger mammals are expected to disperse into adjacent areas during project activities. Although local wildlife movement may be impacted near the project site, the affected area is confined to a small work site within a large tract of public, undeveloped, Forest Service land providing established native vegetation and habitat for a range of common and special-status native wildlife species. Additionally, future use of the new trail segment is not expected to restrict wildlife movement as OHV use would occur sparsely during weekdays and during the daylight hours only leaving ample time for wildlife movement when OHV use is minimal and at night. Therefore, disruption to wildlife movement is considered less than significant.

Local Protection Policies and Conservation Plans. The project does not conflict with any local policies or ordinances protecting biological resources. There would be no impact, directly or indirectly, on local policies or ordinances by the implementation of this project.

The project area is not covered under a Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. Therefore, there would be no impact, either directly or indirectly, on a Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.

2.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

The Tahoe National Forest analyzed project impacts to heritage resources in the PCT Realignment Project EA (pp. 43-44 and 53). The PCT Realignment Project area has been inventoried for cultural resources. There was no evidence of prehistoric or historic archaeological sites or isolated features within the project area. Additionally, the project would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. Project actions would fully comply with the National Historic Preservation Act (NHPA), and implementing programmatic agreements (PAs).

A discussion of additional CEQA factors related to cultural resources is presented below.

Discussion:

Human Remains. Neither the EA nor PA addressed inadvertent discovery or recognition of any human remains during project activities. If human remains are inadvertently discovered, the Tahoe National Forest will follow the procedures as outlined in California Health and Safety Code section 7050.5. All project activities at the find site must come to a complete stop and no further excavation or disturbance of the area or vicinity will occur. The county coroner will be contacted immediately, and if the coroner determines or has reason to believe that the remains are Native American, the coroner will contact the Native American Heritage Commission (NAHC) within 24 hours of making this determination. Whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner the commission will follow the procedures as outlined in PRC section 5097.98.

The CEQA Guidelines (14 CCR §15064.5(e)) reference the appropriate state law (PRC §5097.98) that applies when human remains are accidentally discovered. That CEQA language is the standard text often used as a cultural resource mitigation measure in CEQA documents for OHMVR Division projects. This language states:

> In the event that human remains are accidently discovered, the project must come to a complete stop and no further excavation or disturbance of the area or vicinity will occur. The county coroner is to be called immediately to determine that the remains are of Native American ancestry. If the coroner confirms that the remains are Native American, within a 24 hours of the discovery the coroner is to contact the Native American Heritage Commission (NAHC). The NAHC will identify the person(s) believed to be the Most Likely Descendent (MLD), and the MLD will decide, along with the property owner, to appropriate treatment or disposal of the human remains and associated grave goods as provided in PRC §5097.98. If the NAHC cannot identify the MLD, the MLD fails to make a recommendation, or the property owner rejects the MLD's recommendations, the property owner can rebury the remains and associated burial goods in an area not subject to ground disturbance (14 CCR §15064.5).

Existing state PRC and Health and Safety Code will ensure that the NAHC will be notified upon discovery of Native American human remains and that proper treatment measures will be implemented. Therefore, with these protective state laws in place, the project impact on human remains is less than significant.

Associate State Archaeologist for the OHMVR Division, Sarah Wallace, has reviewed the EA, Cultural Resources Report, and PA as part of the state's CEQA review process for this project and concurs with the findings that project impacts on cultural resources are less than significant. No further mitigation is warranted.

2.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Soil impacts were evaluated for the Gold Valley Connector Trail project in the project PCT Realignment Project EA (p. 37). The EA states the new construction of the motorized single track trail has the potential to remove the topsoil layer and compact the trail surface resulting in increased and redistributed surface drainage that could increase erosion and sediment delivery to streams downhill of the trail. The proposed new construction would meet the Forest standards and guidelines for trail construction. Implementation of applicable BMPs and project specific management requirements (EA, pp. 9-15) should not lead to the indirect effect of accelerated soil erosion.

A discussion of additional CEQA factors related to geologic resources is presented below.

Discussion:

Seismicity. There are no fault lines in the project area; the nearest known fault lines occur in eastern Butte County near Bangor, which is roughly 60 miles west of the project area (CGS 2012). Rupture of a surface fault, seismic shaking, liquefaction, or landslides would not affect the proposed connector trail and, therefore, would not expose people to potential substantial adverse effects such as loss, injury, or death.

Soil Stability. Project activities do not involve building structures that would be affected by unstable soils.

Expansive Soils and Septic. The project does not propose building construction on expansive soils or use of soils for septic purposes.

2.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions or greenhouse gases?	☐	☐	☒	☐

Greenhouse gas emissions are not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Environmental Setting

Gases that trap heat in the atmosphere and affect regulation of the earth's temperature are known as "greenhouse" gases (GHG). Many chemical compounds found in the earth's atmosphere exhibit the GHG property. GHG allow sunlight to enter the atmosphere freely. When sunlight strikes the earth's surface, some of it is reflected back towards space as infrared radiation (heat). GHG absorb this infrared radiation and trap the heat in the earth's atmosphere. The six common GHG are described below.

- Carbon Dioxide (CO_2). CO_2 is released to the atmosphere when fossil fuels (oil, gasoline, diesel, natural gas, and coal), solid waste, and wood or wood products are burned.
- Methane (CH_4). CH_4 is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in municipal solid waste landfills and the raising of livestock.
- Nitrous oxide (N_2O). N_2O is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels.
- Sulfur hexafluoride (SF_6). SF_6 is commonly used as an electrical insulator in high voltage electrical transmission and distribution equipment such as circuit breakers, substations, and transmission switchgear. Releases of SF_6 occur during maintenance and servicing as well as from leaks of electrical equipment.
- Hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). HFCs and PFCs are generated in a variety of industrial processes. Although the amount of these gases emitted into the atmosphere is small in terms of their absolute mass, they are potent agents of climate change due to their high global warming potential.

Regulatory Setting

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific greenhouse gases – carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride -and two groups of gases – hydrofluorocarbons and perfluorocarbons. These GHG are the primary GHG emitted into the atmosphere by human activities. Water vapor is also a common GHG that regulates the earth's temperature; however, the amount of water vapor in the atmosphere can change substantially from day to day, whereas other GHG emissions

remain in the atmosphere for longer periods of time. Black carbon consists of particles emitted during combustion; although a particle and not a gas, black carbon also acts to trap heat in the Earth's atmosphere.

GHG can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHG by their GWP determines their carbon dioxide equivalent (CO_2e), which enables a project's combined global warming potential to be expressed in terms of mass CO_2 emissions. Nitrous oxide, a common GHG, has a GWP of 298 and hydrofluorocarbons (HFC) range from a GWP of 140 (HFC-152a) to 14,800 (HFC-23).

In 2006, the California State Legislature adopted the California Global Warming Solutions Act of 2006, Assembly Bill (AB) 32, which required CARB to: 1) determine 1990 statewide GHG emissions, 2) approve a 2020 statewide GHG limit that is equal to the 1990 emissions level, 3) adopt a mandatory GHG reporting rule for significant GHG emission sources, 4) adopt a Scoping Plan to achieve the 2020 statewide GHG emissions limit, and 5) adopt regulations to achieve the maximum technologically feasible and cost-effective reductions.

In 2007, CARB approved a statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million metric tons of carbon dioxide equivalents ($MTCO_2e$) (CARB 2007). In 2008, CARB adopted its *Climate Change Scoping Plan*, which projects, absent regulation or under a "business as usual" (BAU) scenario, 2020 statewide GHG emissions levels of 596 million $MTCO_2e$ and identifies the numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 174 million $MTCO_2e$ of reductions and reduce statewide GHG emissions to 1990 levels by 2020 (CARB 2009b). In 2011, CARB released a supplement to the 2008 *Scoping Plan Functional Equivalent Document* (FED) that included an updated 2020 BAU statewide GHG emissions level projection of 507 million $MTCO_2e$ (CARB 2011), and in 2014 CARB adopted its First Update to the Climate Change Scoping Plan (CARB 2014).

Discussion:

Greenhouse Gas Emissions. The proposed project would involve short-term construction activity, probably between the months of June and October. Forest service employees and volunteers would be constructing the 1.8 miles of new single-track trail using hand tools including Pulaskis, McClouds, picks, rock bars, and pruners. Of the tools listed in the construction plans, chainsaws and gas-powered rock drill/hammers are the only tools that would create GHG emissions. The short duration of the project, low power-equipment use, and minimal emissions rates would not result in GHG emissions that would have a significant impact on the environment.

Plans, Policies, and Regulations. The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Construction vehicle and equipment GHG emissions are identified and planned for in the CARB's GHG emissions inventory and Scoping Plan, which contains measures designed to achieve the state's GHG reduction goals outlined in AB32. The project would not contain any stationary sources that are subject to state or federal GHG permitting or reporting regulations. The impact is less than significant.

2.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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 accident conditions involving the release of hazardous materials 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 section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project 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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, 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 involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Hazards and hazardous materials were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Chemical and physical properties such as toxicity, ignitability, corrosivity, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations (CCR), Title 22, sections 66261.20-66261.24. A "hazardous waste" is any hazardous material that is discarded, abandoned, or to be recycled. The criteria that render a material hazardous also make a waste hazardous (California Health and Safety Code §25117). According to this definition, fuels, motor oil, and lubricants in use at a typical construction site and airborne lead built up along roadways could be considered hazardous.

Hazardous Materials. The project area does not contain any hazardous materials nor are any hazardous materials planned to be brought to the project area, with the exception of fuel required to power the chainsaws and the gas powered combination rock drill/hammer. The fuel needed for this equipment would be contained within transport vehicles in appropriate containers. Therefore, these fuels would not cause an impact either through transport, use, or disposal of hazardous materials or by posing a risk of release of hazardous materials into the environment.

There are no schools within one-quarter mile of the project area.

The project area is not located on the list of hazardous materials sites pursuant to Government Code section 65962.5 (USFS 2014c). The area is not anticipated to contain any hazardous materials and is therefore not considered to pose an impact related to hazardous materials.

Airports. The project area is not located within an area that has an airport land use plan. The nearest public use airport is the Sierraville Airport, a general aviation airport more than 15 miles away. The project activities would not impact airport operations or be create aviation related safety issues.

Emergency Plans. The proposed project does not change access roads into or out of Tahoe National Forest or otherwise impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Wildland Fires. The project does not include the construction of structures; therefore, there is no risk of damage from wildland fires.

2.9 HYDROLOGY AND WATER QUALITY

	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 which 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 the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the 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 flooding on- or off-site?	☐	☐	☐	☒
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) Otherwise 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 within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

The PCT Realignment Project EA addresses the impacts of the Gold Valley Connector Trail on soils and hydrology (p. 37). Surface drainage on trail soils has the potential to create erosion impacts. The EA concludes new trail construction would meet the Forest Service standards and guidelines. Implementation of applicable BMPs and project specific management requirements (EA, pp. 9-15) should not lead to the indirect effect of accelerated soil erosion.

The discussion below addresses hydrology and water quality CEQA factors of consideration that were not included in the EA.

Discussion:

Water Quality Violations. The trail connector project would not create discharges or new sources of runoff. The project would not cause the violation of any water quality standards or waste discharge requirements.

Groundwater Supplies. The project would not increase water use, create a demand on groundwater supply, or otherwise interfere with groundwater volumes or recharge rates. No impervious surfaces would be created. The project would not result in removal of stormwater runoff from the project area. Groundwater supplies would be unaffected by the project.

Water Quality. The project would not introduce pollutants into stormwater runoff or otherwise degrade water quality.

Flood Hazards. The project does not place housing or other structures in a 100-year flood zone. The project area is not located in an area that exposes people to flood risk such as a levee or dam failure.

Seiche, Tsunami, and Mudflow. The project is not located near a large body of water that would inundate the project area with water from a seiche or tsunami or near hills that would result in a mudflow.

2.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the 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?	☐	☐	☐	☒

Land use and planning impacts were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

Established Community. The project has no components that would divide an established community. All project activities would take place on national forest land.

Land Use Plans and Policies. The project would not change the nature of any land use within the area or conflict with any land use plans. The purpose of the Gold Valley Connector Trail Project is to create a new OHV trail to connect existing OHV trails within the Gold Valley OHV Trail System. The connector trail is part of a broader action being undertaken by Tahoe National Forest to move the existing PCT away from an existing OHV use area. According to the FONSI (p. 4), all actions included in the PCT Realignment, including the development of the Gold Valley connector Trail, "are consistent with direction in the Tahoe National Forest Land and Resource Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (2004)."

Habitat Plans. The project area is not located in an area covered by a habitat conservation plan or natural community conservation plan.

2.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that 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?	☐	☐	☐	☒

Mineral resource impacts were not evaluated in the project NEPA documents (EA and FONSI). A discussion of this CEQA factor of consideration is presented below.

Discussion:

No important mineral resources would be removed from the project area, nor would availability of any mineral resources be affected by work at the specific project sites.

2.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project 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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Noise impacts of motorcycle use in the area were evaluated as they relate to disturbance of PCT users in the project NEPA document (EA, pp. 25-29). The EA concludes that the planned realignment of the PCT, which includes the proposed new Gold Valley Connector Trail, would have the overall effect of reducing noise impacts to the PCT from motorcycle users (p. 16).

A discussion of additional CEQA factors of consideration related to noise is presented below.

Discussion:

Violation of Noise Standards. Noise associated with trail construction would be minor due to the fact that the work would mostly be completed using hand labor and hand tools. However, chainsaws and a gas powered rock drill/hammer would be used as necessary when conditions warrant it. Noise from the chainsaws and drill hammer would be limited to the hours between 7:00 a.m. and 5:00 p.m., Monday through Friday, and for a period of approximately 30 days. Recreationalists in the vicinity of the project area would be able to hear the machinery, however because of the short duration of the work (80 hours), limited work hours (no nighttime work), and the limited amount of time machinery would be needed, no violations of noise standards are expected to occur. Noise impacts are considered less than significant.

Groundborne Vibration and Noise. Localized ground vibrations are not expected to occur during implementation of the project as no heavy equipment would be used to construct the connector trail.

Permanent and Temporary Noise Increase. None of the construction activities associated with construction of the trail would create a substantial permanent or temporary increase in ambient noise levels (refer to responses above).

Airport Noise. The nearest public use airport is the Sierraville Airport, a general aviation airport more than fifteen miles away. The project area is not located within the 60 dBA CNEL zone of the airport and does not involve a change in recreational or other human use of the area. Implementation of the project would not affect or result in exposure to excessive noise levels from an airport.

2.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒

Population and housing impacts were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

The project is located in a national forest and would not induce population growth. The proposed project involves construction a 1.8-mile connector trail to create a loop trail for OHV use. These activities do not provide services that support population growth.

The project would not displace any existing houses as there are none in the area.

There are no people living in the immediate vicinity of the project area. Therefore, there would be no displacement of people requiring the construction of replacement housing elsewhere.

2.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Public service impacts were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

The project would not increase the need for fire or police protection services or create an adverse impact on these protection services. The project area is monitored by Forest Service patrol staff.

The project would not affect the number of students served by local schools, nor bring in new residents requiring the construction of additional schools.

The project would not result in an increased number of residents or visitors in the area using community parks. The project is not expected to increased visitor use within the national forest or OHV use of the OHV Trail System such that additional public services are needed.

No other public facilities would be affected by the project.

2.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project 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) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

OHV recreation was addressed in the PCT Realignment Project EA (pp. 22-33 and 52). The EA and resulting Decision Memo and FONSI concluded that there is no significant change in these recreation opportunities caused by the project. The EA determined the connector trail would provide enhanced single-track trail opportunities available to motorcyclists and mountain bicyclists. Use for these two groups is not expected to increase beyond general population-based increases through time; it would not create a significant impact to recreation user groups in the project area (p. 52).

The discussion below addresses CEQA factors of consideration that were not included in the EA.

Discussion:

The project would not increase visitor use at the national forest such that new recreational facilities would be needed, nor would the new connector trail cause motorized recreationists to intensify uses on other facilities. No neighborhood or regional parks are located in the vicinity of the project which is located in a remote area of a national forest.

The project would not include nor would it facilitate any new recreational facilities or activities.

2.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in 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) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Transportation/traffic impacts were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

Project activities would take place on Tahoe National Forest lands in a very sparsely populated area of Tahoe County. The project would not increase vehicle trips to the project area, alter existing circulation systems, or introduce road hazards. The construction of the new connector trail is consistent with the Forest's 2011 Motor Vehicle Use Map (Draft Yuba River Ranger District (North)). Modes of alternative transportation do not occur at the project sites, which are remotely located in the national forest. The project does not affect air traffic patterns. Emergency access to or from the project area is not affected.

2.17 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB)?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could 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 which serves or may serve the project that it has adequate capacity to serve the project's projected 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 related to solid waste?	☐	☐	☐	☒

Impacts to utilities and service systems were not evaluated in the project NEPA documents (EA and FONSI). A discussion of these CEQA factors of consideration is presented below.

Discussion:

The project would not require or result in construction of new or expanded water or wastewater treatment facilities. The project is limited to the construction of a single-track motorcycle trail in a remote area of a national forest. In addition, visitor use numbers are not expected to change significantly from existing visitation.

The project would be designed to convey stormwater off of the trail at appropriate locations and in accordance with national forest standards and guidelines so as to prevent erosion and siltation of downstream water bodies.

No new water supplies or entitlements would be needed to complete the project. The project is designed to serve existing visitor use levels. The project would not cause an increase in water use or require construction of new water infrastructure.

The project has no solid waste disposal needs and thus would not violate any federal, state, or local statutes or regulations related to solid waste.

2.18 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of past projects, the effects of other current projects, and the effects of probably future projects as defined in Section 15130.)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion:

Degraded Environment. Work to install the new Gold Valley Connector Trail would employ Management Requirements and BMPs (EA, pp.9-15) during implementation to preserve the quality of the environment and to protect sensitive habitats and species. These actions, combined with the resource conservation measures, would prevent substantial degradation of the environment and loss of species below self sustaining levels. No important examples of the major periods of California history or prehistory are present at specific project sites.

Cumulative Impacts. The project has no impacts related to Agriculture/Forestry, Hazards/Hazardous Materials, Hydrology, Land Use Planning, Mineral Resources, Population/Housing, Public Services, Recreation, Transportation, and Utilities. Therefore, there are no cumulative impacts related to these environmental factors

The project is found to have less than significant impacts on Aesthetics, Air Quality, Cultural Resources, GHG Emissions, Geology/Soils, and Noise. With the exception of GHG emissions, all project impacts are highly localized and do not contribute toward cumulative impacts. There are no other activities or proposed projects in the Tahoe National Forest that would contribute toward the site-specific project impacts.

Cumulative impacts related to climate change (GHG emissions) and Air Quality are not anticipated as the project activities would not expand recreational facilities or result in increased visitation at the Tahoe National Forest.

Effects on Human Beings. The project is the construction of a 1.8-mile connector trail within an established OHV trail system. Measures have been incorporated into the project that would

prevent significant environmental effects. No substantial unavoidable adverse effects, either direct or indirect, are identified in this Initial Study.

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Tahoe National Forest -- Gold Valley Connector Trail Project
Supplement to Environmental Assessment

APPENDIX A

PACIFIC CREST TRAIL REALIGNMENT PROJECT DECISION NOTICE AND FINDING OF NO SIGNIFICANT IMPACT AND ENVIRONMENTAL ASSESSMENT

U.S. Forest Service, Tahoe National Forest

DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT
For the

Pacific Crest Trail Realignment Project

USDA Forest Service, Tahoe National Forest
Yuba River Ranger District
Sierra County, California

BACKGROUND

On July 18, 2011, the *Pacific National Scenic Crest Trail Highway 49 to the A-Tree Optimal Location Review* (PCTOLR) was signed by me; Beth Boyst, Regional Pacific Crest Trail (PCT) Program Manager; Liz Bergon, Executive Director, PCT Association; Alice Carlton, Plumas National Forest Supervisor; Genice Froehlich, Yuba River District Ranger; and Deb Bumpus, Beckwourth District Ranger. The goal of the Pacific Crest Trail Realignment Project is to implement the PCTOLR recommendations, which are aimed at addressing issues associated with the current Pacific Crest Trail (PCT) alignment in the area of Packer Saddle, near the Sierra Buttes in Sierra County. These issues include potential safety concerns, lack of access to good water and camping opportunities, mountain bike trespass, and a degraded recreational experience for hikers and equestrians. To a large extent, these issues are associated with the PCT's current use of a busy section of paved road, proximity to a commercial mountain bike drop-off point, and its proximity to a dirt road and a four-wheel drive trail, which it closely parallels on and off for about a mile. In addition to deciding how to realign the PCT, I have also decided how to best manage the abandoned segment of PCT given the other needs and demands in the area, as described below.

DECISION AND REASONS FOR THE DECISION

I have read the Pacific Crest Trail (PCT) Realignment Project Environmental Assessment (EA), reviewed the analysis in the project file, including documents incorporated by reference (listed on page 61 of the EA), and fully understand the environmental effects disclosed therein. After careful consideration of the analysis, applicable laws, the Forest Plan, and public comments, I have selected Alternative A. My decision is based on a review of the record that shows a thorough analysis using the best available science.

Alternative A is fully described in the EA on pages 3-4. Under Alternative A, the Forest Service will:

- Relocate approximately six miles of the PCT in the Packer Saddle area.
- Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users.
- Convert the abandoned section of PCT to a multiple use trail.
- Construct an approximately one-mile multiple-use, single-track trail connection between the newly converted multiple-use trail to the Gold Valley four-wheel drive Trail, thus creating connections to a popular network of multiple-use single-track trails.

- Obliterate approximately ¼ mile of the abandoned PCT between the newly converted multiple-use trail and the new PCT to prevent inadvertent trespass on the PCT by mountain bicyclists and motorcyclists.

Standard management requirements included in Alternative A to reduce and avoid adverse impacts are described in the EA, Chapter 2, Management Requirements Common to All Alternatives (pages 9-11), and in the Best Management Practices (BMPs), described in the EA, Chapter 2, pages 11-15.

My reasons for selecting Alternative A are:

1) Alternative A would achieve the project Purpose and Need (described on pages 3-4 in the EA) in the most responsible and effective manner, especially when compared to the Alternative B, the No Action alternative.

2) Alternative A more completely implements the recommendations made in *the Pacific National Scenic Crest Trail Highway 49 to the A-Tree Optimal Location Review* (PCTLOR) than any of the other alternatives.

3) Specifically, Alternative A would address safety concerns, lack of access to good water and camping opportunities, mountain bike trespass, and degraded recreational experiences for hikers and equestrians

4) Alternative A implements: (1) applicable standards and guidelines contained in the *Tahoe National Forest Land and Resource Management Plan* (1990) as amended by the *Sierra Nevada Forest Plan Amendment Record of Decision* (SNFPA ROD 2004) and (2) the Management Requirements and Best Management Practices (BMPs) as presented in the EA (Chapter 2, pages 11-15, Management Requirements Common to All Alternatives, and Appendix C, Watershed Data-BMPs), which ensure that potentially adverse environmental effects are mitigated.

5) Alternative A provides for protection of forest resources, including Management Indicator Species, Threatened, Endangered and Sensitive species and their habitat; water quality; cultural and historical resources; and riparian areas.

6) Alternative A would improve overall visual quality, as well as reducing the distance spent crossing private lands for the PCT users.

7) Alternative A addresses the requirement in NEPA to consider "the degree to which the action may adversely affect" a given resource. I have considered the degree to which this project's actions add cumulative effects to the various resources. I conclude that the Management Requirements that are included in the Proposed Action reduce effects from this project to a level of non-significance for all affected resources, while still accomplishing the purpose and need for the project.

ALTERNATIVES CONSIDERED

Five alternatives were considered in detail: **Alternative A** - *the Proposed Action,* **Alternative B** - *No Action*), **Alternative C** – *Put in the new PCT route as planned, but don't make the old route a motorized multiple use trail (leave as non-motorized, but allow mountain bike use); and do not build new Multiple-use single-track connector trail,* **Alternative D** - *Put in the new PCT route as*

planned, but don't improve Pack Saddle Campground, and **Alternative E** - *Instead of building new trails, only use existing trails for the re-route (i.e.- Tamarack Trail, Sierra Buttes Trail, and Deer Lake Trail).* Two additional alternatives were considered, but eliminated from detailed study, because they did not meet the purpose and need of the project: **Alternative F** – *Keep the existing PCT where it is currently located. Make the proposed new alignment a multiple use trail, including the new construction, and* **Alternative G** - *Use a net-zero impact philosophy: If 4.3 miles of new trail is required, then remove and restore 4.3 miles of existing trail to a natural state.* These alternatives are described in detail in Chapter 2 of the EA, and analyses of the environmental effects for the first five alternatives are presented in Chapter 3 of the EA.

PUBLIC INVOLVEMENT

On August 25, 2011, numerous scoping letters for the Pacific Crest Trail Realignment Project were mailed to interested and potentially affected parties, and on that same day, a public notice was published in Grass Valley's *The Union* newspaper. Additionally, a public notice was put in Downieville's Mountain Messenger Newspaper on that day as well. As a result of this public scoping, a total of 13 letters of comment were received, as well as 21 letters asking to be kept informed. These comments were used to identify any issues and develop alternatives as needed in the Environmental Assessment. The Pacific Crest Trail Realignment Project was included in the Tahoe National Forest Schedule of Proposed Actions dated January of 2011, and all subsequent issues. A preliminary EA was mailed to those individuals and organizations who responded during scoping, contacted the District and requested a copy, or otherwise indicated an interest in the Pacific Crest Trail Realignment Project. Additionally, a legal notice announcing the 30-day opportunity to comment on the proposal and analysis was published in the newspaper of record, Grass Valley's *The Union* on May 9, 2013, and in Downieville's Mountain Messenger on the same day. Twenty-six letters of comment or other expressions of interest were received during the comment period. Responses to public comments received during the 30-day comment period are attached to this DN/FONSI.

Notification of this decision will be published in *The Union*, as well as the *Mountain Messenger*. A copy of this DN/FONSI (including responses to comments) will be distributed to those who commented during the 30-day comment period as well as those who requested to be kept informed about this project.

FINDING OF NO SIGNIFICANT IMPACT

I have determined that this action will not significantly affect the quality of the human environment. Therefore, an environmental impact statement is not needed. This determination is based on the effects analysis documented in the Project EA, and considers the following factors listed in 40 CFR 1508.27:

(a) **Context --** This project would not pose significant effects either in a local context or in the broader context of the Tahoe National Forest (EA discussion on pg. 21).

(b) Intensity

(1) Beneficial and adverse effects – Benefits of this project were not used to offset adverse impacts, and adverse impacts of this project are not significant even when separated from its benefits (EA pp. 22-43).

(2) Public health and safety -- Implementation of this project will not cause any significant effects relative to public health and safety (EA pg. 43).

(3) Unique characteristics of the geographic area -- This project would not have any significant effects on unique characteristics of the geographic area (EA pp. 43-44).

(4) Controversy – Public involvement has not identified any legitimate scientific controversy regarding the effects of this project (EA pg. 44).

(5) Uncertainty, unique or unknown risks -- Effects of implementing the selected alternative are not highly uncertain, nor do they represent unique or unknown risks (EA pg. 44).

(6) Precedence – This action does not establish a precedent for future actions or represent a decision about future management considerations (EA pp. 44-45).

(7) Cumulative impacts --This action would not cause any significant, cumulative, environmental impacts (EA pp. 45-52).

(8) Cultural and historical resources -- This action would not pose any significant adverse effects on cultural or historical resources (EA pg. 53).

(9) Endangered or threatened species or its habitat – The selected alternative would not affect any federally threatened or endangered species or their designated critical habitat. The selected alternative will not cause a trend toward Federal listing or a loss of viability for any Forest Service Pacific Southwest Region Sensitive Species (EA pg. 53).

(10) Federal, State, or local law or requirements -- The selected alternative conforms to all applicable Federal, State, and local laws and requirements (EA pp. 53-57).

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

I find that all actions included in Alternative A are consistent with direction in the *Tahoe National Forest Land and Resource Management Plan* (1990) as amended by the *Sierra Nevada Forest Plan Amendment Record of Decision* (2004). All actions meet *National Forest Management Act (NFMA)* requirements detailed in 36 CFR 219.27 (EA pp 112-114).

The project is in full compliance with the Endangered Species Act, the Clean Air Act, the Clean Water Act and the National Historic Preservation Act.

ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES

Legal notice in Grass Valley's *The Union* newspaper (May 9, 2013) and a subsequent 30-day comment period for this proposal was provided pursuant to 36 CFR 215.5. Only those individuals and organizations that provide comments or other expressions of interest during the 30-day comment period are eligible to appeal the decision. The 30-day comment period for this project proposal ended on June 10, 2013. Twenty-six comments or other expressions of interest were received during the comment period.

This decision is subject to appeal pursuant to the regulations in 36 CFR §215. Individuals or organizations who submitted comments or otherwise expressed interest in the project during the comment period specified at §215.6 may appeal this decision. Appeals must be filed within 45 days following the date of the published legal notice of this decision in Grass Valley's *The Union* newspaper. The publication date of the legal notice in *The Union* is the exclusive means for calculating the time to file an appeal (§215.15 (a)), and those wishing to appeal should not rely upon dates or timeframe information provided by any other source. Notices of appeal must meet the requirements in 36 CFR §215.14. A statement of appeal, including attachments, must be filed (regular mail, fax, e-mail, hand-delivery, express delivery, or messenger service) with the Regional Forester, 1323 Club Drive, Vallejo, California, 94592, FAX (707) 562-9229. The office business hours for those submitting hand-delivered appeals are 8:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays. Electronic appeals must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc) to appeals-pacificsouthwest-regional-office@fs.fed.us. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

If no appeals are filed within the 45-day time period, implementation of the decision may begin on, but not before, the 5th business day following the close of the appeal-filing period (36 CFR §215.15). When an appeal is filed, implementation may occur on, but not before, the 15th business day following the date of appeal disposition (36 CFR §215.2). In the event of multiple appeals, the implementation date is controlled by the date of the last appeal disposition.

CONTACT PERSON

For further information concerning this decision, contact: Joe Chavez, Project Leader, or Dennis Stevens, Environmental Coordinator, Yuba River Ranger District, 15924 Highway 49, Camptonville, CA 95922, phone (530) 478-6253.

Tom Quinn – Forest Supervisor
Deciding Officer, Tahoe National Forest

7/18/13
Date

Attachment: Responses to Comments

United States
Department of
Agriculture

**Forest
Service**

Pacific
Southwest
Region

March 2013

Environmental Assessment for the Pacific Crest Trail Realignment Project

Tahoe National Forest – Yuba River Ranger District

View of Sierra Buttes from Proposed New Pacific Crest Trail Alignment

Pacific Crest Trail Realignment Project

Table of Contents

ENVIRONMENTAL ASSESSMENT
for the
Pacific Crest Trail Realignment Project

USDA Forest Service – Tahoe National Forest – Yuba River Ranger District

Project located in Sierra County, California

Chapter I – Purpose, Need, and Proposed Action

The USDA Forest Service, Tahoe National Forest, is proposing to implement recommendations made in the *Pacific National Scenic Crest Trail Highway 49 to the A-Tree Optimal Location Review* (PCTOLR) signed by Tom Quinn, Tahoe NF Forest Supervisor, on July 18, 2011(as well as Beth Boyst, Regional PCT Program Manager; Liz Bergon, Executive Director, PCT Association; Alice Carlton, Plumas NF Forest Supervisor; Genice Froehlich, Yuba River RD District Ranger; and Deb Bumpus, Beckwourth RD District Ranger). The name of the project is the "Pacific Crest Trail Realignment Project." Implementing the PCTOLR recommendations would address issues associated with the current Pacific Crest Trail (PCT) alignment in the area of Packer Saddle, near the Sierra Buttes in Sierra County. These issues include potential safety concerns, lack of access to good water and camping opportunities, mountain bike trespass, and a degraded recreational experience for hikers and equestrians. To a large extent these issues are associated with the PCT's current use of a busy section of paved road, proximity to a commercial mountain bike drop-off point, and its closeness to a dirt road and a four-wheel drive trail, which it closely parallels on and off for about a mile. With any proposal to realign the PCT the land management agency must also decide what to do with, and how to best manage, the abandoned segment of PCT given the other needs and demands in the area. To address these concerns the Forest Service is proposing the following actions:

- Relocate approximately six miles of the PCT in the Packer Saddle area, which would use approximately 1.7 miles of existing non-motorized trail (portions of the Sierra Buttes Trail and most of the Deer Lake Trail) and require approximately 4.3 miles of new trail construction.

- The proposed new PCT alignment would pass through or be adjacent to the Packsaddle Campground/Trailhead. To provide for additional PCT hikers and equestrian users, the proposed action includes increasing the trailhead parking capacity by 10 to 15 vehicles, making equestrian related enhancements to six campsites (lengthen parking spurs and providing site corrals), and creating two designated day-use horse trailer parking spots, all within the existing Packsaddle Campground/Trailhead developed site boundaries.

- If needed in the future, expand trailhead parking by up to 30 vehicles by grading approximately ½ acre of a brushy flat immediately across the road from Packsaddle Campground/Trailhead.

- Convert the abandoned section of PCT between Pack Saddle and a junction above Deer Lake to a multiple use trail; both motorized (motorcycle) and non-motorized (hike, mountain bike, horse) uses.

- Construct an approximately 1.8 mile multiple-use single-track trail connection between the newly converted multiple-use trail on the ridge to the Gold Valley 4X4 Trail, thus creating connections from Pack Saddle (staging area for motorcyclists and mountain bicyclists) to a popular network of multiple-use single-track trails.

- Obliterate approximately ¼ mile of the abandoned PCT between the newly converted multiple-use trail and the new PCT to prevent inadvertent trespass on the PCT by mountain bicyclists and motorcyclists. Obliterate the steep abandoned trail segments on trails converted to the new PCT alignment, after these segments have been rerouted with trail alignments of desired grades (<10%).

In addition to addressing the above issues, the proposed alternate route would also improve overall visual quality and reduce the distance spent crossing private land for PCT users. The proposed PCT realignment would begin at the intersection with the Sierra Buttes Trail. The alternate route would descend to the northeast, passing by and weaving through the Tamarack Lakes, running parallel but out of sight and sound of the Tamarack Lakes OHV 4X4 Trail, dropping a total of 1,300 feet in elevation to Packsaddle Campground. From the Packsaddle Campground the alternate route would climb back up to the ridge top, roughly following the existing Deer Lake Trail, meeting back up with the current PCT alignment north of the junction with the Deer Lake OHV 4X4 Trail, but south of Summit Lake. The six mile new alignment would use about 1.7 miles of existing non-motorized trail (portions of the Sierra Buttes Trail and most of the Deer Lake Trail) and require approximately 4.3 miles of new trail construction. See the enclosed map (in Appendix A).

In addition to the benefits to PCT users, the proposed actions would provide enhanced trail experiences for two significant user groups that greatly value this area: motorcyclists and mountain bicyclists. This enhanced experience would come from providing a single-track trail connection between Pack Saddle and Gold Valley 4x4 Trail, which then connects riders to a larger network of multiple-use single-track trails. Pack Saddle is currently a popular staging area for both the mountain bike and motorcycle user groups. Both of these user groups place great value on the challenging single-track trail opportunities within a mountainous forest setting that this portion of the Tahoe National Forest provides. For both the mountain bike and motorcycle user groups, the experience of traveling on single-track trails cannot be replicated by traveling on roads, as roads do not provide near the same quality narrow trail experience these user groups seek. The proposed action to manage the abandoned PCT as multiple-use motorized would also provide a consistent management strategy that would reduce trail user confusion and thus, conflict. There is always less confusion if a trail network's management strategy is consistent, rather than going from non-motorized to motorized, as has occurred in the nearby example of the non-motorized Sunrise Trail that leads into a network of motorized trails. This inconsistent management strategy would be the case for users traveling from Pack Saddle to Downieville (via the abandoned PCT segment) if the 2 ½ mile segment of abandoned PCT was managed as multiple-use non-motorized.

All proposed activities would adhere to the Standards and Guidelines contained within the *Tahoe National Forest Land and Resource Management Plan* (1990) as amended by the *Sierra Nevada Forest Plan Amendment Record of Decision* (2004), as described in Chapter 3, Intensity Item #10.

Public Involvement/Scoping

This project was originally published in the Tahoe National Forest's quarterly *Schedule of Proposed Actions* (SOPA) in January of 2011 and every issue since that time. A public scoping letter was mailed to numerous potentially interested and/or affected individuals on August 25, 2011. A public notice was also put in Grass Valley's *The Union* Newspaper, published on August 25, 2011. Additionally, a public notice was put in Downieville's *Mountain Messenger* on the same day. As a result of this public scoping, Yuba River Ranger District received a total of thirteen letters of comment, plus twenty one requests to be kept informed. These comments were used to identify the issues and develop the alternatives included in this Environmental Assessment.

Issues

Issues have a cause-effect relationship to the actions under consideration. An issue statement describes a specific action and the environmental effect(s) expected to result from that action. Cause-effect statements provide a way to understand and focus on the issues relevant to a particular decision. Issues serve to highlight effects or unintended consequences that may occur from the proposed action and alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the decision maker and public to understand. Issues are identified during scoping early in the process to help set the scope of the actions, alternatives, and effects to consider.

Thirty four comment/keep informed letters were received and reviewed by the Responsible Official. Much of the input received consisted of either "non-issues" or questions and general comments; however, several important issues were identified by the Responsible Official. These include the following: There was the concern from hikers that the old PCT alignment should not be converted to a motorized trail, nor should the new motorized connector trail be built. There were concerns that funds would be spent on Packsaddle Campground when, in the opinion of some, improvements were not really needed. There was a concern that there are enough existing trails in the area and that if the PCT needed to be moved; only existing trails should be used for the re-route. There was the concern that more motorized trails are needed, and that the proposed re-route should be a motorized trail, and the PCT should remain in its current location. There was a concern that the area has reached its user capacity level, and that, if any new trails were built, an equal amount of existing trails should be removed and converted back to a natural state. These issues have been addressed through the range of alternatives, as presented in Chapter II.

Decision to be Made

The decision to be made is whether to approve the proposed actions as presented in this document, approve an alternative to those proposed actions, or choose to not implement any of the actions proposed. All proposed actions are consistent with the *Tahoe National Forest Land and Resource Management Plan* as amended. The decision would likely be made in mid-2013, and implemented later in 2013.

Chapter II – Alternatives Considered

Alternatives

Alternative A – Proposed Action

This alternative is the Proposed Action, as presented in Chapter 1. (See pages 3-4 of this environmental assessment.) Below is a summary of the project treatments:

- Relocate approximately six miles of the PCT in the Packer Saddle area.
- Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users.
- Convert the abandoned section of PCT to a multiple use trail.
- Construct an approximately one-mile multiple-use, single-track trail connection between the newly converted multiple-use trail to the Gold Valley four-wheel drive Trail, thus creating connections to a popular network of multiple-use single-track trails.
- Obliterate approximately ¼ mile of the abandoned PCT between the newly converted multiple-use trail and the new PCT to prevent inadvertent trespass on the PCT by mountain bicyclists and motorcyclists.

The proposed PCT realignment would begin at the intersection with the Sierra Buttes Trail. The alternate route would descend to the northeast, passing by and weaving through the Tamarack Lakes, running parallel but out of sight and sound of the Tamarack Lakes OHV 4X4 Trail, dropping a total of 1,300 feet in elevation to Packsaddle Campground. From the Packsaddle Campground the alternate route would climb back up to the ridge top, roughly following the existing Deer Lake Trail, meeting back up with the current PCT alignment north of the junction with the Deer Lake OHV 4X4 Trail, but south of Summit Lake. The six mile new alignment would use about 1.7 miles of existing non-motorized trail (portions of the Tamarack Connection Trail and most of the Deer Lake Trail) and require approximately 4.3 miles of new trail construction. See the enclosed map (in Appendix A).

Proposed management activities are consistent with the applicable forest-wide and land allocation-specific standards and guidelines described in the 2004 SNFPA ROD (pp. 49 through 66). Alternative A is consistent with the *Tahoe National Forest Land and Resource Management Plan* (LRMP), as amended (36 CFR 219.10 (c)).

Alternative B - No Action

This alternative does not implement any of actions proposed. No trail relocation, realignment, construction, conversions, or parking expansion would occur. Under this alternative, routine land stewardship, including fire suppression, road maintenance, or other administrative activities that address threats to life and property, would continue.

This alternative complies with 40 CFR 1502.14(d), which requires that a no-action alternative be included in the analysis.

Alternative C – Put in the new PCT route as planned, but don't make the old route a motorized multiple use trail (leave as non-motorized, but allow mountain bike use); and do not build new Multiple-use single-track connector trail:

- Relocate approximately six miles of the PCT in the Packer Saddle area (as described in Alternative A).
- Leave the abandoned section of PCT as an existing non-motorized trail.
- Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users.

Alternative C is consistent with the *Tahoe National Forest Land and Resource Management Plan* (LRMP), as amended (36 CFR 219.10 (c)).

Alternative D – Put in the new PCT route as planned, but don't improve Pack Saddle Campground:

- Relocate approximately six miles of the PCT in the Packer Saddle area (as described in Alternative A).
- Convert the abandoned section of PCT to a multiple use trail.
- Construct an approximately one-mile multiple-use single-track trail connection between the newly converted multiple-use trail to the Gold Valley four-wheel drive Trail, thus creating connections to a popular network of multiple-use single-track trails.
- **Do Not** enlarge the trailhead parking at Packsaddle Campground for PCT users nor make enhancements to the campground for equestrian users.

Alternative D is consistent with the *Tahoe National Forest Land and Resource Management Plan* (LRMP), as amended (36 CFR 219.10 (c)).

Alternative E – Instead of building new trails, only use existing trails for the re-route (i.e.- Tamarack Trail, Sierra Buttes Trail, and Deer Lake Trail):

- Relocate the PCT to the following route: From the current junction of the PCT and the Sierra Buttes Trail (12E06), take the Sierra Buttes Trail north to the Tamarack Lakes Trail (12E30). Continue north on the Tamarack Lakes Trail to its junction with Packer Lake Road (FS Road 621). Follow this road east approximately ¼ mile to the junction with the Deer Lake Trail (12E02). Follow existing Deer Lake Trail back to the PCT.

- Convert the abandoned section of PCT to a multiple use trail.
- Construct an approximately one-mile multiple-use single-track trail connection between the newly converted multiple-use trail to the Gold Valley four-wheel drive Trail, thus creating connections to a popular network of multiple-use single-track trails.
- Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users.

Alternative E is consistent with the *Tahoe National Forest Land and Resource Management Plan* (LRMP), as amended (36 CFR 219.10 (c)).

Alternatives Considered, but eliminated from detailed study:

Alternative F - Keep the existing PCT where it is currently located. Make the proposed new alignment a multiple use trail, including the new construction:

This alternative was considered, but dropped from detailed study because it does not meet the purpose and need of the project, which is to implement the PCTOLR recommendations, as well as address the ongoing issues of potential safety concerns, lack of access to good water and camping opportunities, mountain bike trespass on the existing PCT, and a degraded recreational experience, as described in Chapter I.

Alternative G - Use a *net-zero impact* philosophy: If 4.3 miles of new trail is required, then remove and restore 4.3 miles of existing trail to a natural state:

This alternative was considered, but dropped from detailed study because it is not within the purpose and need, nor scope of the project, which is to implement the recommendations outlined in the PCTLOR while addressing recreation needs associated with the abandoned segment of the PCT.

Management Requirements Common to All Action Alternatives

In response to both internal and public comments on the proposal, management requirements were developed to reduce or prevent some of the potential impacts the various proposed actions may cause. The following management requirements would be applied to Alternatives A and C-E (if applicable to the actions proposed).

Table 2-1. Pacific Crest Trail Realignment Project Management Requirements

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Noxious/Invasive Exotic Weed Management – Prevention	Ensure that project specifications include provisions that ensure all equipment used in the Project Area is weed free.	Botanist and recreation staff

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Noxious/Invasive Exotic Weed Management – Erosion control	Use only weed free plant materials for erosion control (if needed) to prevent introduction of noxious/invasive exotic weeds. Native plant materials are required for erosion control work.	Botanist and recreation staff
Rare Plant Management – Sensitive plants	Avoid impacts to known occurrences of *Lewisia kelloggii* ssp. *hutchisonii* plants in section 7.	Botanist and recreation staff
Rare Plant Management – Sensitive plants	Survey potential habitat for *Lewisia kelloggii* ssp. *hutchisonii* in the correct time frame during the year of trail decommission/construction, and flag any rare plants discovered – before trail decommission/construction – to avoid/reduce impacts to these rare plants. Also reflag known occurrences.	Botanist and recreation staff
Rare Plant Management – Sensitive plants	If any rare plants or weeds are found in the Project Area before or during project implementation, notify a plant specialist and flag those sites for avoidance until site specific recommendations are developed.	Botanist and recreation staff
Non-native invasive Plant Management – Prevention	Ensure that contract specifications include provisions that ensure all equipment used in the Project Area is certified-noxious weed free.	Recreation and Botanist
Non-native invasive Plant Management – Erosion control	Use only noxious weed free plant materials for erosion control (if needed) to prevent introduction of NNIP.	Recreation and Botanist
Non-native invasive Plant Management – Prevention and erosion control	Coordinate with the botanist prior to decommissioning the road/trail to obtain a list of native plant seed appropriate for the site.	Recreation and Botanist
Wildlife/Aquatics - TES	If new Threatened, Endangered, or Forest Service Sensitive (TES) species are listed or discovered or nesting TES are found within 0.25 mile of activities, a limited operating period may be implemented as recommended by a qualified biologist.	District Biologist, Recreation Officer/staff, Service Contract COR
Wildlife – Trail location	Locate trails to avoid removing large trees, large snags, and large downed logs.	District Biologist, Resource specialists, Recreation Officer/staff, Service Contract COR
Watershed, Soils, & Aquatic Resources – **Riparian Buffers –Ground Disturbance Activities**	Follow site-specific Best Management Practices	Resource specialists, Recreation Officer/staff, Hydrologist, Aquatic Biologist.

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Watershed, Soils, & Aquatic Resources – Roads & trails.	Place rock on trails and roads at stream crossings and segments within identified RCAs to reduce the impact of sediment delivery to associated stream courses. Place rock, slash, or certified weed-free straw at the outlets of rolling dips and/or waterbars to dissipate water where identified by road engineer and soil scientist, and/or hydrologist.	Resource specialists, Recreation Officer/staff, Hydrologist, Aquatic Biologist.
Watershed, Soils, & Aquatic Resources – Implementation of BMPs	To reduce the potential for adverse cumulative watershed effects, implement state certified Best Management Practices (BMPs) (USDA 2000).	Resource specialists, Recreation Officer/staff, Hydrologist, Aquatic Biologist.
Recreation – PCT	Design new PCT segments and rerouted segments of existing trails that are converted to the PCT to contain grades no steeper than 10% for erosion protection and user convenience.	Recreation Officer

*****In addition to the above listed management requirements, the following BMPs to protect water quality and riparian resources, listed below, must be followed.*****

Best Management Practices

1.1 RESOURCE MANAGEMENT PLANNING PROCESS

The PCT Realignment Project Interdisciplinary (ID) Team included the District Hydrologist, District Biologist, and District Botantist, along with Recreation Specialists providing input on the proposed trail projects. They identified sensitive land and soils within and adjacent to the project area and specific mitigation measures for the project area. The Forest Hydrologist provided input on watershed protection needs. (During Project Planning)

1.4 USE OF PROJECT AREA MAPS FOR DESIGNING WATER QUALITY PROTECTION NEEDS

A project area map has been developed during the project preparation process. It identified sensitive areas to be protected such as streamcourses, lakes, meadows, fens, and riparian zones. (During Project Planning)

1.8 RIPARIAN CONSERVATION AREA DESIGNATION

Management in Riparian Conservation Areas (RCAs) needs to be consistent with Riparian Conservation Objectives (RCOs) and Aquatic Management Strategy (AMS) goals. The intent of management direction for RCAs is to (1) preserve, enhance, and restore habitat for riparian- and aquatic-dependent species; (2) ensure that water quality is maintained or restored; (3) enhance

habitat conservation for species associated with the transition zone between upslope and riparian areas; and (4) provide greater connectivity within the watershed. Projects that propose activities in RCAs need to enhance or maintain the physical and biological characteristics of the RCA.

All associated Standards and Guidelines identified in the Tahoe National Forest Land and Resource Management Plan (Forest Plan) associated with this project will be adhered to.

Widths of RCAs vary with the type of water body. The types of water bodies are designated as follows: (1) perennial streams; (2) seasonally flowing streams (includes ephemerals with defined stream channel or evidence of scour); (3) streams in inner gorge; (4) special aquatic features (lakes, meadows, bogs, fens, wetlands, vernal pools, and springs); and (5) other hydrologic or topographic depressions without a defined channel. The Sierra Nevada Forest Plan Amendment ROD defines the widths of the RCAs as follows:

Stream Type	Width of the Riparian Conservation Area
Perennial Streams	300 feet each side, measured from bank full edge
Seasonal Flowing Streams	150 feet each side, measured from bank full edge
Streams In Inner Gorge	Top of inner gorge if beyond 300 feet*
Meadows, Lakes, Fens, and Springs	300 feet from edge of feature or riparian vegetation, whichever is greater

*Note: If inner gorge is present and extends beyond specified RCA width, the RCA width will extend to the top of the inner gorge. The inner gorge area is defined as slopes adjacent to the stream channel greater than 70 percent gradient.

Riparian Buffers

Riparian buffers will be established within all RCAs. The purpose of the riparian buffer is to minimize impacts from management activities to the stream-adjacent zone and riparian habitat. The following are specified widths of the riparian buffer related to stream types:

Perennial Streams and Special Aquatic Features
-100 feet slope distance from the edge of the existing riparian vegetation.

Seasonal Streams (intermittent and ephemeral)
- Intermittent streams: 50 feet slope distance from the edge of the existing riparian vegetation or, if no riparian vegetation exists, from the apparent high water mark.
- Ephemeral streams: 25 feet from stream channel.

Other hydrologic or topographic depressions without a defined channel will be protected through standard operating procedures during trail layout. (During Project Planning and Implementation)

1.19 STREAMCOURSE AND AQUATIC PROTECTION

Streamcourse protection measures will be implemented during all aspects of the project to protect the natural flow of streams, to provide unobstructed passage of stormflows, and to reduce sediment and other pollutants from entering streams. Rocking and/or use of paver blocks on the

trail tread will occur within identified riparian buffers and stream crossings. Bridge installation would be considered at specific stream crossings to keep sediment and other pollutants from entering perennial and intermittent streamcourses. A riparian specialist will be consulted during streamcourse protection work including stream crossing designation. (During Project Implementation)

2.2 GENERAL GUIDELINES FOR THE LOCATION AND DESIGN OF TRAILS

Locate and design trails with minimal resource damage including risks to water, aquatic, and riparian resources. All resource-coordinating instructions for the protection and prevention of damage to National Forest lands, resources, and ecological systems including wetlands and floodplains shall apply to the planning, development, and operation of trail facilities. All stream crossings will be designed to provide for unobstructed flows and fish passage, and to minimize diversion potential and alteration of stream channels. (During Project Implementation)

2.3 TRAIL CONSTRUCTION AND RECONSTRUCTION

Construction and reconstruction activities will be conducted when weather and ground conditions are such that impacts to soils and water quality will be minimal. Prior to impending winter storms, construction and reconstruction activities shall be closed down and erosion work completed so that the erosion potential is reduced. To minimize sediment production originating from sidecast material during trail construction and reconstruction activities, sidecasting of uncompacted material will only be permitted at locations shown on the plans or agreed to by a riparian specialist. When streamflow is deverted around construction or reconstruction sites, diverted flows are to be returned to their natural streamcourse as soon as possible after construction or at least prior to the rainy season. All disturbed areas are stabilized prior to to the rainy season or as needed. The design of the diversion will include mitigation necessary to protect instream values and downstream beneficial uses of the water. Debris from clearing and grubbing operations shall not be placed where the material can be transported to stream channels, snow ponds, lakes, meadows, fens, or in a location that will impede flow through or from drainage structures. Material generated from RCAs will be disposed of by any combination of the following so long as the RCA ground cover goals are maintained and channels are not obstructed: piling and burning (outside of riparian buffers), chipping, lop and scatter, or removal to agreed upon location. (During Project Implementation)

2.4 TRAIL MAINTENANCE AND OPERATIONS

The trails and associated facilities shall be maintained in a manner which provides for water quality protection by minimizing rutting, failures, sidecasting and blockage of drainage facilities (all of which can cause sedimentation and erosion). To disperse runoff and to minimize erosion of the trail prism by runoff from the trail surface and from uphill areas, measures such as properly spaced waterbars or cross drains, dips, and outsloping shall be installed. This level of maintenance often requires an annual inspection to determine what work, if any, is needed to keep drainage functional and the trail stable. To minimize sediment production originating from sidecast material during trail maintenance activities, sidecasting of uncompacted material will only be permitted outside of identified riparian buffers. (During Project Implementation)

2.7 TRAIL DECOMMISSIONING

Approximately 1.11 miles of existing trails would be decommissioned. All identified portions of trails to be decommissioned would have the soil decompacted, hydrologic function restored, provide effective soil cover through mulching exposed ground and establishing vegetative cover, and install barriers to ensure compliance. Mulching can include slash, chipped material, or weed-free rice straw to protect the surface of the trail from erosion. Other erosion measures, such as waterbars, may be needed to supplement the erosion needs.

2.8 STREAM CROSSINGS

Locate stream crossings to minimize water, aquatic, and riparian resource disturbances and related sediment production when constructing, reconstructing, or maintaining permanent stream crossings. Permanent crossings are designed to meet applicable standards while also protecting water, aquatic, and riparian resources. All stream crossings will be designed to provide for unobstructed flows and fish passage, and to minimize diversion potential and alteration of stream channels. All excavated materials shall be kept out of the streamcourses. Any materials stockpiled will be removed prior to the runoff season. Excess spoil material will be disposed of through BMP 2.3. Divert flowing water around work sites to minimize erosion and sedimentation. Streams identified as important for fisheries or other aquatic resources may require that the channel not be disturbed except during low flow periods. Work would not be allowed during spawning periods, or other peroids critical to aquatic resources. Downstream sediment basins or other sediment reduction facilities or techniques may be necessary to mitigate impacts. (During Project Planning and Implementation)

2.10 PARKING AND STAGING AREAS

Construct, install, and maintain an appropriate level of drainage and runoff treatment for parking and staging areas to protect water, aquatic, and riparian resources. Runoff from these areas can create rills and gullies, and carry sediment, nutrients, and other pollutants to nearby surface waters. Avoid locating parking and staging areas within or adjacent to sensitive areas such as riparian buffer areas. Take advantage of existing openings and sites away from waterbodies.

2.11 EQUIPMENT REFUELING AND SERVICING

To prevent pollutants such as fuels, lubricants, and other harmful materials from being discharged into or near rivers, streams or into natural channels leading thereto, service and refueling areas shall be located outside of RCAs if possible. Report spills and initiate appropriate clean-up action in accordance with applicable State and Federal laws, rules, and regulations. (During Project Implementation)

2.13 EROSION CONTROL PLAN

All erosion control measures will be shown on the project design plans and will be implemented in all phases of the project. The kinds and intensity of erosion control work shall be adjusted to ground conditions. Erosion control work shall be inspected and maintained preceding expected seasonal periods of precipitation. Effectiveness of erosion structures will be monitored and maintained during the life of the project. Trail construction, reconstruction, and maintenance activities within the designated RCAs shall be kept to a minimum to protect riparian habitat, channel stability, and to prevent sediment from entering the stream channel. (During Project Implementation)

7.8 CUMULATIVE OFF-SITE WATERSHED EFFECTS

The Pacific Crest Trail Realignment project is located within three HUC 7 "Drainages": Upper Pauley Creek (5,085 acres), Upper Salmon Creek (5,478 acres), and Lower Salmon Creek (5,438 acres). A cumulative watershed effects (CWE) analysis was done as part of the environmental analysis and no significant impacts are anticipated. The project is considered to have minimal ground disturbing activities with an average 4 foot trail tread on approximately 6.1 miles of trail. Beside new trail construction, the project would also include obliterating unneeded trail sections and improving drainage and erosion control structures on the remaining existing trials. There are no affects to beneficial uses anticipated if BMPs are implemented correctly. (During EA Process)

Comparison of Alternatives- The following charts compare the alternatives in terms of the actions they propose as well as their potential environmental consequences.\

Table 2-2. PCT Realignment Project Attributes Comparison Chart:

Attribute Compared	Alt. A- (Proposed Action)	Alt. B- (No Action)	Alt. C- (No new motorized Multi- Use trails)	Alt. D (No Pack Saddle CG Improvements)	Alt. E (Use existing trails only)
Implements Recommendations Made in the PCTOLR	Yes	No	Yes	Yes	Partially. Moves PCT away from Packer Saddle ridge, but does not meet desired trail grades and shares 1 mile segment with OHV trail.

Attribute Compared	Alt. A- (Proposed Action)	Alt. B- (No Action)	Alt. C- (No new motorized Multi- Use trails)	Alt. D (No Pack Saddle CG Improvements)	Alt. E (Use existing trails only)
Enhances Scenic Quality Views for PCT Users	Yes	No	Yes	Yes	Yes
Generally Maintains Trail Grades of ≤ 10% on PCT	Yes	Partially. Does not meet along paved road segment.	Yes	Yes	No
Provides Additional Parking to Accommodate Future Increases in Recreation Use	Yes	No	Yes	No	Yes
Substantially Reduces Noise Impacts to PCT Users from Motorcycles	Yes	No	Yes	Yes	Partially. Would still share approximately 1 mile with an OHV Trail.
Increases Noise Impacts to Recreationists at Packer Lake from Motorcycles	No	No	No	No	No
Enhances Recreational Opportunities for Significant (to this area) User Group –Motorcyclists-	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail.	No	No	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail.	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail.

Attribute Compared	Alt. A- (Proposed Action)	Alt. B- (No Action)	Alt. C- (No new motorized Multi- Use trails)	Alt. D (No Pack Saddle CG Improvements)	Alt. E (Use existing trails only)
Enhances Recreational Opportunities for Significant (to this area) User Group –Mountain Bicyclists-	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail, though some mountain bikers may prefer to not share the trail with motorcyclists. No – Eliminates mountain bike use on old Sierra Buttes (below ridge) and Deer Lake trails.	No – Does not provide single-track trail connection from Packer Saddle to Gold Valley Trail	Partially – Would allow use on 2 ½ miles of abandoned PCT segment, but would not create a single-track trail connection to Gold Valley No – Eliminates mountain bike use on old Sierra Buttes (below ridge) and Deer Lake trails.	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail, though some mountain bikers may prefer to not share the trail with motorcyclists. No – Eliminates mountain bike use on old Sierra Buttes (below ridge) and Deer Lake trails.	Yes – Provides single-track trail connection from Packer Saddle to Gold Valley Trail, though some mountain bikers may prefer to not share the trail with motorcyclists. No – Eliminates mountain bike use on old Sierra Buttes (below ridge) and Deer Lake trails.
Provides Enhancements for Equestrian Users in Packsaddle Campground	Yes	No	Yes	No	Yes
Provides Enhanced Trail Experiences for General Hikers (non-through PCT hikers, "day hikers")	Yes – New trail to Tamarack Lakes (1 ½ mi.), Reduced grades on old Sierra Buttes (below ridge 1 mi.) and old Deer Lake (3.5 mi.) trails. Reduced Experience – Would Share 2 ½ mile of Abandoned PCT Segment north of Packer Saddle with Motorcycles & Mountain Bikes	No	Yes – New trail to Tamarack Lakes (1 ½ mi.), Reduced grades on old Sierra Buttes (below ridge 1 mi.) and old Deer Lake (3.5 mi.) trails. Reduced Experience – Would Share 2 ½ mile of Abandoned PCT Segment north of Packer Saddle with Mountain Bikes	Yes – New trail to Tamarack Lakes (1 ½ mi.), Reduced grades on old Sierra Buttes (below ridge 1 mi.) and old Deer Lake (3.5 mi.) trails. Reduced Experience – Would Share 2 ½ mile of Abandoned PCT Segment north of Packer Saddle with Motorcycles & Mountain Bikes	No

Attribute Compared	Alt. A- (Proposed Action)	Alt. B- (No Action)	Alt. C- (No new motorized Multi- Use trails)	Alt. D (No Pack Saddle CG Improvements)	Alt. E (Use existing trails only)
Trail Management Strategy Creates Potential Confusion, Conflict, Safety Issues Between Mountain Bicyclists and Motorcyclists Further Down the Trail Network	No	No	Yes	No	No
Reduces Potential for Unwanted Development Adjacent to the PCT	Yes	No	Yes	Yes	Yes
Expected to Cause an Increase in Motorcycle and Mountain Bike Use in the General Area (Yuba River Ranger District north of Sierra City & Downieville)	No	No	No	No	No
Expected Increase in PCT Through Hikers	No	No	No	No	No
Expected Increase in Day Use Hikers on PCT	Yes	No	Yes	Yes	No
Addresses Parking Needs for Anticipated Increase in Use	Yes	NA	Yes	No	Yes

****Note**: All miles and/or acres are approximate.

Table 2-3. PCT Realignment Project Comparison of Potential Environmental Impacts by Alternative

Resources of Interest	Alt. A (Proposed Action)	Alt. B (No Action)	Alt. C (No new Motorized Multi-Use trails)	Alt. D (No Pack Saddle CG Improvements)	Alt. E (Use existing trails only)
Perennial and Intermittent Riparian Conservation Areas (RCAs) Affected by New Trail Crossings	1 Perennial crossing 2 intermittent crossings	0	2 intermittent crossings	1 Perennial crossing 2 intermittent crossings	1 Perennial crossing
Shrub and open-canopy habitats into which noise disturbances would extend from new trail use	400 acres	0	200 acres	199.5 acres	400 acres

****Note**: All miles and/or acres are approximate.

Chapter III – Environmental Consequences

This chapter discloses the potential consequences or impacts of the alternatives described in Chapter II. Chapter III provides the scientific and analytical basis for the comparison of the environmental consequences of the alternatives summarized in Chapter II.

This chapter discusses the consequences by resource area (i.e., botany, fisheries, wildlife, etc) as needed, that are relevant to the identified issues of significance, as well as the elements of the finding of no significant impact (FONSI). This chapter displays a comparison of the consequences, and provides brief, yet sufficient, evidence and analysis to determine whether to prepare an environmental impact statement or a finding of no significant impact. The specialist's reports, mentioned and/or incorporated by reference in this document, contain detailed analysis of the consequences by alternatives. They are located in the project file and are available upon request.

Effects relative to Finding of No Significance Impact (FONSI) elements.

In 1978, the Council on Environmental Quality published regulations for implementing the National Environmental Policy Act (NEPA). These regulations (40 CFR Parts 1500-1508) included a definition of "significant" as used in NEPA. The eleven elements of this definition are critical to reducing paperwork through use of a finding of no significant impact (FONSI) when an action would not have a significant effect on the human environment, and is therefore exempt from requirements to prepare an environmental impact statement (EIS). Significance as used in NEPA requires considerations of context and the ten elements of intensity as follows:

(a) Context: Significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, affected interests, and the locality. Significance varies with setting. In the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

The context of the proposed action is limited to minor, local, short-term effects within the area. No significant effects, either long or short term, regional or societal, are anticipated.

The local context of the proposed action is limited to the northern portion of the Tahoe National Forest, in locations shown on the attached map (See Appendix A). The TNF is comprised of approximately 800,000 acres of national forest land. This project's area represents less than one percent of the total Forest landbase. Project activities would occur over a relatively short time period, with the mechanized portion of the construction activities, in all probability, limited to a three year contract. Other project activities would, most likely, all be completed within three to five years of the decision. Also, all these tasks are done seasonally, not year-round. Thus, in terms of the affected area, the proposed action affects a very small portion of the landbase over a relatively short timeframe. Even in the context of seasonality and duration of activities, analyses prepared for this EA (Biological Evaluations, Management Indicator Species Assessment, Weed Risk Assessment, Cumulative Watershed Effects Analysis, Riparian Conservation Objectives analysis, Riparian Conservation Area guidelines, and the soils analysis, hereby incorporated by reference, and available on request) indicate that the proposed action would not pose significant short- or long-term effects on forest resources.

(b) Intensity: Refers to the severity of impact, ... and the following should be considered in evaluating intensity:

1. Impacts both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Effects determinations are detailed in supporting analysis documents and summarized in the remaining sections of this chapter. All analyses prepared in support of this document considered both beneficial and adverse effects, but all effects determinations were made on the basis of only adverse effects. The effects are discussed below.

Recreation:

The information provided in this section is summarized from the Recreation Report prepared for the PCT Realignment Project, which is hereby incorporated by reference. The complete Recreation Report is available in the Project Record.

Direct Effects - The PCTOLR identified the following issues associated with the current PCT alignment along the ridge in the Packer Saddle area:

- A degraded recreational experience for PCT users associated with the trail's use of a busy paved road south of Packer Saddle and the trail's close proximity to a dirt road (93-1) and 4x4 trail north of Packer Saddle.
- Lack of access to good water and camping opportunities along the busy ridge in the area in question.
- Unexpected encounters with mountain bikers that trespass on the PCT north of Packer Saddle.
- Safety concerns stemming from PCT users needing to share the busy paved road segment south of Packer Saddle, and the potential for stalking of PCT travelers along the trail section north of Packer Saddle to point above Deer Lake where the trail parallels the 93-1 road and a 4x4 trail on and off for about a mile (stalking has occurred on the Appalachian National Scenic Trail).

The following table displays whether or not the Alternatives address the issues identified in the PCTOLR for PCT users.

Table 3-1. Alternatives Addressing Issues Identified in the PCTOLR

Issue	Alt. A Proposed Action	Alt. B No Action	Alt. C No new Multiuse Trails	Alt. D No Packsaddle CG Improvements	Alt. E Use Existing Trails only
Eliminates PCT use of a busy paved road. (enhances safety and PCT experience)	Yes	No	Yes	Yes	Yes
Eliminates PCT being in close proximity to a dirt road and 4x4 trail between Packer Saddle and Deer Lake OHV Trail junction. (enhances safety and PCT experience)	Yes	No	Yes	Yes	Yes
The PCT would traverse near Tamaracks and Deer lakes, potable water and provide additional camping opportunities near water and away from motor vehicle use. (enhances PCT experience)	Yes	No	Yes	Yes	Yes
Would reduce mountain bike trespass on the PCT. (enhances PCT experience)	Yes	No	Yes	Yes	Yes

The Alternatives provide different levels of recreational experiences and opportunities related to: views, trail grades and parking for PCT users; additional motorcyclist opportunities; additional mountain bicyclist opportunities; equestrian facilities at Pack Saddle Campground, and; general hiker experiences.

PCT Users – Scenic Quality, Grades, Parking, Noise

PCT Users-Scenic Quality - The PCT traveler would benefit from enhanced scenic views under Alternatives A, C, D and to a lesser degree Alternative E. It may seem contrary to one's intuition, but the views from the current PCT ridgeline alignment between the Sierra Buttes Trailhead and the Deer Lake OHV Trail junction are less outstanding (overlooking broad forest areas) than the unique up close views of the Sierra Buttes (a significant geological feature) offered by the proposed new alignment. These unique views include the intimate views of the Sierra Buttes, especially on the proposed new trail section between Packsaddle Campground and Tamarack Lakes (traveling south) under Alternatives A, C and D (see Figure 1).

Figure 3-1. View of the Buttes Area Looking South from the Proposed New Trail South of Packsaddle Campground.

Figure 3-2. Typical view of forest landscape from current PCT alignment north of Packer Saddle.

Other high quality views that Alternatives A, C, D and E would provide to the PCT traveler are close up views of the Tamarack Lakes and Deer Lake.

PCT Users-Grades – For user convenience and to minimize erosion potential, the desired trail grades for the PCT are 10% or less. Under action Alternatives A, C and D the realigned PCT would generally maintain the 10% or less grade goal. The no action alternative (Alternative B) would continue to maintain this trail grade goal along the section north of Packer Saddle. South of Packer Saddle along the paved 93 road, the desired trail grade goal would continue to be exceeded. Under Alternative E, hikers would still negotiate the existing steep grades (15% - 25%) found on the Sierra Buttes and Deer Lake trail segments. Additionally, under Alternative E hikers would still utilize and share the Tamarack OHV (4x4) Trail, which also exceeds the 10% trail goal, with motorized recreation users.

PCT Users-Parking – Under Alternatives A, C and E the parking capacity of the Packsaddle Campground/Trailhead would be increased by 10-15 vehicles and two horse trailers. This would be accomplished within the existing site boundaries by rearranging barriers and clearing brush and grass to utilize currently unused space. The additional vehicle capacity is designed to accommodate an expected increase in use stimulated by the enhanced trail opportunities that would be created by realigning the PCT through or near Packsaddle Campground. The designated two horse trailer parking spaces are designed to accommodate equestrian day users. If, over time, additional parking capacity is needed, these alternatives also provide for the creation of a ¼ acre parking area immediately across Packer Lake Road in what is currently a brushy flat. This additional trailhead parking would accommodate 20-25 vehicles. These actions would benefit PCT users in the area by providing sufficient parking opportunities to meet expected future demand.

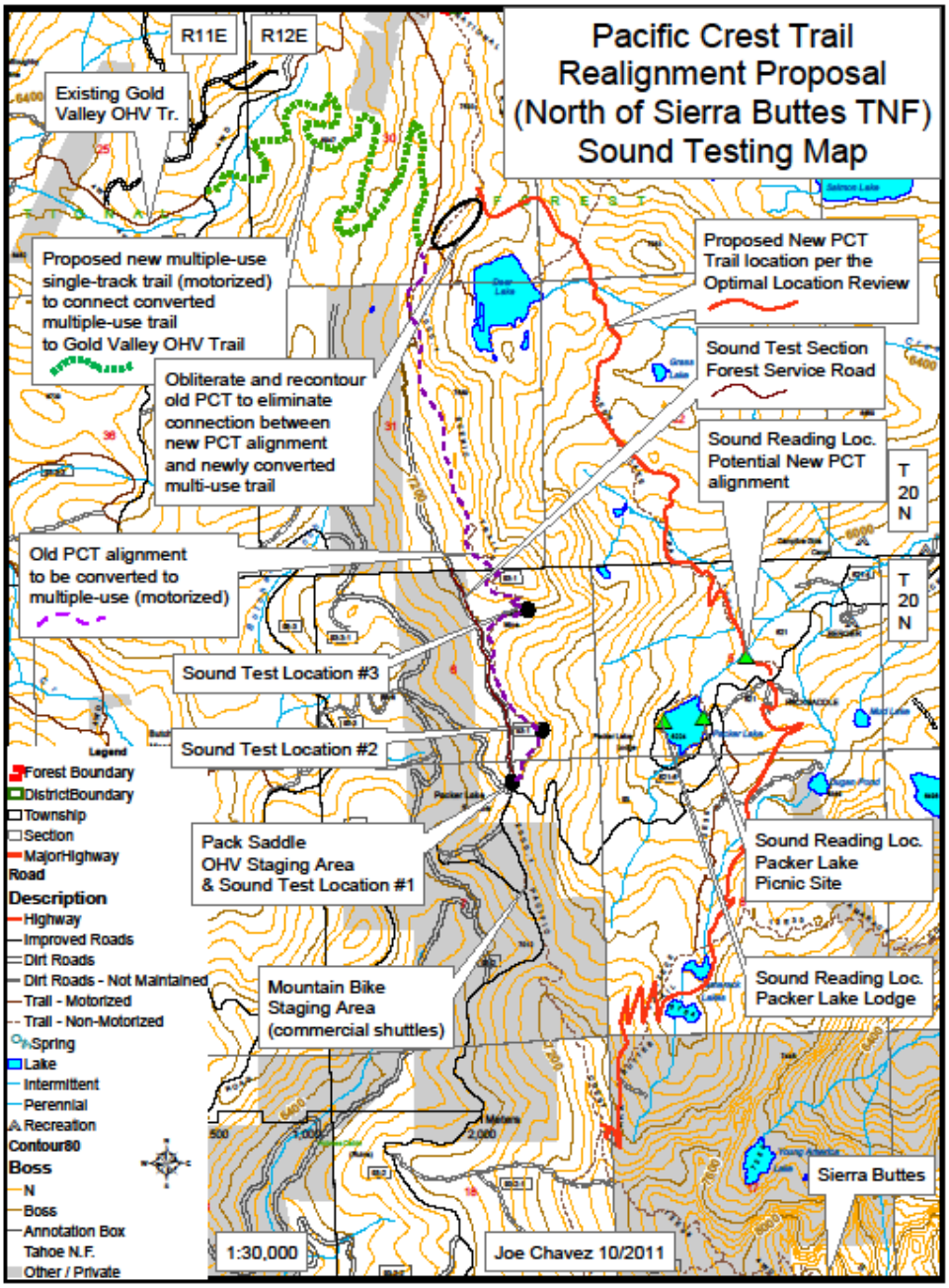
Alternative B would not create any changes to the PCT and would not increase parking opportunities.

Alternative D would create enhancements to the PCT, but would not provide additional parking capacity at Packsaddle Campground. This could result in PCT users in the area not being able to find close and safe parking opportunities as more people discover the new day hike opportunities, with spectacular views of the buttes, from Packsaddle Campground to Tamarack Lakes and the Sierra Buttes.

PCT Users-Noise – Action Alternatives A, C, D, and E would provide an enhanced PCT experience by moving the trail away from the noises and congestion of the busy 93 Road south of Packer Saddle and away from the noises and dust from OHV users riding on the dirt road (93-1) and OHV trail north of Packer Saddle. Concern was expressed that the conversion of the abandoned PCT segment between Packer Saddle and the Deer Lake OHV Trail junction to a motorized trail would negatively affect PCT users traveling on the new alignment due to engine noise. Sound testing was conducted to determine the potential motorcycle noise impacts to PCT users (on the new alignment) and recreationists at Packer Lake and Packer Lake Lodge.

Sound readings were taken of a motorcycle that produces the loudest allowable sound (96 decibels) at specific locations within the Packer Lake area on September 29, 2011, a clear day with little human activity occurring in the area. These locations included the shoreline at the Packer Lake Picnic Site, Packer Lake Lodge and at a sight on the potential new PCT alignment (current Deer Lake Trail) near Packsaddle Campground (see Figure 2). Sound tests were conducted using a Quest Technologies 1100 Precision Sound Level Meter. Decibel readings were taken of the motorcycle at three specific locations on the proposed converted trail and along the OHV Road that parallels (proximities ranging from 30 to 500 feet) the proposed converted trail (see Figure 2). The two trail locations were selected for the fact that they were on the abandoned PCT segment located on the east side of the mountain facing the new PCT alignment and Packer Lake, the closest in proximity to Packer Lake and new PCT alignment and the only locations where there was a direct line of sight from the trail to the lake, thus ensuring the loudest possible readings.

Figure 3-1. Sound Testing Map



The table below provides the decibel readings of the motorcycle from the various locations, readings of other sound sources in the area, and some other common decibel reading provided for comparative purposes.

Table 3-2. Sound Testing Results

Sound Source	Sound Source Location	Meter location	Decibel Level	Remarks
Library, whisper quiet			30 dB	Comparison Purposes
Refrigerator humming			40 dB	Comparison Purposes
Normal conversation 3-5 feet away			60 dB	Comparison Purposes
Background noise level		Packer Lake – Shoreline (Picnic Site)	34 dB	Background Information - No traffic, no conversations, slight breeze (3-5 mph)
Background noise level - wind		Packer Lake – Shoreline (Picnic Site)	40 dB	Background Information - Breeze (8-10 mph)
Motorcycle	Packer Saddle (Site #1)	Packer Lake – Shoreline (Picnic Site)	34 dB	Tester could not hear motorcycle (background noise)
Motorcycle	Trail (Site #2)	Packer Lake – Shoreline (Picnic Site)	35.1 dB	Motorcycle faintly detectible for about 4 seconds
Motorcycle	Trail (Site #3)	Packer Lake – Shoreline (Picnic Site)	33.1 dB	Motorcycle barely detectible when breeze stopped
Motorcycle	Traveling on existing road (Rd 93-1) adjacent to the PCT	Packer Lake – Shoreline (Picnic Site)	38.2 dB	Motorcycles are able to be ridden at higher speeds on road due to geometry of travel way (higher RPMs).
Traffic on Packer Lake Road	Unknown Car or Truck	Packer Lake – Shoreline (Picnic Site)	42.9 dB	Comparison Purposes
Conversation Across Lake	Unknown Persons	Packer Lake – Shoreline (Picnic Site)	36.0 dB	Comparison Purposes
Motorcycle	Packer Saddle (Site #1)	Packer Lake Lodge	33.1 dB	Tester could barely hear motorcycle (background noise)
Motorcycle	Trail (Site #2)	Packer Lake Lodge	34.1 dB	Tester could not hear motorcycle over breeze (background noise)
Motorcycle	Trail (Site #3)	Packer Lake Lodge	33.8 dB	Tester could not hear motorcycle over breeze (background noise)
Car (Subaru Wagon)	Driving into Lodge	Packer Lake Lodge	45.9 dB	Approximately 100 ft away from sound meter
Blue Jay	Flying overhead and squawking	Packer Lake Lodge	42.0 dB	Comparison Purposes
Motorcycle	Packer Saddle (Site #1)	New PCT location - near beginning by Pack Saddle Campground	32.0 dB	Tester could not hear motorcycle (background noise)
Motorcycle	Trail (Site #2)	Deer Lake Trail - near beginning by Pack Saddle Campground	33.4 dB	Tester could not hear motorcycle (background noise)
Motorcycle	Trail (Site #3)	Deer Lake Trail - near beginning by Pack Saddle Campground	35.1 dB	Tester could not hear motorcycle over breeze (background noise)

Sound testing was not conducted along the proposed new PCT trail segment near Deer Lake. The testing was not done due to the fact that the abandoned PCT location in this area is in such close proximity (about 25-200 feet) to the 4x4 trail that motorcycle sound levels would be unquestionably higher (as heard from Deer Lake and the new PCT alignment) while on the 4x4 trail than they would be when on the narrow single-track trail. This is because of the higher motorcycle engine speeds attainable and the increased ability to open up the throttle on the 4x4 segment as compared to the narrow trail. Noises from all types of OHVs (ATVs, 4x4 vehicles, motorcycles) traveling the 4x4 trail on the ridge and on Deer Lake OHV Trail (access to Deer Lake on its west side), would continue to be heard by PCT travelers under all alternatives. Sound testing was not conducted along the sections of the potentially abandoned PCT where it traverses on the west side of the ridge, as the noises would not reach the PCT travelers due to the mountain obstructing the noise.

The sound testing demonstrates that for all the action alternatives there is essentially no increase in noise impacts to the users of the proposed new PCT alignment, recreationists at Packer Lake or guests of Packer Lake Lodge. The sound testing actually indicates that engine noises are potentially louder at Packer Lake and the new PCT alignment when motorcycles use the 93-1 Road, as compared to motorcycles using the converted PCT alignment. This is due to the much higher engine speeds and corresponding increases in engine noise as a result of motorcyclists riding much harder and faster along the wider and straighter 93-1 Road in comparison to a motorcycle traveling on a narrow, curvy trail. Therefore, Alternative C would have a slightly higher noise impact on PCT users and recreationists in the Packer Lake area because of the increased motorcycle engine speeds and noise from use of the 93-1 Road instead of the narrow and slower converted PCT alignment. Alternative B (No Action) would have the greatest noise impact to PCT travelers from vehicles as the PCT alignment would remain in close proximity to roads and OHV trails.

Motorcyclists - The challenging network of single-track trail opportunities north of Sierra City and Downieville on the Tahoe National Forest are highly cherished by the skilled motorcycle user group. The qualities that make this network of trails so prized and rare include: remote trails in a mountainous forested setting; challenging (difficult) single-track trails; and, sufficient mileage of such trails to provide the skilled riders a weekend's worth of riding. According to public input to the recently completed Tahoe National Forest Motorized Travel Management Analysis (Record of Decision signed 9/21/2010), Idaho is the closest area motorcyclists would find these same trail experiences, though Idaho provides these experiences on a much larger scale. For this user group, like the mountain bike user group, traveling on roads does not provide near the same quality experience as a single-track trail. Packer Lake Saddle is currently used as a staging area for motorcyclists and is the main starting point of access to the highly sought after trail network on its eastern edge.

Alternatives A, D and E would provide enhanced trail experiences for the skilled motorcycle user group. This enhanced experience would come from providing a single-track trail connection between Packer Saddle (staging area) and Gold Valley 4x4 Trail, which then connects riders to a larger network of multiple-use single-track trails. This would involve managing the abandoned section of PCT between Packer Saddle and a junction above Deer Lake as a multiple-use (motorized) trail, and by constructing an approximately 1.8 mile single-track multiple-use (motorized) trail to connect end of the converted abandoned section of PCT, above Deer Lake, to the beginning of the Gold Valley OHV Trail (at the 93-3 road junction).

The Forest Service's goal of providing for quality experiences for multiple recreational user groups, including the motorized user group is consistent with the direction set forth in the Tahoe National Forest Land and Resource Management Plan. The proposed project lies predominately within the Lakes Basin Management Area (009), with some of the proposed abandoned segment of the PCT (west of the ridge) falling within the Lavezzola Management Area (005) (Tahoe National Forest Land and Resource Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment (2004)). The management emphasis for the Lakes Basin Management Area is to "*provide a variety of recreation opportunities consistent with maintaining the high visual quality of the area.*" The management emphasis for the recreation resource in the Lavezzola Management Area is to "*Emphasize recreation opportunities on system trails by giving consideration to trail use and the recreation experience of trail users in project planning*". The Recreation Opportunity Spectrum (ROS) for most of the project area is designated as Roaded Natural, with a very small area nearest the Buttes being designated as Semi-primitive Motorized.

Though motorcyclists are one of the significant trail user groups for the Pack Saddle/ Downieville/ Poker Flat area, their significance is not due to large numbers, as is the case with the mountain bicyclists using the trails between Pack Saddle and Downieville. Because of the trail network's difficulty level, exposures to steep drop-offs (cliff sections), remoteness, and the fact that this area is a long drive from major population centers compared to other riding areas, there are relatively low numbers of motorcyclists that use the area on any typical summer weekend. On a typical summer weekend day, excluding an occasional motorcycle club event, there is an average of about 6-10 motorcyclists that utilize the Pack Saddle area, and 15-25 total motorcyclists that utilize the larger motorized trail network (between the Pack Saddle area, Downieville, the Plumas National Forest, Poker Flat and the Cal-Ida area). Thus, a small number of motorcyclists are spread out across a large area.

Alternatives B and C would not provide any enhanced opportunities for the motorcycle user group.

Mountain Bicyclists - The challenging network of single-track trail opportunities north of Sierra City and Downieville on the Tahoe National Forest are highly treasured by the mountain bike user group. Of particular preference to mountain bicyclists are the challenging single-track trails that link Packer Saddle and the town of Downieville. This includes both options of starting with Sunrise/Butcher Ranch trails, or going through the Gold Valley OHV trails to connect with the single-track Pauley Creek Trail, which then connects to the Butcher Ranch Trail. The qualities that make this network of trails so prized include: a 14+ mile, mostly downhill ride; remote trails in a mountainous setting; and challenging (difficult) single-track trails. A smaller percentage of the mountain bicyclists choose to travel north from Packer Saddle via the 93-1 Road and the 4x4 trail

(Lots-A-Lakes OHV Trail) to reach the single-track trails available in Lakes Basin on the Plumas National Forest. A few of these riders find the attributes of the current PCT along the ridge north of Packer Saddle too alluring to resist and trespass on the PCT, which is restricted to mountain bike use. It is typical to find mountain bike tracks on this segment of the current PCT. Traveling on roads does not provide near the same quality experience as a single-track trail for both the mountain bike and motorcycle user groups. A point immediately south of Packer Saddle is used as the staging area for mountain bicyclists. Two commercial shuttle services based out of Downieville deliver hundreds of mountain bicyclists to this starting point each summer weekend.

Alternatives A, C, D and E would provide enhanced trail experiences for the mountain bike user group by providing additional single-track trail opportunities and connections. Under Alternative C, the abandoned PCT segment between Packer Saddle and a junction above Deer Lake would be managed as multiple-use (non-motorized), which would allow mountain bike use. However, this alternative would not provide the single-track trail connection between the end of the abandoned PCT segment and Gold Valley OHV Trail. Under this scenario, mountain bicyclists seeking to access the popular Pauley Creek Trail (via Gold Valley OHV Trail) would still need to continue north on the 4x4 trail to Summit Lake, turn back south on the Summit 4x4 Trail until they reached the Gold Valley Trail junction (about 2 miles). Alternatives A, D and E would also allow mountain bike use on the abandoned PCT segment described above, and would provide the 1.8-mile single-track trail connection between the end of the abandoned PCT segment to the Gold Valley OHV Trail. Some mountain bicyclists would prefer not to share trails with motorcycles. However, due to the relatively small number of highly skilled motorcyclists that would use these trails and the broader trail network, expected impacts to mountain bicyclists would be minimal.

Though not heavily used, some mountain bicyclists use the current Sierra Buttes (below the ridge) and Deer Lake trails to create loops from the Packer Saddle ridge area down to Packsaddle Campground. Alternatives A, C, D and E would convert the Sierra Buttes (below the ridge) and Deer Lake trails to the PCT, and make these trails unavailable to mountain bikes and eliminate the loop opportunity. Under Alternative B, mountain bicyclists would be able to continue using these trails as a loop opportunity.

Equestrians - The proposed new PCT alignment under Alternatives A, C, D and E would pass through or near the Packsaddle Campground/Trailhead. Packsaddle Campground is currently designed to accommodate equestrians, having room for horse trailers in the first portion of the campground and a set of corrals. It is expected that there would be an increase in equestrian users taking advantage of the new and enhanced trail opportunities originating from the Packsaddle Campground under Alternatives A, C and D. Alternatives A and C propose enhancements for equestrians by making equestrian related improvements to six campsites (lengthen parking spurs and providing site corrals) in the first portion of the campground, and by creating two designated day-use horse trailer parking spots, all within the existing Packsaddle Campground/Trailhead developed site boundaries. Alternatives B, D and E would not provide enhancements for equestrians.

Hikers (Day Hikers and Through Hikers) - Under Alternatives A, C, and D campers and recreationists in the Sierra Buttes Lake Basin area would have a new high quality day hike opportunity on a single-track trail from Pack Saddle Campground to Tamarack Lakes (1 ½ mile), with unique close up views of the Sierra Buttes, which will also be an enhancement to the PCT

through hiker. These same alternatives would also provide an enhanced hiking experience from Pack Saddle Campground to Deer Lake (current Deer Lake Trail) and the trail segment between Tamarack Lakes and the ridge (current Sierra Buttes Trail) due to the trail grades being reduced to 10% or less. Hikers would also benefit from the aforementioned trail segments being converted to the PCT due to the fact that mountain bikes would not be permitted. The Yuba River Ranger District over the years has received many inquiries and requests for trail opportunities where the hikers could avoid encounters with mountain bikes. Under Alternative E hikers would benefit from the conversion of the Sierra Buttes and Deer Lake trails to the PCT and the resulting elimination of mountain bike use. However, under Alternative E hikers would still negotiate the steep grades (15% - 25%) currently found on the Sierra Buttes and Deer Lake segments. Additionally, under Alternative E hikers would still utilize and share the Tamarack OHV (4x4) Trail with off-highway vehicles.

Some hikers strongly dislike sharing trails with motorized users. Under Alternatives A, D and E the abandoned segment of PCT between Packer Saddle and the Deer Lake OHV Trail would be managed as motorized multiple-use, which would result in a degraded experience for some hikers. The frequency and comparative impacts of these negative experiences for the hiker would be mitigated by two factors:

1) Though the single-track trail network in the area is extremely significant to the highly skilled motorcycle user group, there are relatively few motorcyclists that utilize the larger network and would use this particular segment on any particular weekend (estimated at 6-10 on a typical weekend day). This is due to the high level of skill and confidence needed to negotiate the remote and highly technical narrow trails in the larger network of single-track trails north of Sierra City and Downieville.
2) The abandoned PCT segment between Packer Saddle and the Deer Lake OHV Trail closely parallels (25-200 feet) the 93-1 Road and a 4x4 trail on and off for about a mile. Due to the relatively straight alignment and 12 foot plus width of the road and 4x4 trail, OHV riders can and do run their machines at full throttle, obtain high motor speeds, and obtain high rates of speed. This results in loud engine noise that is clearly heard on all sections of the current PCT alignment in this area. In comparison, a motorcycle traveling on a narrow curvy trail is not able to operate at full throttle or high rates of speed, thus engine noise is greatly reduced.

Vehicle is located on the road.

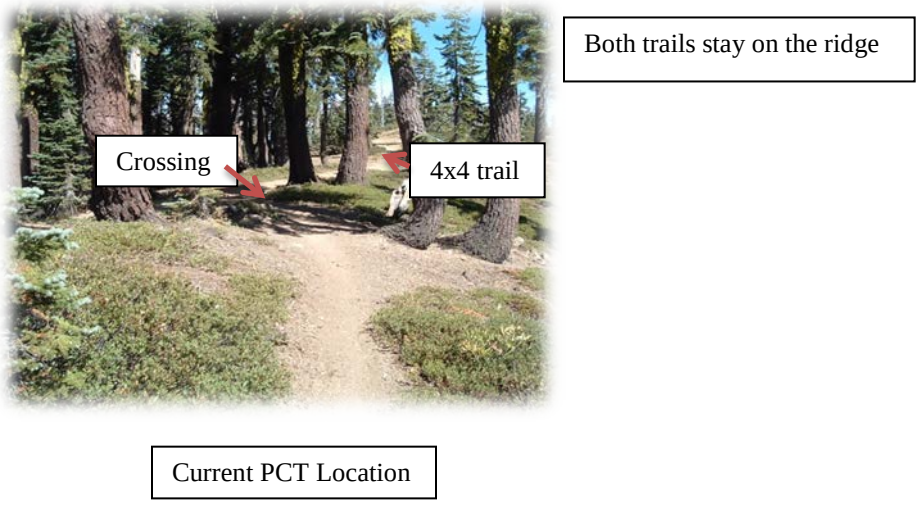
Picture taken from the existing PCT alignment.

Vehicle is located on the 4x4 trail.

Picture taken from the existing PCT alignment.

Under Alternative C the abandoned PCT segment between Packer Saddle and the Deer Lake OHV Trail would be managed as non-motorized and would better meet the preferences of those hikers that do not want to encounter motorcycles during their hike between Packer Lake Saddle and Deer Lake. Unlike hiking on the PCT however, hikers would encounter mountain bicyclists on this trail segment under Alternative C. The no action alternative (Alternative B) would also meet the preferences of those hikers that do not want to encounter motorcycles during their hike on the PCT between Packer Lake Saddle and the Deer Lake OHV Trail junction; this alternative would also limit the hiker's encounters with mountain bikers to just those trespassing on the PCT.

Some hikers view the current trail PCT segment between Packer Saddle and the Deer Lake OHV Trail as a "mini wilderness" experience. The proposed project is predominately within the Lakes Basin Management Area (009), with some of the proposed abandoned segment of the PCT (west of the ridge) falling within the Lavezzola Management Area (005) (Tahoe National Forest Land and Resource Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment (2004)). The management emphasis for the Lakes Basin Management Area is to "*provide a variety of recreation opportunities consistent with maintaining the high visual quality of the area.*" The management emphasis for the recreation resource in the Lavezzola Management Area is to *"Emphasize recreation opportunities on system trails by giving consideration to trail use and the recreation experience of trail users in project planning."* The Recreation Opportunity Spectrum (ROS) for the area of vast majority of the project area, including the ridgeline north of Packer Saddle, is Roaded Natural. Only a very small area nearest the Buttes is being managed as Semi-primitive Motorized. The area is not being managed for a wilderness or semi-primitive non-motorized experience, where one would expect minimal visitor contacts and only non-motorized uses.



For the trail segment between Packer Saddle and the Deer Lake OHV Trail junction, Alternative B would best meet the desires for some hikers to have no encounters with mechanized vehicles (motorcycles and mountain bikes) while on this trail segment. However, because of its close proximity to an existing road and 4x4 trail where OHVs can open up their throttle and obtain high motor speeds that create loud engine noise, engine noise would still be a prominent element of the hiking experience. This is one of the contributing factors instrumental to instigating the proposal to move the PCT. None of the alternatives provides for a "wilderness experience."

Indirect Effects - Confusion & Conflict – Alternatives A, D and E would provide a consistent management strategy that would reduce confusion and conflict for trail users traveling from the Pack Saddle area down to the town of Downieville. All the National Forest System trails in this part of the Tahoe National Forest west of Pack Saddle that connect to Downieville are motorized trails. The destination for the vast majority of trail users (mountain bicyclists) that start up at Pack Saddle is the town of Downieville. If non-motorized trail users start on a non-motorized trail, but then soon after transition onto motorized trails, there tends to be confusion with the users thinking that they are still on a non-motorized trail further down the trail system. This would be the case under Alternative C, where the abandoned section of PCT would be managed as non-motorized, because the majority of the mountain bicyclists using this section of trail would be headed to Downieville via Gold Valley/Pauley Creek/Butcher/3rd Divide/1st Divide motorized trails. This type of inconsistent management approach leads to confusion and user conflict.

It is a safety issue when a mountain bicyclist traveling downhill at a fast rate of speed unexpectedly encounters a motorcyclist traveling uphill at a rate of speed much faster than a hiker would be traveling uphill. The Yuba River Ranger District has observed and monitored this exact problem in connection with the short non-motorized Sunrise Trail (non-motorized due to the portion on private land), which is the first trail mountain bicyclists start on from the top of Packer Saddle. This confusion is a regular occurrence despite signs on the motorized trails indicating their status. Through education improvements have been made in reducing the confusion created by the non-motorized Sunrise Trail being the first trail mountain bicyclists start with. The education is due to the commercial shuttles providing the relevant information to all their customers before leaving the vans, as required under their special use permit. However, there are still a large number of trail users that do not use the commercial shuttles and do not receive this education. This safety issue would be mitigated under Alternatives A, D, and E as the abandoned PCT segment would be managed as a motorized trail consistent with the management of the majority of other trails in this area used by both motorcyclists and mountain bicyclists.

Long-Term Management of the PCT- One of the goals for the long-term management of the PCT is to reduce the mileage where it traverses private lands. That goal is based on the potential for future unwanted developments or management activities occurring near the PCT that may adversely affect the trail users' experiences. Alternatives A, C, D and E reduce the distance that the PCT traverses private land by approximately ¾ of a mile. Alternative B would not reduce the distance that the PCT traverses private land.

Soils and Hydrology:

The information provided in this section is summarized from the Hydrology Report prepared for the PCT Realignment Project, which is hereby incorporated by reference. The complete Hydrology Report is available in the PCT Realignment Project Record.

Resource management activities have the potential to affect the hydrologic, soil, and aquatic resources by causing soil disturbance, altering vegetative cover, and changing local drainage patterns. The effects of the proposed management activities are most closely related to the forest health and fuel reduction techniques used. Applying the Forest Plan Standards and Guidelines and effective Best Management Practices (BMPs) would reduce the magnitude of the effects to soil, water, and aquatic resources. In addition, management requirements were developed to avoid sensitive watershed areas or minimize soil/water/aquatic concerns. The primary concern to water quality is the impairment of beneficial uses due to an increase of fine sediment caused by accelerated erosion from the proposed project. The risk of direct effects to forest soils, water quality, and aquatic species would be low, because project design minimizes activities that might otherwise have an impact to these resources.

Effectiveness of the BMPs in mitigating direct and indirect effects is largely related to proper implementation and the magnitude of climatic events the first several seasons after project completion. There is a risk that heavy precipitation or rain on accumulations of snow could overwhelm erosion control structures and render them ineffective. The increased sediment delivery to channels would occur only during rare events and for short periods of time where overland flow from disturbed areas occurs. BMPs have been selected using specific information regarding soil, slope, geology, and climate conditions typically found in the PCT Realignment project area.

The proposed treatments for all the action alternatives include the following:

- Relocate approximately six miles of the PCT in the Packer Saddle area. This route would use 1.7 miles of existing non-motorized trail and 4.3 miles of new trail construction. **(Alternatives A, C, and D)**

- Relocate the PCT to the following existing route: From the current junction of the PCT and the Sierra Buttes Trail (12E06), take the Sierra Buttes Trail north to the Tamarack Lakes OHV Trail (12E30). Continue north on the Tamarack Lakes OHV Trail to its junction with Packer Lake Road (FS Road 621). Follow this road east approximately ¼ mile to the junction with the Deer Lake Trail (12E02). Follow existing Deer Lake Trail back to the PCT. **(Alternative E)**

- Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users. **(Alternative A, C, and D)**

- Convert the abandoned section of PCT to a multiple use trail. **(Alternative A, D, and E)**

- Construct an approximately 1.8 mile multiple-use single-track trail connection between the newly converted multiple-use trail to the Gold Valley four-wheel drive Trail, thus creating connections to a popular network of multiple-use single-track trails. **(Alternative A, D, and E)**

- Obliterate approximately 0.29 miles of the abandoned PCT between the newly converted multiple-use trail and the new PCT to prevent inadvertent trespass by mountain bicyclists and motorcyclists. Also obliterate approximately 0.82 miles of existing trails adjacent to the new PCT trail reroute. **(Alternative A, C, and D)**

- Obliterate approximately 0.29 miles of the abandoned PCT between the newly converted multiple-use trail and the new PCT to prevent inadvertent trespass by mountain bicyclists and motorcyclists. **(Alternative E)**

The following section describes the effects of the proposed PCT Realignment project in terms of direct and indirect effects.

Relocate approximately six miles of the PCT in the Packer Saddle area. This route would use 1.7 miles of existing non-motorized trail and 4.3 miles of new trail construction. **(Alternatives A, C, and D)**

Erosion, sediment and water quality

The relocation of the Pacific Crest Trail involves the construction of approximately 4.3 miles of new trail alignment connecting with approximately 1.7 miles of existing non-motorized trails in the Packer Saddle area. The PCT relocation project impacts approximately 2.9 acres within two HUC7 "Drainages" totaling 10,916 acres. New construction of non-motorized trails, including the proposed reroutes, does have potential direct effects. The direct and indirect effects of constructing trails would be the removal of the topsoil layer and compaction of the trail surface. This could increase and redistribute the surface drainage and has the potential to increase erosion and sediment delivery to streams downhill of the trail. New trail cuts have the potential to affect hydrologic function by disrupting and increasing the surface drainage and by interrupting the subsurface water flow. Trail construction within RCAs, especially when crossing identified stream channels, does have the potential for direct effects to water quality and aquatic resources. The proposed new construction would meet the Forest standards and guidelines for trail construction. Implementation of applicable BMPs and project specific management requirements should not lead to the indirect effect of accelerated soil erosion.

Near stream soil disturbance

Riparian Conservation Areas (RCAs) have been established on all streams within the project area to protect the aquatic and riparian ecosystems. The following RCA widths would be established for the PCT Realignment project area: perennial streams – 300 feet, seasonal streams, including intermittent and ephemeral streams – 150 feet, and Special Aquatic Features such as meadows, lakes, springs/ seeps and ponds – 300 feet. Within the RCA, a riparian buffer would be established according to BMP 1.8 Riparian Conservation Area Designation.

There are a total of 3 perennial stream crossings and 3 intermittent stream crossings within the 6 mile PCT Realignment project area. The PCT Realignment project crosses through 1800 feet of

perennial Riparian Conservation Areas (RCAs) and 900 feet of intermittent RCAs. The total direct impact in the perennial and intermittent RCAs is 0.25 acres. The project is expected to be in compliance with the Clean Water Act and EOs 11988 and 11990.

Relocate the PCT to the following existing route: From the current junction of the PCT and the Sierra Buttes Trail (12E06), take the Sierra Buttes Trail north to the Tamarack Lakes OHV Trail (12E30). Continue north on the Tamarack Lakes OHV Trail to its junction with Packer Lake Road (FS Road 621). Follow this road east approximately ¼ mile to the junction with the Deer Lake Trail (12E02). Follow existing Deer Lake Trail back to the PCT. (Alternative E)

Erosion, sediment and water quality

The relocation of the Pacific Crest Trail under Alternative E involves the utilization of existing non-motorized trails for approximately 6 miles in the Packer Saddle area. The PCT relocation project under Alternative E impacts approximately 2.9 acres of existing trails within two HUC7 "Drainages" totaling 10,916 acres. These non-motorized trails are existing and no new construction would take place. The direct and indirect effects of utilizing existing non-motorized trails would be consistent with the no action alternative since no new ground disturbing activities would occur under Alternative E.

Near stream soil disturbance

Riparian Conservation Areas (RCAs) have been established on all streams within the project area to protect the aquatic and riparian ecosystems. The following RCA widths would be established for the PCT Realignment project area: perennial streams – 300 feet, seasonal streams, including intermittent and ephemeral streams – 150 feet, and Special Aquatic Features such as meadows, lakes, springs/ seeps and ponds – 300 feet.

There are a total of 3 perennial stream crossings and 1 intermittent stream crossing within the 6 mile PCT Realignment project area. The PCT Realignment project crosses through 1800 feet of perennial Riparian Conservation Areas (RCAs) and 300 feet of intermittent RCAs. The total direct impact in the perennial and intermittent RCAs is 0.19 acres. With implementation of the stream-specific BMPs listed above, the project is expected to be in compliance with the Clean Water Act and EOs 11988 and 11990.

Enlarge the trailhead parking at Packsaddle Campground for PCT users and make enhancements to the campground for equestrian users. (Alternative A, C, and D)

Erosion, sediment and water quality

The direct and indirect effects of enlarging the trailhead parking area at the Packsaddle Campground along with enhancing the campground for equestrian users would be the removal of the topsoil layer and compaction of the parking area and campground surface. This could increase and redistribute the surface drainage and has the potential to increase erosion and sediment delivery to streams downhill of the Packsaddle Campground. Newly exposed areas have the potential to affect hydrologic function by disrupting and increasing the surface drainage and by interrupting the subsurface water flow. The proposed new construction would meet the Forest standards and

guidelines for trailhead parking construction. Implementation of applicable BMPs and project specific management requirements should not lead to the indirect effect of accelerated soil erosion.

Near stream soil disturbance
There are no RCAs associated with the enlarging of the trailhead parking area at the Packsaddle Campground along with enhancing the campground for equestrian users and therefore no near stream soil disturbance.

Convert the abandoned section of the PCT to a multiple use trail. (Alternative A, D, and E)

Erosion, sediment and water quality
This is an administrative change in the use of the abandoned section of the PCT. No increase in ground disturbing activities would occur since the trail tread would remain the same.

Near stream soil disturbance
There are no RCAs associated with this proposal.

Construct an approximately 1.8 miles of multiple-use single-track trail connection between the newly converted multiple-use trail to Gold Valley four-wheel drive trail, thus creating connections to a popular network of multiple-use single-track trails. (Alternative A, D, and E)

The construction of approximately 1.8 miles of a new motorized single track trail impacts approximately 0.9 acres within the Upper Pauley Creek HUC7 "Drainage" totaling 5,085 acres. New construction of the motorized single track trail does have potential direct and indirect effects. The direct and indirect effects of constructing trails would be the removal of the topsoil layer and compaction of the trail surface. This could increase and redistribute the surface drainage and has the potential to increase erosion and sediment delivery to streams downhill of the trail. The new trail cuts have the potential to affect hydrologic function by disrupting and increasing the surface drainage and by interrupting the subsurface water flow. Trail construction within RCAs, especially when crossing identified stream channels, does have the potential for direct effects to water quality and aquatic resources. The proposed new construction would meet the Forest standards and guidelines for trail construction. Implementation of applicable BMPs and project specific management requirements should not lead to the indirect effect of accelerated soil erosion.

Near stream soil disturbance
Riparian Conservation Areas (RCAs) have been established on all streams within the project area to protect the aquatic and riparian ecosystems. The following RCA widths would be established for the new multiple-use single track trail construction area: perennial streams – 300 feet, seasonal streams, including intermittent and ephemeral streams – 150 feet, and Special Aquatic Features such as meadows, lakes, springs/seeps and ponds – 300 feet. Within the RCA, a riparian buffer would be established according to BMP 1.8 Riparian Conservation Area Designation.

There is 1 perennial stream crossing associated with the construction of the new multiple-use single track trail. The new construction project crosses through 600 feet of perennial Riparian Conservation Areas (RCAs). The total direct impact in the perennial RCA is 0.06 acres. The project is expected to be in compliance with the Clean Water Act and EOs 11988 and 11990.

Obliterate approximately 1.11 miles of trails. (Alternative A, C, and D)
Obliterate approximately 0.29 miles of trails. (Alternative E)

Erosion, sediment and water quality
The obliteration of the identified trails and trail segments would be accomplished by breaking-up the compacted trail surface. Erosion control devices (waterbars) and surface cover such as pine needles, vegetative material, and/or rocks would be deposited on the trail surface to minimize erosion. The entrance to the trail segment obliterated would be blocked by rocks or vegetative material to prevent future use. The project is designed to promote natural recovery of the trail surface by restoring the natural hydrologic function (infiltration capacity and permeability) of the soil in the trailbed and by reducing runoff and erosion. The trail segments identified for obliteration were exhibiting maintenance problems (rilling and gullying) and were mostly located on steeper trail gradients (>10 percent gradient). This operation involves the complete obliteration of the trail and recontouring of the hillslope, where feasible. The elimination of unnecessary Forest Service trails by obliteration would have several effects on soil and watershed resources. The direct effects of the proposed action include erosion control and restoration of the hillslope hydrology. The indirect effects include protection of aquatic habitat, acceleration of re-establishment of pre-existing native plant communities, and protection/improvement of water quality.

Near stream soil disturbance
The proposed trail obliteration activities are located within several identified perennial RCAs. These activities would have little direct or indirect effects on riparian and aquatic resources when management requirements and BMPs are implemented. The elimination of the unnecessary trail segments would have direct and indirect benefits to the stream system by reducing erosion and sediment effects on an unnamed tributary to Packer Creek and downstream beneficial uses. Identified trail segments would be closed to the public by waterbarring the trail surface and blocking access by rocks or vegetative material to prevent future use. The proposed action would not involve any obliteration of existing stream crossings.

Wildlife:

Information used in assessing effects includes: computer Geographical Information System layers (e.g. Digital Orthophoto Quads, Sierra Nevada Forest Plan Amendment Land Allocations, Forest Vegetation and Disturbance layers for public and private land, streams, roads, California spotted owl and northern goshawk Protected Activity Centers and Home Range Core Areas), aerial photos, survey records and species sighting data. Fish and wildlife species-specific surveys conducted in all or portions of the project area include: California spotted owl, forest carnivore surveys (sooted track plates and camera stations), and mountain yellow-legged frog habitat surveys. Aquatic assessments include information gained through stream surveys, amphibian habitat assessments, evaluation of the potential effects of proposed activities in riparian conservation areas (RCAs), and the results of the cumulative watershed effects analysis.

The following reports address the direct, indirect, and cumulative effects from the alternatives to wildlife species in detail, and they are incorporated into this EA by reference: (1) Biological

Evaluation for Birds, Mammals, Amphibians, Reptiles, Fish, and Invertebrates dated February 29, 2012 and (2) Management Indicator Species Report dated February 29, 2012.

There are no federally endangered, threatened, or proposed species or their designated critical habitat within the project area that may be affected by the proposed actions. This project is outside of the range for the following federally-listed species: the Valley elderberry longhorn beetle, California red-legged frog, Lahontan cutthroat trout. There is no Critical Habitat, or Proposed Critical Habitat, present within this project area. The Biological Evaluation has determined that there are no effects from any of the alternatives to any federally protected species.

The Project occurs within open-canopy coniferous and montane shrub habitats. Management Indicator Species for these habitats are the mountain quail (open-canopy coniferous) and the fox sparrow (shrub). The Project is above the elevational range of the western red bat, foothill yellow-legged frog, northwestern pond turtle, and hardhead; and it is outside of the geographic range for the Great Basin ramshorn snail, Lahontan Lake tui chub, and California floater. There is no suitable habitat within the Project Area for the California spotted owl, great gray owl, northern goshawk, willow flycatcher, and the greater sandhill crane. The Project would not affect habitat for the Townsend's big eared bat or the pallid bat. Mountain yellow-legged frogs do not occur within the Project Area, and drainages that new trails would cross do not provide suitable breeding habitat for this species. A pair of bald eagles forage within Packer and Deer Lakes, but no nests occur at either of these lakes, and new trail construction and use of trails would not disrupt nesting or disturb bald eagles from foraging sites at lake. Although the Sierra Nevada red fox and the California wolverine are not known to occur within the Project Area, the Project does occur within suitable habitat, and it is within the elevational range for these species. No Sierra Nevada red fox populations are known to persist within the Tahoe National Forest. The wolverine documented in the Tahoe National Forest is a male that is genetically related to wolverines from the Rocky Mountains, and there is no evidence that breeding populations persist in the Sierra Nevada. Therefore, it is not likely that either the Sierra Nevada red fox or the wolverine are present within the Project Area or that habitat within the Project Area would be important for sustaining breeding or denning in either of these species. American marten have been sighted at Packer Lake, but new trails are not located within suitable marten denning or foraging habitat, or within one mile of suitable habitat.

A Biological Evaluation has determined that the action alternatives:

(1) Will not affect the following Region 5 Forest Service Sensitive Species: California spotted owl, great gray owl, northern goshawk, willow flycatcher, greater sandhill crane, Pacific fisher, pallid bat, Townsend's big-eared bat, western red bat, northwestern pond turtle, foothill yellow-legged frog, mountain yellow-legged frog, Great Basin ramshorn snail, Lahontan Lake tui chub, hardhead, and California floater;

(2) May affect individuals, but will not lead to a trend toward federal listing or loss of viability of the following: bald eagle, American marten, Sierra Nevada red fox, and the California wolverine.

Effects from Alternative A

The analysis for direct, indirect and cumulative effects to wildlife for the overall project analyses includes an area for two miles from the proposed new trails, staging areas, campground improvements and trail obliteration. This area would include analyzing effects to individual Forest Service Sensitive species that might range within the project area. The project area traverses open shrub, rocky areas and open-canopy forests that are generally comprised of canopies that are less than 30% cover; these extend out approximately one mile to the west, and two miles to the east of the proposed trails. The Project Area is within summer range for the Downieville Deer Herd, and surrounding shrub habitats provide important forage for deer and other shrub-associated species. Some low quality, scattered mid-successional forests are present between one to two miles west of proposed new trails. No closed-canopy, late-successional forests would be affected by this project, and no California spotted owl or northern goshawk Protected Activity Centers or Home Range Core Areas are present that would be affected.

Direct Effects: Direct effects to wildlife may occur from killing, injuring, or displacing individuals or interfering with feeding, movement and migration. Noise from operating motorized equipment, either during trail construction, obliteration, or along the new OHV route could displace individual animals from the vicinity. Generally, noise disturbances are considered to occur for a distance up to 0.25 miles. The effects of noise disturbances during trail construction and obliteration are limited both spatially and temporally, as they would only affect approximately 40 acres at any one time, and proceed along the trail alignments, lasting only one or two seasons until they are completed. These effects are considered to be minimal, because no disturbances would occur to any federally protected or Forest Service Sensitive species during critical life stages, such as at dens, within nesting habitat, or within important or frequently used foraging habitats.

Indirect Effects: Indirect effects to wildlife may occur from altering the quantity or quality of habitat or degrading the way in which habitat functions for wildlife. This may occur by directly altering the quantity or availability of food and water, or reducing habitat components that provide shelter, nesting, denning, or resting opportunities. The effects of roads and trails to wildlife vary greatly by the species, type of road or use (i.e. motorized or non-motorized), its configuration, location, and traffic patterns. Numerous studies have documented negative effects that may include: increasing stress and energetic costs to individual animals that results in decreased fitness, creating barriers for movement, fragmenting habitats, reducing habitat effectiveness, or causing genetic isolation (Riley et al. 2006, Cushman and Lewis 2010).

Effects from Alternative A would remove a total of approximately 8 acres of habitat by constructing new trails, which represents a negligible amount of habitat, totaling a fraction of 1% within the project assessment area. Recreational use of 6.1 miles of new trails is expected to be regular during the summer and fall months, primarily late May through November, when these trails are not closed by winter snowpack. Because recreational activities within the District historically increase over time, once established, the effects from human disturbances are considered to be a long-term effect that permanently (50-100 years) reduces the quality of wildlife habitat in the project assessment area.

Harrison et al. (1993) found that normal trail machines do not increase the measured ambient noise levels at 400 feet or greater from trails. However, this distance is much less than that reported by

Harrison (1975), who concluded that the maximum distance at which a vehicle may be heard ranges from approximately 4,500 feet (for vehicles on level ground) to 7,500 feet (for a motorcycle climbing a hill). In the Eldorado National Forest, Barrett (1976) found that wintering deer directly responded to vehicle noise up to a distance of 100 meters (328 feet) from a vehicle. Thomas et al. (1979) identifies a reduction in deer habitat quality when the density of roads that are open to public use increases, and the effectiveness of the habitat drops sharply where densities exceed two miles of open road per square mile (Thomas et al. 1979). This roughly equates to a reduction of habitat quality within a distance of 0.25 miles either side of roads. Assuming that disturbances along new trail segments extend approximately 0.25 miles from trails, Alternative A would introduce disturbances within approximately 400 acres of open-canopy and shrub habitat that is presently undisturbed by people using roads or trails.

Suitable wildlife habitat varies by species, and it is discussed in detail for Forest Service Sensitive and Management Indicator Species in detail in those project reports. Briefly, suitable habitat is present within two miles of the project area for the following Region 5 Forest Service Sensitive species: American marten, Sierra Nevada red fox, the California wolverine, and bald eagle. American marten are confirmed to be present within the project analysis area. The area for a one-mile distance surrounding the proposed trails and parking lot do not contain suitable denning or foraging habitat for marten, while a small amount of low-quality habitat is present two miles west of the proposed new trails. Similarly, although bald eagles are known to forage within some of the lakes in the project assessment area, no nests have been identified within the project assessment area, none were found to occur in proximity to the proposed new trails, and the proposed new trail segments occur further than 0.25 miles from areas that may provide suitable nesting habitat. Therefore, any potential disturbances caused by trail use to Forest Service Sensitive species is limited to potentially disturbing individuals that may occasionally forage within the project area.

As previously discussed, the Sierra Nevada red foxes and California wolverines are not likely to be present within the project area, and any effects to these species or their habitats are limited to affecting a small percent of habitat within the assessment area (2%). The project Biological Evaluation and Management Indicator Species reports detail the specific project effects and rationale for the determination statements for each potentially affected Forest Service Sensitive or MIS species trends.

Effects that Vary by Alternative

The proposals vary in the quantity of wildlife habitat that would be removed, and the number of acres within which habitat quality would be reduced due to additional human-caused disturbances extending out from new trails. Table 3-3 (below) identifies these differences by Alternative.

Table 3-3. Comparison of the alternatives (Alt.) showing the acres (miles) directly affected, and the additional amount of wildlife habitat that would be indirectly affected by human-caused disturbances.

	Alt. A Proposed Action	**Alt. B No Action**	**Alt. C No new multi-use trails**	**Alt. D No Campground Improvements**	**Alt. E Use Existing Trails**
New PCT trail	2.1 acres (4.3 miles)	0	2.1 acres (4.3 miles)	2.1 acres (4.3 miles)	0
Pack Saddle new parking	0.5 acres	0	0.5 acres	0	0.5acres
New OHV trail connection	0.4 acres (1.8 miles)	0	0	0.4 acres (1.8 miles)	0
Trail obliteration	1.1 miles	0	1.1 miles	1.1 miles	.03 miles
MIS Wildlife habitat directly removed: Shrub (fox sparrow) and open coniferous habitats (mountain quail)	8 acres (< 1% of habitat in assessment area)	0 acres	6 acres	8 acres	0 acres
Additional shrub and open coniferous habitats affected by human disturbances	400 acres (200 ac. new PCT; 200 ac. new motorcycle)	0 acres	200 acres (new PCT use)	400 acres (200 ac. new PCT; 200ac. new motorcycle)	200 acres (new motorcycle)

The effects to wildlife from directly removing habitat vary a negligible amount (less than 8 acres) for each of the action alternatives. The primary differences among the alternatives are the area within which new disturbances would occur to wildlife from people using the trails, and the changes in road densities seen within the project area. Alternative A would increase road densities within five sections that lie within the project assessment area. The effects of road to wildlife habitat vary by species, but roads are considered to generally reduce habitat quality. For example, deer habitat effectiveness reduces dramatically where road densities exceed two miles per square mile (Thomas et al. 1979); and the Tahoe National Forest Land Management Plan (USDA Forest Service 1990) uses this threshold as a goal where deer management is emphasized. Road densities presently range from approximately three to eight miles of road per square mile, which already represent a sharp reduction in the functioning of the surrounding habitat for deer.

Table 3-4 shows road densities by legal section, and how these densities would change by alternative. All Action Alternatives include proposals to decommission approximately 0.25 miles of existing trail north of Tamarack Lake, which would not change road densities. Alternatives A, D and E add to road densities in the Project Area, while Alternative C does not. The new PCT segment would be relocated to the south side of Tamarack Lakes, rather than the north, and effectively results in no net change in the area directly, or indirectly disturbed under Alternatives A, C, and D.

Although Alternatives A, D, and E would increase road densities that generally reduce habitat quality within adjacent habitats, these proposals all occur outside of any critical deer summer range or fawning habitats; outside of any closed-canopy, late-successional habitats that support sensitive species such as spotted owls, goshawks, or marten; and outside of any special management areas (i.e. spotted owl or goshawk Protected Activity Centers, Old Forest Emphasis Areas). The effects

from this Project would occur within a small percent (2%) of open-canopy coniferous and shrub habitats, and represent a small effect to wildlife habitat.

Table 3-4– Road Densities

	Alt A Proposed Action (Mi/mi^2)	**Alt. B No Action (Existing road density) (Mi/mi^2)**	**Alt C No new motorized multi-use trails (Mi/mi^2)**	**Alt D No Campground Improvements(Same as Alt. A) (Mi/mi^2)**	**Alt E Use Existing Trails (Mi/mi^2)**
T20N, R11E, Section 25	3.0	2.8	2.8	3.0	3.0
T20N, R12E, Sec. 30	5.5	2.9	2.9	5.5	5.5
T20N, R12E, Sec. 31	4.8	3.5	3.5	4.8	4.8
T19N, R12E, Sec 6	7.7	5.9	5.9	7.7	7.7
T19N, R12E, Sec 7	7.8	7.6	7.6	7.8	7.8

Overall

Tahoe National Forest Land and Resource Management Plan (Tahoe LMP) standards and guidelines and project specific mitigation measures have been designed to reduce any adverse impacts. Beneficial effects were not used in this analysis or supporting analyses to offset or compensate for adverse effects. No adverse effects of this project would be significant, even when considered separately from the beneficial effects that may occur in conjunction with those adverse effects.

2. The degree to which the proposed action affects public health or safety.

Hazard trees could be removed along Forest Service system trails and within, or immediately adjacent to (tree felling distance), high-use recreational and administrative sites, but would be analyzed under a separate document. The direct effects of removing hazard trees would be that roads would be safer for travel, and administrative or high use recreational sites would be safer for forest visitors, residents, and Forest Service employees.

The proposed actions would have no other effects to public health and safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

Historic/Cultural Resources- The PCT Realignment Project area is near historic and/or prehistoric sites, but project actions have been designed to avoid cultural resource sites eligible for inclusion in

the National Register of Historic Places, with the result that there would be no direct or indirect effects to any cultural resources eligible for inclusion in the National Register. Project actions would fully comply with the National Historic Preservation Act (NHPA), and implementing programmatic agreements (PAs).

Parklands- There are no parklands within the project area.

Prime Farmlands- There are no prime farmlands within the project area.

Wetlands- The project area was surveyed and no special aquatic features, i.e. peatlands, fens, seeps, springs, lakes were found in areas proposed for impact.

Wild and Scenic Rivers- There are no Wild and Scenic Rivers designated within the project area.

Ecologically Critical Areas- There are no ecologically critical areas within the project area.

4. The degree to which the effects on the human environment are likely to be highly controversial.

The effects of this project on the quality of the human environment are not likely to be highly controversial. The project was subject to extensive analysis and planning, in addition to requiring the implementation of best management practices (BMPs), mitigation measures, and management requirements listed elsewhere in this document and in the project record. This has resulted in a limited and focused proposed action, which incorporates public concerns into the proposed action.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The proposed actions are routine tasks implemented on a regular basis by the Tahoe National Forest without incurring significant impacts. The results or effects of these actions on the human environment are predictable and known, based on similar past practices. The management requirements, mitigation measures, and best management practices included in the action alternatives, as described this document and the project record would also reduce and minimize any impacts or risks that might have otherwise been uncertain, unique, or unknown.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

There are no future activities (other than routine trail maintenance) planned within this project. The proposed actions or any of the alternatives would not establish a precedent for future actions, nor would it represent a decision in principle about a future consideration for other similar projects. Any future decision to treat the same or adjacent areas would be analyzed separately and on its own

merits to determine a course of action. Future projects would require additional site-specific analysis and separate decisions as required under NEPA.

While this project neither proposes, nor schedules, future actions in any of these areas, this document does not prevent the opportunity for future management actions.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

In order to understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

This cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. There are several reasons for not taking this approach. First, a catalog and analysis of all past actions would be impractical to compile and unduly costly to obtain. Current conditions have been impacted by innumerable actions over the last century (and beyond), and trying to isolate the individual actions that continue to have residual impacts would be nearly impossible. Second, providing the details of past actions on an individual basis would not be useful to predict the cumulative effects of the proposed action or alternatives. In fact, focusing on individual actions would be less accurate than looking at existing conditions, because there is limited information on the environmental impacts of individual past actions, and one cannot reasonably identify each and every action over the last century that has contributed to current conditions. Additionally, focusing on the impacts of past human actions and risks, while ignoring the important residual effects of past natural events, may contribute to cumulative effects just as much as human actions. By looking at current conditions, we are sure to capture all the residual effects of past human actions and natural events, regardless of which particular action or event contributed those effects. Third, public scoping for this project did not identify any public interest or need for detailed information on individual past actions. Finally, the Council on Environmental Quality issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, “agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.”

The cumulative effects analysis in this EA is also consistent with Forest Service National Environmental Policy Act (NEPA) Regulations (36 CFR 220.4(f)) (July 24, 2008), which state, in part:

> “CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. Once the agency has identified those present effects of past actions that warrant consideration, the agency assesses the extent that the effects of the proposal for agency action or its alternatives would add to, modify, or mitigate those effects. The final analysis documents an agency assessment of the cumulative effects of the

> actions considered (including past, present, and reasonable foreseeable future actions) on the affected environment. With respect to past actions, during the scoping process and subsequent preparation of the analysis, the agency must determine what information regarding past actions is useful and relevant to the required analysis of cumulative effects. Cataloging past actions and specific information about the direct and indirect effects of their design and implementation could in some contexts be useful to predict the cumulative effects of the proposal. The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to informed decision-making. (40 CFR 1508.7)"
>
> For these reasons, the analysis of past actions in this section is based on current environmental conditions.

Design features included in the proposed action would avoid, minimize, or reverse adverse cumulative watershed effects and minimize impacts to rare plants, wildlife, aquatic species, and other sensitive resources to the extent that any residual effects would not be cumulatively significant. Biological Evaluations and a Watershed Effects Report that disclose cumulative effects, as well as direct and indirect effects, are in the project file and available from the Yuba River District office.

Evaluation of Cumulative Effects:

A cumulative effect is the consequence on the environment that results from the incremental effect of the action when added to the effects of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes the other actions and regardless of land ownership on which the actions occur.

i) Cumulative watershed effects.

The direct and indirect effects of combined past, present, and proposed management activities create a cumulative impact on soils. The cumulative impact on soils is best analyzed in terms of the overall inherent productivity of the soils and is typically reflected in the growth and yield of trees on a site. Soil compaction tends to accumulate within the watershed over time. Compaction decreases tree growth by restricting root growth and decreasing available soil moisture. Compaction also disrupts the continuity and volume of soil pore space. Soil pores are the major structural component of soil organism habitat. Soil organisms are responsible for developing critical properties that underlie basic soil fertility and productivity. These biological communities result from complex interactions and require anywhere from a few years to several hundred years to develop. Compaction or alteration of the surface soil layers can have detrimental effects on soil organism populations. No quick remedies are available if extensive damage to the soil system occurs.

Ground-disturbing activities can cause both direct and indirect effects that persist through time. The cumulative result of all these effects is the potential to adversely affect downstream beneficial uses of the water. Cumulative watershed effects (CWE) analysis may reveal that even though the proposed activities themselves may not be sufficient to substantially impact the watershed, when analyzed in connection with past and future activities, they may become a cause for concern. The proposed activity areas were field reviewed to determine existing compaction levels. The existing

detrimental compaction in the project area, with a previous management history, is less than 5 percent. Even with the minor increase of > 1 percent compaction with this project the activity areas would be consistent with the 15 percent LRMP porosity standard. Also given the fact that the soils in the activity areas have sandy textures, the overall direct effects of this project on soil productivity should be negligible. The project area does not have an extensive disturbance history in the past thirty years. Logging history is limited to hazardous tree removal along powerlines and roads and around organizational and Forest Service campgrounds.

Cumulative watershed effects are the combined effects of past, present, and future land management activities within a watershed that may affect the watershed's hydrologic structure or process. The Forest Service's Pacific Southwest Region uses a standardized analysis process to assess the potential risk of cumulative watershed effects resulting from management activities (FSH 2509.22). This cumulative watershed effects analysis compares (a) the existing level of land disturbance within a watershed with (b) an estimate of the upper limit of watershed tolerance to disturbance, referred to as the Threshold of Concern (TOC). The level of land disturbance is measured using Equivalent Roaded Acres (ERAs), whereby all disturbances are equated to an acre of road. The cumulative watershed effects analysis then recovers these disturbances over some period of time following a specified recovery curve. The existing ERA of a watershed is compared to the TOC to provide an assessment of the potential for cumulative watershed effects.

One measure of cumulative watershed effects in based on the relationship between equivalent roaded acres (ERA) and watershed threshold of concern (TOC). The ERA/TOC model provides a simplified accounting system for tracking disturbances that affect watershed processes; in particular, estimates in peak runoff flows influenced by ground-disturbing activities. Unlike the surface erosion model (USLE), ERA/TOC is not intended to be a process-based sediment model. It does, however, provide an indicator of watershed conditions.

Two critical parts of the CWE analysis process include: (1) determining the Threshold of Concern (TOC) for each affected watershed and (2) assigning Equivalent Roaded Acre (ERA) coefficients and recovery curves to different types of natural resource management activities.

Thresholds of Concern: The Tahoe National Forest has developed a standard method for determining watershed TOC values based on several factors. Each watershed is assessed for its ability to withstand erosional processes and handle sediment delivery to stream channels. The assessment is based on climatological, geologic and soils information, on-the-ground surveys of the stream channels and upland areas; and the experience and knowledge of current and previous TNF hydrologists. A range of TOC values, from a high of 0.18 (18%) to a low of 0.09 (9%), have been established for each 7th field Hydrologic Unit Code (HUC) watershed on the Forest, using the watershed assessments, soil porosity guidelines in the Forest Plan, and literature review of research on impacts of timber harvesting activities on sediment production.

Coefficients and Recovery Curves: ERA coefficients assigned to the PCT Realignment project was 1.00 for the impact of the trail system and campground improvements. Coefficients have been developed based on soil monitoring results, literature reviews, and consultation with other hydrologists. A 30-year straight line recovery rate is used for this analysis.

Ground-disturbing activities can cause both direct and indirect watershed effects that persist through time. The cumulative result of all these effects is the potential to adversely affect downstream beneficial uses of water. Cumulative watershed effects analysis may reveal that even though the proposed action alone may not be sufficient to substantially impact the watershed, when analyzed in connection with other past, present, and future activities, the effects of the proposed action may become cause for concern. Past and present Forest Service vegetation and fuels management projects, timber harvests on private lands, and the existing and proposed transportation system were included in the cumulative watershed effects analysis.

Cumulative Effects of Alternative A (Proposed Action), Alternative C (Put in the new PCT route as planned, but do not build new multiple-use single-track connector trail), Alternative D (Put in the new PCT route as planned, but don't improve Packsaddle Campground) and Alternative E (Proposed Action, but reroute the PCT on existing trails)

Ground-disturbing activities can cause both direct and indirect watershed effects that persist through time. The cumulative result of all these effects is the potential to adversely affect downstream beneficial uses of the water. Cumulative watershed effects (CWE) analysis may reveal that even though the proposed activities themselves may not be sufficient to substantially impact the watershed, when analyzed in connection with past and future activities, they may become a cause for concern. Forest Service and private timber sales plus all private lands with Timber Harvest Plans filed for future sales were included in the CWE analysis.

This project is designed to protect watershed values by reducing potential direct and indirect effects associated project activities, such as erosion and sedimentation and protecting sensitive lands while meeting other resource objectives. By reducing the direct and indirect effects, cumulative effects would also be reduced under all action alternatives.

The acres of new trail construction by Drainages and Alternative are displayed in the table below.

Table 3-5. Cumulative Watershed Effects Analysis Acreage Increase by Alternative

			ALT. A	ALT. B	ALT. C	ALT. D	ALT. E
Drainage Name	**Acres**	**TOC**	**Acres Increase**	**Acres Increase**	**Acres Increase**	**Acres Increase**	**Acres Increase**
Upper Pauley Creek	5,085	13%	0.87	0.0	0.0	0.87	0.87
Upper Salmon Creek	5,478	13%	0.0	0.0	0.0	0.0	0.0
Lower Salmon Creek	5,438	13%	3.10	0.0	3.10	2.10	1.00

The Threshold of Concern (TOC) and increase of Equivalent Roaded Acres (ERA) by Drainages are displayed in the table below.

Table 3-6. Cumulative Watershed Effects Analysis Percent ERA Increase by Alternative

			ALT. A	ALT. B	ALT. C	ALT. D	ALT. E
Drainage Name	**Acres**	**TOC**	**% Increase**	**% Increase**	**% Increase**	**% Increase**	**% Increase**
Upper Pauley Creek	5,085	13%	0.0002%	0.0%	0.0%	0.0002%	0.0002%
Upper Salmon Creek	5,478	13%	0.0%	0.0%	0.0%	0.0%	0.0%
Lower Salmon Creek	5,438	13%	0.0006%	0.0%	0.0006%	0.0004%	0.0002%

Table 5 shows such a small increase to the Drainage Percent ERA by Alternative that the increase would not be discernible. Currently, these watersheds have ERA values of less than five percent. The management requirements and the State mandated BMPs would be successfully used on this to protect the water quality.

Implementing any of the action alternatives, with the specified management requirements, would result in a low risk of negative cumulative watershed effects.

ii) *Cumulative effects on wildlife, aquatic species, and threatened, endangered, or sensitive plant species*.

Wildlife/Aquatics: Cumulative effects to wildlife consider the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects to fish, wildlife, and rare plants are discussed in detail in the following project documents, which are incorporated by reference: (1) Biological Evaluation for Birds, Mammals, Amphibians, Reptiles, Fish, and Invertebrates, (2) Biological Evaluation for Plants and Fungi, and (3) Management Indicator Species (MIS) Assessment. These documents are located in the project file and are available upon request from the Yuba River Ranger District office. The analyses in these documents consider past, present and reasonably foreseeable effects within the analysis area. In general, the cumulative effects analysis area for wildlife varies by species, but in some cases, assessment areas used to analyze effects expands to include sixth-field watersheds or beyond, to include the home ranges of wide-ranging animals such as forest carnivores, raptors like the California spotted owl, and deer that may use the project area as a regular part of their home range, or for movement, migration and dispersal.

The temporal period selected for changes in vegetation from logging include a time period since 2001, which includes the best available data layers to complete this analysis in GIS. A qualitative assessment comparing the layers used against additional information (disturbance layers, aerial

photos, vegetation maps from the 1980s), did not show meaningful changes that would warrant a different time frame.

The following additional factors in this assessment area were considered in the cumulative effects analysis to wildlife:

Disturbance Related to Human Presence—The Sierra County General Plan limits residential development outside of core community areas, and no residential development has occurred on private land in the past 10 years. Road and trail use within the project area is common in the late spring, summer, and fall from a variety of uses that include primarily horseback, hiking, off-highway vehicles, mountain biking, hunting and fishing. No new roads or trails have been planned or constructed within the project assessment area in the past 10 years, and additional trails are not planned in the reasonably foreseeable future.

Disturbances Related to Road Density— Existing road densities presently range from three to 8 miles of road per square mile. Alternatives A, D and E would add approximately 1.8 miles of new OHV road to connect with the Gold Valley OHV route, and allow multiple use, including OHV use along 2.5 miles of the existing PCT, which presently does not allow bicycles or OHVs. Table 3-7 shows the existing road density (Alternative B—No Action) broken down by Section No. in the project area, and how each of the action alternatives change road densities.

Table 3-7– Road Densities changes by Legal Section

	Alt A Proposed Action/ Change in density	**Alt. B No Action (Existing road density)**	**Alt C No new motorized multi-use trails**	**Alt D No Campground Improvements (Same as Alt. A)**	**Alt E Use Existing Trails**
T20N, R11E, Section 25	+0.2	2.8	0	+0.2	+0.2
T20N, R12E, Sec. 30	+2.6	2.9	0	+2.6	+2.6
T20N, R12E, Sec. 31	+1.3	3.5	0	+1.3	+1.3
T19N, R12E, Sec 6	+1.8	5.9	0	+1.8	+1.8
T19N, R12E, Sec 7	+0.2	7.6	0	+0.2	+0.2

Timber harvest and Vegetation Management on Public and Private Lands— To account for the potential for this project to affect habitat within the home range of sensitive forest carnivores (Sierra Nevada red fox and the American marten), a two-mile buffer from the proposed actions in this project was established., Vegetation management within National Forest System Lands has not removed or changed the overall vegetation classification types of wildlife habitats. Vegetation management on the east side of the Pacific Crest Trail has been limited to removing only hazard trees within 300 feet of roads and within administrative sites, because the Tahoe Land Management Plan has identified management emphasis within this area primarily for recreation and to retain its scenic character. No commercial logging of trees has occurred. Logging on private land has removed approximately 200 acres of mid-to late successional, closed-canopy forests. in the vicinity of Packer Saddle, within sections 6, 7, 18, of T19N, R 12E. These closed-canopy forests provide habitat for the American marten, California spotted owl, and the northern goshawk. The Pacific Crest Trail Relocation Project would affect any additional closed-canopy forests, nor their associated species, and it would not change the present distribution of habitats that are present within the Project Area.

Grazing—The east side of the Pacific Crest is not within a grazing allotment; grazing is present on the west side, within the Gold Valley Allotment. Monitoring of this allotment indicates that the management since 2000 has resulted in an upward trend of vegetation within key meadows.

Of the above factors considered above, few factors have added to cumulative effects to wildlife. This project would add cumulative effects to wildlife by increasing road and trail densities in the project area, and subsequently increasing human disturbances within areas that are presently undisturbed. However, the intensity and duration of these effects is small, and limited in both time and space for the following reasons: (1) Vegetation management during the past 10 years has not changed the quality or quantity of wildlife habitat on public lands, and has been minimal on private lands, as described in this section above, (2) Proposed project effects to Forest Service Sensitive species is minimal, because habitat is either absent, or where habitat is present, populations of these species (i.e. Sierra Nevada red fox and California wolverine) are either not known to persist in the project area, or no suitable habitats would be affected (i.e. bald eagle, marten), (3) this project would not cause a downward trend for any MIS species, (4) Implementing BMPs would minimize potential downstream effects and to riparian vegetation, and (5) Under any of the action alternatives, a maximum of 400 acres of wildlife habitat would receive additional human-caused disturbances from trail use, which represents a small (5%) amount of the project assessment area (7680 acres; buffering the trails by approximately 2 miles).

Threatened, Endangered, or Proposed Plants: No threatened, endangered or proposed plants have been found in the surveys of the PCT Realignment Project area.

Sensitive Plants and fungi: The project area contains occurrences of the following Region 5, Regional Forester's sensitive plants, *Lewisia kelloggii* ssp. *Hutchisonii, Lewisia* ssp. *Kelloggii, Botrychium ascendens, Botrychium crenulatum, Botrychium lunaria, Botrychium minganense, and/or Botrychium montanum*. Mitigations would be implemented to avoid direct and indirect effects to these sensitive plants. No other present or reasonably foreseeable future actions will directly or indirectly affect these plants; hence, no adverse cumulative effects are expected.

iii) Cumulative effects on Recreation: Increased Uses - A comment made during the scoping period expressed concern that the Sierra Buttes Lakes Basin area was already "maxed out" and that the Forest Service should not implement projects that would increase use in this area. Under Alternatives A, C and D it is expected that the proposed project enhancements would attract additional hikers and equestrians. Use by PCT hikers traveling through this area would not change because of the proposed realignment, but day hiker and equestrian use from Packsaddle Campground/Trailhead is expected to increase due to the proposed new hiking non-mechanized single-track trail opportunity to Tamarack Lakes and the proposed improved trail opportunity to Deer Lake (elimination of overly steep grades), and from the proposed enhancement of the equestrian facilities at Packsaddle Campground. Additional parking at the Packsaddle trailhead is proposed as part of this project to accommodate the anticipated increase in use.

The proposed project is predominately within the Lakes Basin Management Area (009), with some of the proposed abandoned segment of the PCT (west of the ridge) falling within the Lavezzola Management Area (005) (Tahoe National Forest Land and Resource Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment (2004)). The management emphasis for the Lakes Basin Management Area is to "*provide a variety of recreation opportunities consistent with maintaining the high visual quality of the area."* The management emphasis for the recreation resource in the Lavezzola Management Area is to *"Emphasize recreation opportunities on system trails by giving consideration to trail use and the recreation experience of trail users in project planning."* The Recreation Opportunity Spectrum (ROS) for most of the project area is Roaded Natural, with a very small area nearest the Buttes being Semiprimitive Motorized. The area is not being managed for minimal visitor contacts as one would expect in an area managed for wilderness. Therefore, anticipated increase in visitation to Tamarack and Deer lakes would be acceptable.

None of the alternatives are expected to increase mountain bike or motorcycle use in the general area. Though Alternatives A, D, and E would provide enhanced single-track trail opportunities available to motorcyclists and mountain bicyclists, use for these two groups is not expected to increase beyond general population-based increases through time. This is because the draw to the area for these two user groups is predominately based on the overall single-track trail network experiences (mileage and challenges) available, not the new enhanced trail opportunities being proposed in this project.

The Tahoe National Forest Motorized Travel Management Record of Decision, signed September 2010, did not add any motorized trails in the area of the PCT Realignment proposal to the official Forest Service trail system, but did restrict non-highway legal motorized vehicles from using Forest Service Maintenance Level 3 roads in the area (i.e. portions of the 93 and 93-3 roads, 93-4 Road) resulting in decreased motorized opportunities. A 2.3 mile single-track multiple use (motorized) extension of the Butcher Ranch trail is currently being constructed, which will provide enhanced riding experiences for motorcyclists and mountain bicyclists traveling the "Downieville Downhill" trail system.

Overall, the cumulative effects of the past, current, proposed and foreseeable future recreation actions have different levels of either positive or negative impact to individual recreationists, but would not create a significant impact to recreation user groups in the project area.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historical resources.

The PCT Realignment Project area has been inventoried for cultural resources. The file number for the cultural resource report is TNF02256/R2009051700048 (Slater). The inventory documents that there was no evidence of prehistoric or historic archaeological sites or isolated features within the project area.

Additionally, this action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places**.**

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Biological Evaluations have been completed that include analyses of potential effects to federally listed (endangered, threatened) or proposed species. These reports determine that there are no effects from any of the alternatives to any federally listed or proposed species. There is no designated critical habitat in the Tahoe National Forest.

Endangered Species: There are no federally endangered species or their habitats within the project area.

Threatened Species: This project is outside of the range for the California red-legged frog, Lahontan cutthroat trout and the Valley elderberry longhorn beetle, and a Biological Evaluation has concluded that the action alternatives would not affect the California red-legged frog, Lahontan cutthroat trout, or the Valley elderberry longhorn beetle. There is no designated Critical Habitat within the project area.

Proposed Species: There are no proposed threatened or endangered plant or animal species that occur within the Pacific Crest Trail Realignment Project Area.

10. Whether the action threatens a violation of Federal, State, or local law or other requirements imposed for the protection of the environment.

None of the action alternatives (Alternatives A or C-E) would threaten a violation of Federal law or requirement imposed for the protection of the environment. All alternatives are fully consistent with the Endangered Species Act (see No. 9 above). The action alternatives are fully consistent with the with the Tahoe LMP (1990) as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (2004), as described in the sections below; and comply with the National Forest Management Act (NFMA) of 1976. NFMA requires all projects to be consistent with the following

elements: (a) resource protection; (b) vegetation manipulation; (c) silvicultural practices; (d) even-aged management; (e) riparian areas; (f) soil and water; and (g) diversity.

(a) Resource Protection – The integrated design of the action alternatives, including the Management Requirements listed in Chapter II of this EA and detailed in the attached appendices provide for protection of forest resources, including riparian resources, terrestrial wildlife, aquatic and plant species and their habitat, cultural resources, soil productivity, water quality, and recreational and visual quality resources.

(b) Vegetation manipulation – Other than removal of small trees (less than 10 inches in diameter) where needed to maintain trail grade and continuity, no vegetation manipulation would occur.

(c) Silvicultural practices – No timber harvesting would occur.

(d) Even-aged management – No group selection harvest or other forms of even-aged management are proposed by any of the alternatives.

(e) Riparian areas – Sierra Nevada Forest Plan Amendment (SNFPA) guidelines would be applied to the treatment of Riparian Habitat Conservation Areas (RCAs) as appropriate to protect riparian resources. Any proposed treatments in RCAs are designed to minimize disturbance of riparian vegetation, soils, and other aquatic habitat elements. A riparian conservation objective (RCO) analysis and guidelines (see Appendix C) has been developed for this project, consistent with SNFPA ROD standard and guideline 92 (SNFPA ROD, page 62).

(f)) Soil and water – ***Clean Water Act of 1948 (as amended in 1972 and 1987)*** establishes as federal policy the control of point and non-point pollution and assigns the States the primary responsibility for control of water pollution. Compliance with the Clean Water Act by national forests in California is achieved under state law.

The California Water Code consists of a comprehensive body of law that incorporates all state laws related to water, including water rights, water developments, and water quality. The laws related to water quality (sections 13000 to 13485) apply to waters on the national forests and are directed at protecting the beneficial uses of water. Of particular relevance is section 13369, which deals with nonpoint-source pollution and BMPs.

The Porter-Cologne Water-Quality Act, as amended in 2006, is included in the California Water Code. This act provides for the protection of water quality by the State Water Resources Control Board and the Regional Water Quality Control Boards, which are authorized by the U.S. Environmental Protection Agency to enforce the Clean Water Act in California.

Regional Water Quality Control Boards are the primary regulatory agencies for water quality in California. Each Regional Board has a Basin Plan that includes identified beneficial uses and water quality objectives (standards) for water bodies within each region. Basin Plans may include prohibitions of pollutant discharges, and are incorporated into the California Water Code. As such, Basin Plans are enforceable laws.

Non-point source pollution on national forests is managed through the Regional Water Quality Management Plan (USDA Forest Service, Pacific Southwest Region, 2000), which relies on implementation of prescribed best management practices. The Water Quality Management Plan includes BMPs for timber harvesting, road building and maintenance, and protection of Riparian Conservation Areas.

Working cooperatively with the California State Water Quality Control Board, the Forest Service developed pollution control measures, referred to as Best Management Practices (BMPs) that are applicable to National Forest System lands. The BMPs were evaluated by State Water Quality Control personnel as they were applied on site during management activities. After assessment of the monitoring data and completion of public workshops and hearings, the Forest Service's BMPs were certified by the State and approved by the Environmental Protection Agency (EPA) as the most effective means to control non-point source pollution.

The land treatment measures incorporated into Forest Service BMPs evolved through research and development measures, and have been monitored and modified over several decades with the expressed purpose of improving the measures and making them more effective. On site evaluations of the control measures by State regulatory agencies found the practices were effective in protecting beneficial uses and were certifiable for Forest Service application as their means to protect water quality. The Clean Water Act provided the initial test of effectiveness of the Forest Service non-point pollution control measures by requiring evaluation of the practices by regulatory agencies (State Board and EPA) and the certification and approval of the practices as the "BEST" measures for control.

BMPs are designed to accommodate site-specific conditions. They are tailor-made to account for the complexity and physical and biological variability of the natural environment. In the 1981 Management Agency Agreement between the State Water Resources Control Board and the Forest Service the State agreed that: "The practices and procedures set forth in the Forest Service document constitute sound water quality management and, as such, are the best management practices to be implemented for water quality protection and improvement on NFS lands." Further the Water Quality Control Plan for the Central Valley Regional Water Quality Control Board states "Implementation of the BMPs, in conjunction with monitoring and performance review requirements approved by the State and Regional Boards, is the primary method of meeting the Basin Plan's water quality objectives for the activities to which the BMPs apply."

National Forest Management Act 1976

The National Forest Management Act of 1976 (NFMA) recognized the fundamental need to protect, and where appropriate improve, the quality of soil, water, and air resources. With respect to water and soils, NFMA requires that the Forest Service manage lands so as not to impair their water quality and long-term soil productivity. Further, activities must be monitored to ensure that productivity is protected. This law led to subsequent regulation and policy to execute the law at various levels of management.

The Forest Service Manual (FSM) provides agency guidance for protection of riparian areas. Directives for riparian area management are provided in FSM 2526, which provides that riparian areas shall be managed under the principle of multiple-use and sustained-yield, with emphasis on

protection and improvement of soil, water, and vegetation. Directives for water-quality management are provided in FSM 2532, which provides that BMPs will be applied to all management activities.

Management Direction, Standards and Guidelines

The Tahoe National Forest Land and Resource Management Plan (LRMP 1990), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA 2004), provides direction for maintaining water quality and quantity; protecting streams, lakes, wetlands, and riparian conservation areas; and to prevent excessive, cumulative watershed impacts.

Riparian Area Management (Sierra Nevada Forest Plan Amendment (SNFPA, 2004)).
The SNFPA requires that a site-specific project-level analysis be conducted to determine whether activities proposed within Riparian Conservation Areas (RCAs) meet the Riparian Conservation Objectives (RCOs). This analysis examines how well the Proposed Action for the PCT Realignment project meets the Riparian Conservation Objectives and/or how it would bring the PCT Realignment project area closer to meeting these objectives.

(g) Diversity – Many of the management requirements and/or BMPs are designed to protect soil and water resources and therefore plant and animal habitats. These standard management requirements also contribute to the diversity of the project area by maintaining or enhancing these habitats. In addition, standard management requirements include measures to protect riparian vegetation, snags, down woody debris, unique and sensitive plants and fungi, threatened, sensitive and management indicator species and their habitats. None of the action alternatives would change the seral stage or reduce habitat quality to a degree that would lead to a trend toward listing for any Forest Service Sensitive species, nor would they alter existing forest-wide trends in habitat for Management Indicator Species. Implementing Forest Plan Standard and Guidelines and Management Requirements (Chapter II of this EA) for this project would protect Forest Service Region 5 Sensitive species and Watchlist Plants, and limit the spread of noxious weeds and invasive species. All of these protect diversity within the project area.

R5 Forest Service Sensitive Species:

Direct, indirect, and cumulative effects on fish, wildlife, and rare plants are discussed in detail in the following project documents, hereby incorporated by reference: (1) Biological Evaluation for Birds, Mammals, Amphibians, Reptiles, Fish, and Invertebrates, (2) Biological Evaluation for Plants and Fungi. These documents are located in the project file and available upon request from the Yuba River Ranger District office. These effects are summarized in this document in Chapter III.

The Biological Evaluations describe in detail these effects by species. The Biological Evaluation contains the following determination statements from implementing any of the action alternatives (Alternatives A, C, D, or E):

- No effect to the following sensitive wildlife: California spotted owl, great gray owl, northern goshawk, willow flycatcher, greater sandhill crane, Pacific fisher, pallid bat, Townsend's big-eared bat, western red bat, northwestern pond turtle, foothill yellow-legged frog, mountain

yellow-legged frog, Great Basin ramshorn snail, Lahontan Lake tui chub, hardhead, and California floater.

- May affect, but is not likely to lead to a trend toward federal listing or loss of viability for the following sensitive plants: *Lewisia kelloggii* ssp. *Hutchisonii, Lewisia* ssp. *Kelloggii, Botrychium ascendens, Botrychium crenulatum, Botrychium lunaria, Botrychium minganense, and/or Botrychium montanum*.

- May affect, but is not likely to lead to a trend toward federal listing or loss of viability for the following sensitive wildlife: bald eagle, American marten, Sierra Nevada red fox, and the California wolverine.

Weed Risk Assessment:

A weed risk assessment has determined that there is a low risk of weed introduction as a result of implementing Alternatives A or C-E. If equipment is coming to the project area from a weed infested area; it must be washed to reduce the risk of weed introduction. Additional requirements include the use of weed free plant materials for erosion control work – if needed, which also reduces the risk of weed introduction into the project area. The risk of weed spread from existing weed occurrences within the project area is low for Alternatives A and C-E. Implementation of Alternatives A or C-E would reduce the amount of soil cover and canopy increasing the risk that weeds could become established in disturbed areas if a seed source is near.

Management Indicator Species:

A Management Indicator Species (MIS) Assessment has been completed for this project. This report is incorporated by reference and available from the Yuba River District office upon request. The following MIS were selected for analysis for this project from the list of MIS identified in the Tahoe National Forest Land and Management Plan: fox sparrow and mountain quail. The MIS analysis concluded that the effects of all action alternatives would not alter existing forest-wide trends of these MIS.

Watchlist Plants:

The project area was surveyed and a watchlist plant and plant community report has been completed. No watchlist plants were found during the project surveys.

Agencies and Others Consulted

The Scoping letter was mailed on 8/15/11 to the following:

Name	Organization/Adj. Land Owner	Email Address
Beth Boyst	Forest Service, PCT Program Manager	bboyst@fs.fed.us
Deb Bumpus	Forest Service, District Ranger Beckwourth RD	dbumpus@fs.fed.us
Justin Kooyman	Pacific Crest Trail Association	jkooyman@pcta.org
Linda Frost	Skiers & Hikers for Outdoor Enjoyment (SHOE)	frost.linda@gmail.com
Chris Feucht	Sierra Buttes Trail Stewardship	cfeucht@pacbell.net
Greg Long	Downieville Outfitters	info@downievilleoutfitters.com
Dave Wood	Interested Individual	DWOODCRE@aol.com
Adam Batchelder	Nevada County Woods Riders	adambatchelder@gmail.com
Tim Beals	Sierra County Manager	tbeals@sierracounty.ws
Peter Huebner	Sierra County BOS	supervisor2@sierracounty.ws
Stephen Davis	Interested Individual	steven@heat-tech.com
Red Wood	California Land Management	rwood@clm-services.com
Laurie Oberholtzer	Sierra County Land Trust (adjacent landowner)	laurie@sierracountylandtrust.org
Joe Smailes	Adjacent Landowner	joesmailes@yahoo.com
Jamie Messerli	Gold Lake Stables	reidhrse@psln.com

Name	Organization	Mail Address
Robert Eshleman	Adjacent Landowner	PO Box 123 Downieville, CA 95936
Josh Finn	Adjacent Landowner	PO Box 3310 Truckee, CA 96160
Central 4Wheel Drive	Adjacent Landowner	3248 Auburn Blvd Sacramento, CA 95821
Dennis Giuffre	Adjacent Landowner	610 Scott Street Monterey, CA 93940
William Macquattie	Packer Lake Lodge	PO Box 237 Sierra City, CA 96125-0237

Scoping responses/requests were received from:

Beth Boyst
Deb Bumpus
Justin Kooyman
Linda Frost
Chris Horgan
Lisa Sedlacek
Dave Wood
Adam Batchelder
Corky Lazzarino
Steven Davis
William Brusin
Reuel Brundage
Chris Dailey
Dennie Conrad
Tim Lewis
Jan Hunt Boucher
Joseph Cochran
Sean Cowan
Mark D. Brown
Gabriel Eggen
Vicki Eggen
Sean McCreary
Brad Juanavera
Mark Bridges
Randy Wendt
Herb Gibson
John Williams
Chase Drews
Byron E. Baker
Lisa & Chuck Elliot
Joseph & Frances Burgard
Brian Walt
Eduard Plasse
Gerald Gates
Charles Williams

Additional References

Documents Incorporated By Reference, and/or Available Upon Request, or Attached as Appendices

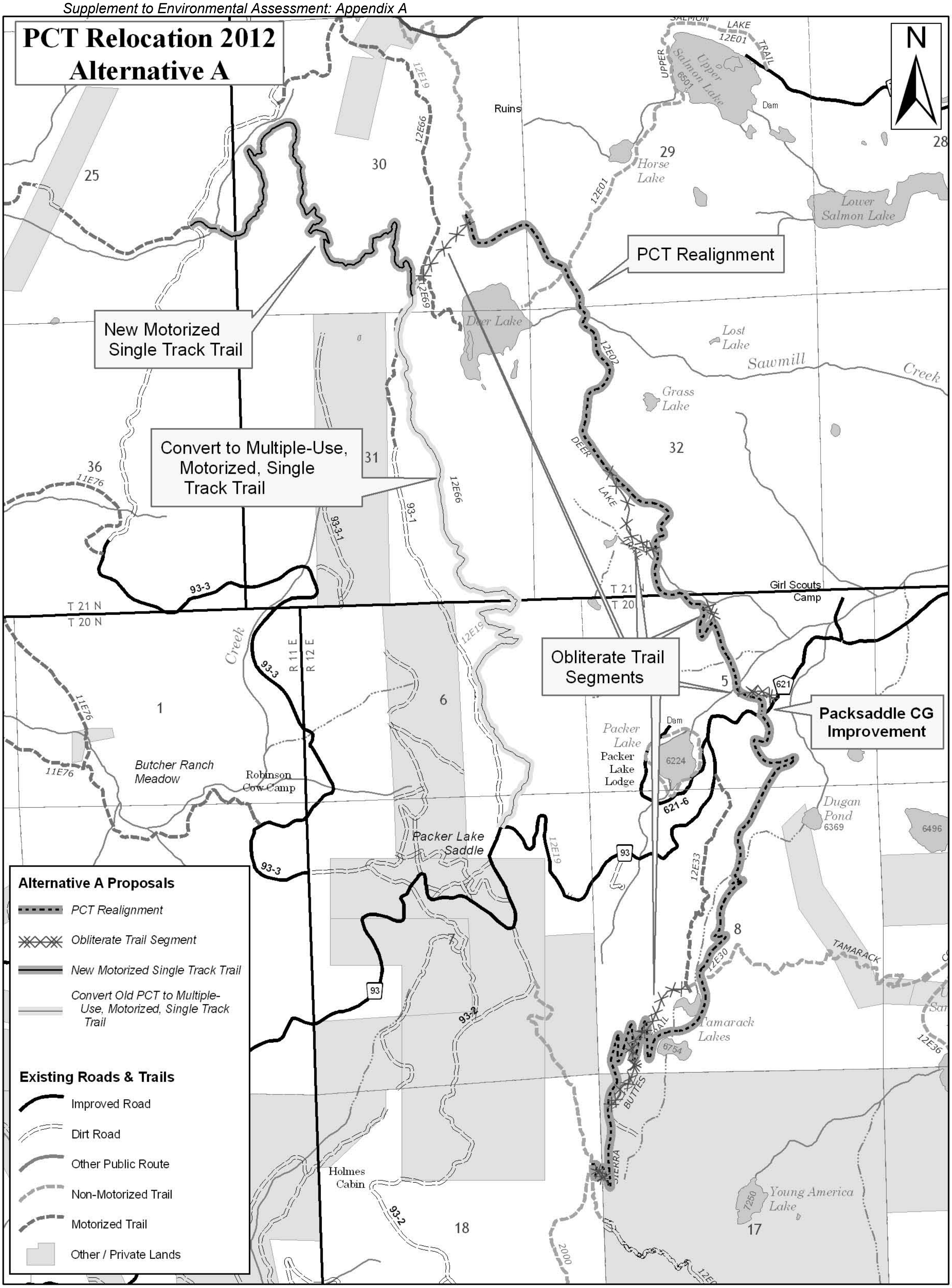
Project Maps (*Appendix A*)
Responses to Public Scoping Comments (*Appendix B*)
Best Management Practices/Watershed Data (*Appendix C)*
Riparian Conservation Objectives Analysis *(in Appendix C)*
PCT Optimal Location Review *(Appendix D)*
References Cited (*Appendix F*)
Cultural Resources Report *(Administratively confidential)*
Management Indicator Species (MIS) Assessment *(in Project File)*
Plant and Animal Biological Evaluations *(in Project File)*
Other References/Citations *(in Project File)*
Tahoe National Forest Sensitive Plant Standards and Guidelines *(Incorporated by Reference)*
Recreation Report *(in Project File)*
Watchlist Plant and Plant Community Report *(in Project File)*
Weed Risk Assessment *(in Project File)*

Pacific Crest Trail

Realignment EA

Appendix A

Maps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Alternative A
New Motorized Single Track Trail
PCT Realignment
Convert to Multiple-Use, Motorized, Single Track Trail
Obliterate Trail Segments
Packsaddle CG Improvement
Alternative A Proposals
PCT Realignment
Obliterate Trail Segment
New Motorized Single Track Trail
Convert Old PCT to Multiple-Use, Motorized, Single Track Trail
Existing Roads & Trails
Improved Road
Dirt Road
Other Public Route
Non-Motorized Trail
Motorized Trail
Other / Private Lands
Upper Salmon Lake
Lower Salmon Lake
Horse Lake
Deer Lake
Lost Lake
Sawmill Creek
Grass Lake
Ruins
Dam
Girl Scouts Camp
Packer Lake
Packer Lake Lodge
Dugan Pond
Butcher Ranch Meadow
Robinson Cow Camp
Packer Lake Saddle
Tamarack Lakes
Young America Lake
Holmes Cabin
T 21 N
T 20 N
R 11 E
R 12 E
93-3
93-1
93-3-1
93-2
621-6
12E19
12E66
12E69
12E01
12E02
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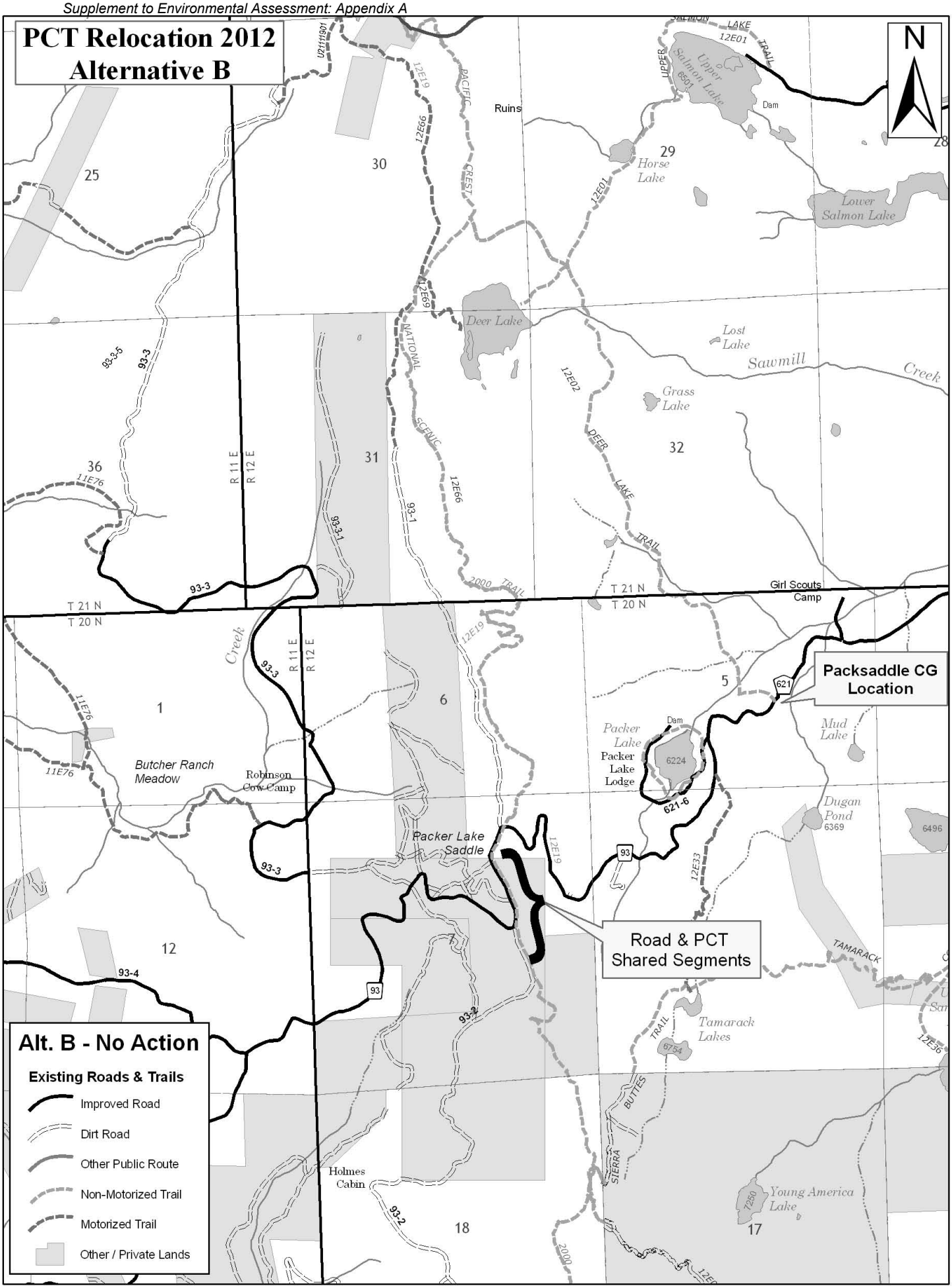
6501
N


PCT Relocation 2012
Alternative B
N
Packsaddle CG
Location
Road & PCT
Shared Segments
Alt. B - No Action
Existing Roads & Trails
Improved Road
Dirt Road
Other Public Route
Non-Motorized Trail
Motorized Trail
Other / Private Lands
Upper Salmon Lake
Lower Salmon Lake
Horse Lake
Deer Lake
Lost Lake
Sawmill Creek
Grass Lake
Packer Lake
Packer Lake Lodge
Mud Lake
Dugan Pond
Tamarack Lakes
Young America Lake
Butcher Ranch Meadow
Robinson Cow Camp
Packer Lake Saddle
Holmes Cabin
Girl Scouts Camp
Ruins
Dam
T 21 N
T 20 N
R 11 E
R 12 E
PACIFIC CREST NATIONAL SCENIC TRAIL
DEER LAKE TRAIL
TAMARACK BUTTES TRAIL
SIERRA 2000 TRAIL
93
93-1
93-2
93-3
93-4
621
621-6
12E01
12E02
12E19
12E33
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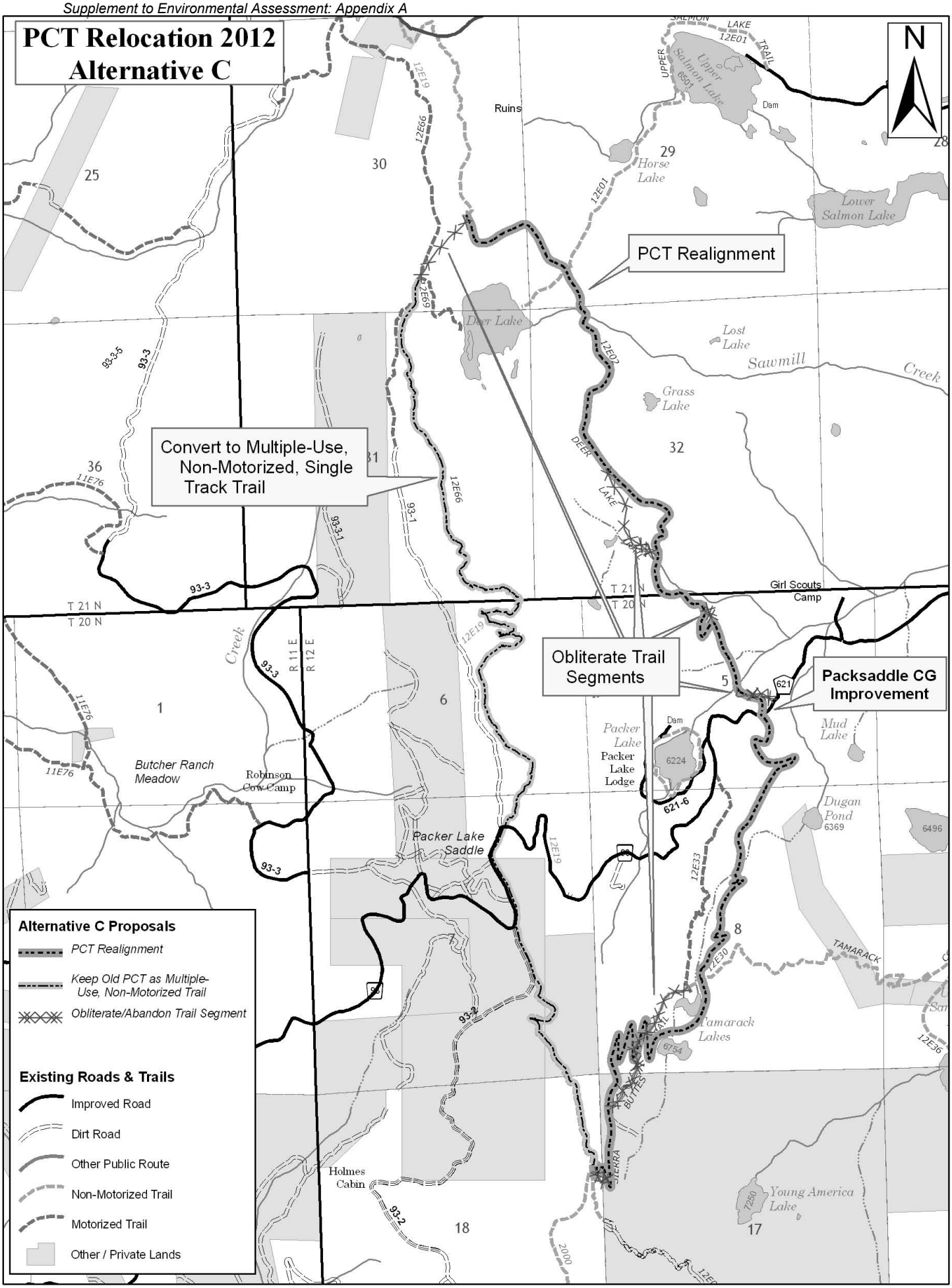
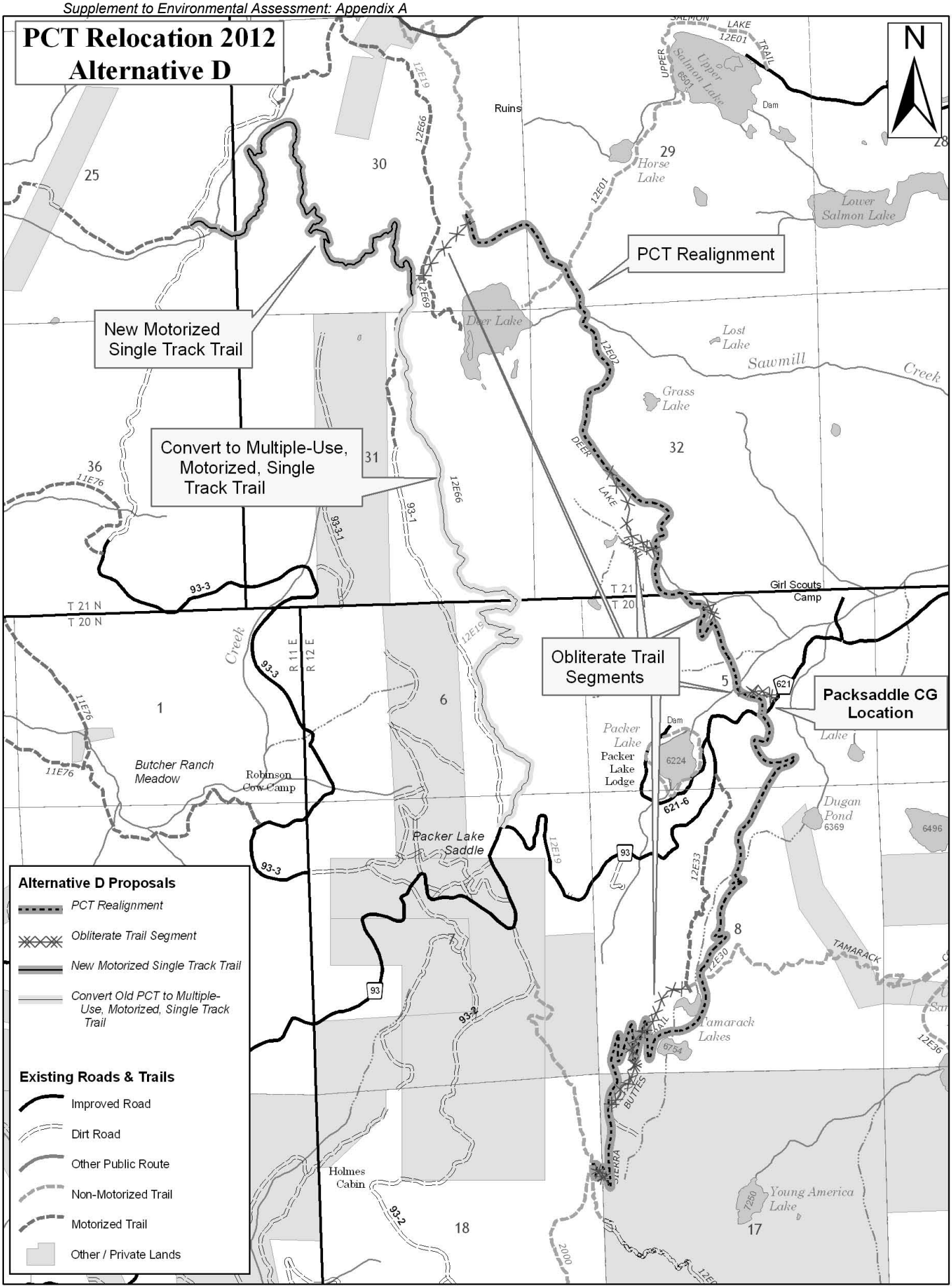
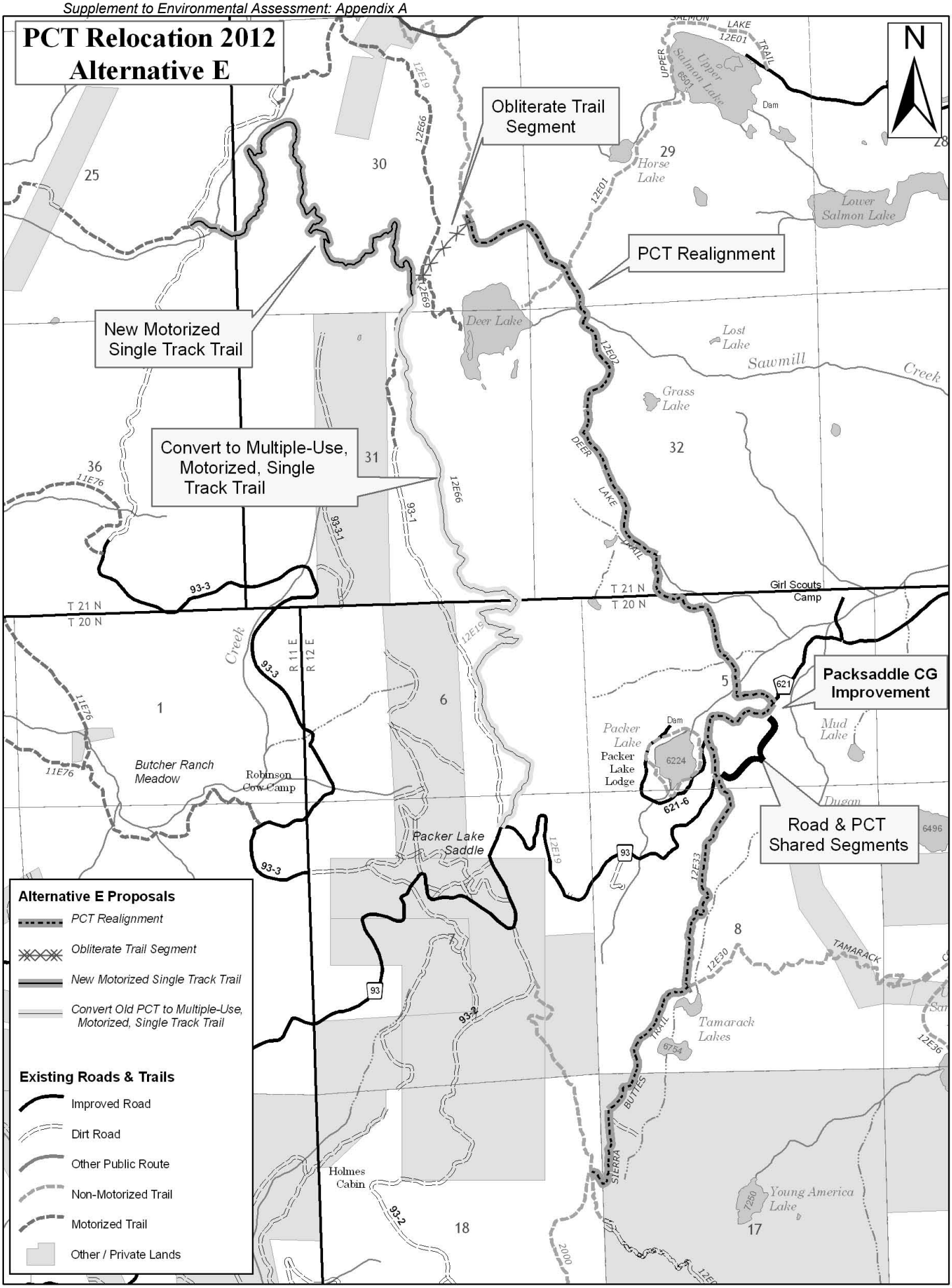

PCT Relocation 2012
Alternative C
N
PCT Realignment
Convert to Multiple-Use, Non-Motorized, Single Track Trail
Obliterate Trail Segments
Packsaddle CG Improvement
Ruins
Upper Salmon Lake
Dam
Horse Lake
Lower Salmon Lake
Deer Lake
Lost Lake
Sawmill Creek
Grass Lake
Girl Scouts Camp
Packer Lake
Packer Lake Lodge
Mud Lake
Dugan Pond
Butcher Ranch Meadow
Robinson Cow Camp
Packer Lake Saddle
Tamarack Lakes
Holmes Cabin
Young America Lake
T 21 N
T 20 N
R 11 E
R 12 E
Alternative C Proposals
PCT Realignment
Keep Old PCT as Multiple-Use, Non-Motorized Trail
Obliterate/Abandon Trail Segment
Existing Roads & Trails
Improved Road
Dirt Road
Other Public Route
Non-Motorized Trail
Motorized Trail
Other / Private Lands


PCT Relocation 2012
Alternative D
N
PCT Realignment
New Motorized Single Track Trail
Convert to Multiple-Use, Motorized, Single Track Trail
Obliterate Trail Segments
Packsaddle CG Location
Alternative D Proposals
PCT Realignment
Obliterate Trail Segment
New Motorized Single Track Trail
Convert Old PCT to Multiple-Use, Motorized, Single Track Trail
Existing Roads & Trails
Improved Road
Dirt Road
Other Public Route
Non-Motorized Trail
Motorized Trail
Other / Private Lands
Upper Salmon Lake
Lower Salmon Lake
Horse Lake
Deer Lake
Lost Lake
Sawmill Creek
Grass Lake
Packer Lake
Packer Lake Lodge
Dugan Pond
Tamarack Lakes
Young America Lake
Butcher Ranch Meadow
Robinson Cow Camp
Packer Lake Saddle
Holmes Cabin
Girl Scouts Camp
Ruins
T 21 N
T 20 N
R 11 E
R 12 E


PCT Relocation 2012
Alternative E
Obliterate Trail Segment
PCT Realignment
New Motorized Single Track Trail
Convert to Multiple-Use, Motorized, Single Track Trail
Packsaddle CG Improvement
Road & PCT Shared Segments
N
Alternative E Proposals
PCT Realignment
Obliterate Trail Segment
New Motorized Single Track Trail
Convert Old PCT to Multiple-Use, Motorized, Single Track Trail
Existing Roads & Trails
Improved Road
Dirt Road
Other Public Route
Non-Motorized Trail
Motorized Trail
Other / Private Lands
Upper Salmon Lake
Lower Salmon Lake
Horse Lake
Deer Lake
Lost Lake
Sawmill Creek
Grass Lake
Packer Lake
Packer Lake Lodge
Mud Lake
Dugan
Butcher Ranch Meadow
Robinson Cow Camp
Packer Lake Saddle
Tamarack Lakes
Young America Lake
Holmes Cabin
Girl Scouts Camp
T 21 N
T 20 N
R 11 E
R 12 E

Pacific Crest Trail

Realignment EA

Appendix B

Responses to Scoping Comments

PCT Realignment Project
Scoping Comments (and Issues)

An issue is a point of debate, dispute, or disagreement regarding anticipated effects of the proposed action. Issues have a cause-effect relationship to the actions under consideration. An issue statement describes a specific action and the environmental effect(s) expected to result from that action. Issues serve to highlight effects or unintended consequences that may occur from the proposed action and alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the decision maker and public to understand. Issues are identified during scoping early in the process to help set the scope of the actions, alternatives, and effects to consider.

Typically, public scoping comments include many non-issue comments and questions. Any non-issues are identified as such, here, and are not mentioned in the EA. Important issues, if identified as such here, are addressed in the EA. Other issues have an explanation of why they are not specifically addressed in the EA.

Thirteen letters of comment were received. One letter was received from Corky Lazzarino of the Sierra Access Coalition, one from Adam Batchelder; one from Steve Davis; one from David Wood; one from Joseph Cocran; one from the Tim Lewis; one from Chris Horgan of Stewards of the Sequoia; one from Justin Kooyman of the Pacific Crest Trail Association; one from Lisa & Chuck Elliot of Pacific Crest Trail Advocates; one from Joseph & Frances Burgard; one from Brian Walt; one from Eduard Plasse; and one from Gerald Gates. For ease of categorizing responses to comments or issues, these will be referred to as letters 1– (Sierra Access Coalition), 2- (Batchelder), 3- (Davis), 4- (Wood), 5- (Cochran), 6- (Lewis), 7- (Stewards of the Sequoia), and 8- (Pacific Crest Trail Association), 9- (Elliot) , 10- (Burgard) , 11- (Walt) , 12- (Plasse), and 13- (Gates). Issues within the letters are sequentially numbered (ie. 1-1, 1-2, 2-1, etc.).

Additionally, twenty one letters of interest were received, asking to be kept informed, or showing support for the project, but without substantive comments.

1-1: "We support the proposed project objectives. ……. However, we want to make sure this project does not impact snowmobile use in this area. ……. To insure snowmobile users are not impacted, SAC asks that snowmobile use be added to the project analysis so effects of Subpart A and Subpart B of the Travel Management Plan will not be in conflict with this project."

Response: This project has no bearing on snowmobile use. Snowmobile use is outside the scope of this project. Snowmobile use on the National Forests will be considered under Subpart C of the Travel Management Rule (November 9, 2005), to be analyzed at a future date on the Tahoe National Forest. Decisions made that affect motorized travel on the Tahoe National Forest after completion of Subpart B (signed on 9/21/2010) will be considered following the procedures under the National Environmental Policy Act.

1-2: "We would also like to see analysis of the old section of the PCT to document that it will not become an historic site that will need protection in the future."

Response: It would not be the aim of this project, or the policy of the Forest Service, to actively manage a feature with the intent to prevent or ensure its future consideration for inclusion in the National Register of Historic Places. Therefore, this consideration is outside of the scope of this project.

1-3: "Additional [motorized] routes are needed to access the A-Tree area. Without these routes, the transportation system for this area will be deficient. If these routes cannot be added to this project, as a minimum, analysis for "future projects" should also include a timetable for completing the transportation system to add routes to the A-Tree area."

Response: The purpose of this Environmental Assessment is to examine the environmental and social effects of: 1) a proposal to implement the recommendations of the *Pacific Crest National Scenic Trail Optimal Highway 49 to the A-Tree Location Review* (PCTOLR, signed June 27, 2011); 2) a proposal on how to manage the proposed abandoned sections of the PCT, and, 3) new proposed trail construction that takes into consideration the other main user groups and existing trail opportunities/experiences in the area. Examining a new trail to connect Pack Saddle to the A-Tree for mechanized users is outside the scope of this project.

1-4: "SAC would like to see an alternative analyzed for this project that will mitigate the loss of ML-3 roads. ……. Mitigation could include mixed-use analysis or lowering the maintenance level of roads to accommodate green sticker vehicles."

Response: Because this project is about re-routing a non-motorized trail, it is outside the scope of the project to "mitigate the loss of ML-3 roads" to Off-Highway Vehicles as a result of a different analysis made during the Tahoe National Forest Motorized Travel Management Project.

2-1: "If the Pacific Crest Trail is realigned, the conversion of the old PCT trail to multiple-use/motorized single track is extremely critical to motorcycle single track connectivity in the Packer Saddle to Gold Valley Area."

Response: It is understood that multiple-use motorized single-track trail connectivity is particularly important to both the motorcycle and mountain bike user groups that frequent this area. This is why the initial project proposal (Alternative A) considers the conversion of the proposed abandoned section of PCT to multiple-use motorized, and the construction of a new single-track trail that would create a connection between Pack Saddle, which functions as a trailhead for motorcyclists and mountain bicyclists, and the Gold Valley trail network.

2-2: "The project should take multiple-use trail users all the way to the A-tree, and ideally to Chimney Rock via single track (not shown on the map). The proposed plan doesn't do anything to resolve the poaching (trespass) of Mtn. Bikes on Section 6 of the PCT."

Response: The consideration of a new trail to connect Pack Saddle to the A-Tree and Chimney Rock Trail for mechanized users is outside the scope of this project.

The project does not include proposals for Segment 6 of the PCTOLR (Summit Lake to A-Tree) to resolve mountain bike trespass on the PCT because it was determined in the PCTOLR that Segment 6 was already in the optimal location. Although there is some trespass by mountain bikes on this segment of the PCT, it is less common than on the PCT between Pack Saddle and Deer Lake (Segment 4 and a portion of 5 of the PCTOLR), which has been addressed.

2-3: "Reopening Tamarack Lakes Trail to true multiple use (incl. Motorcycles) would let people camping at all the camp grounds all the way down to Gold Lakes Hwy have access to the Gold Valley/Downieville Trail System. This would help restore the access in the area and help repair the trail system, helping to counteract the Forest Service's gross mismanagement of our public lands."

Response: Converting existing non-motorized trails to motorized *"to counteract the Forest Service's"(emphasis added)* Travel Management Planning Process and decisions, is outside the scope of this project. The campgrounds along Packer Lake Road would not be accessible to Off-Highway Vehicles regardless of whether Tamarack Lake Trail was converted to a motorized trail. Packer Lake Road is a Sierra County paved public highway, and is only open to highway legal vehicles.

2-4: "An alternative not presented in the PCTOLR is to keep the PCT where it is currently located, and make the proposed PCT (displayed on the map) multiple use. All those who need to get to Packsaddle can, but hikers/equestrians wouldn't experience the dramatic elevation changes in the proposed PCT. Such an alternative would serve more people more of the time."

Response: This proposal is considered as Alternative F in the Environmental Assessment. However, it was eliminated from further study because it did not meet the purpose and need to address the issues with the current PCT alignment identified in the PCTOLR. Regardless of the alternative selected, PCT travelers would still have the option, if so desired, to continue hiking the ridge and not drop in elevation to Pack Saddle Campground and then climb back up to the ridge. However, under Alternatives A, C, D, E, they would be sharing the abandoned section of the PCT with motorized or mechanized traffic.

3-1: "Pack Saddle Campground has some nice campsites. ….. Routing the PCT through it will sting. However, it would be an ideal trailhead location for the PCT. …… Increasing parking and enhancing equestrian facilities will be necessary if the proposed relocation is implemented."

Response: We concur that Pack Saddle Campground has nice campsites, would make a good trailhead, and that the Forest Service would need to increase the parking capacity and enhance the equestrian facilities if the PCT were to traverse through or adjacent to the campground. Some mountain bicyclists would be affected by no longer being able to use the Deer Lake Trail, which leads directly to the campground, should it become the PCT. This is disclosed in the effects analysis for the proposed action (Alternative A).

4-1: "(PCTOLR)….. While I support this project, as phase 1, I suggest that this project falls way short of the stated objective of a multiple use trail from Packer Saddle to the A-Tree.

I propose that a phase 2 and even a phase 3 will be needed to provide the access to the A-tree. Proposed options in the second phase of this location review should include the consideration of the following options…."

Response: There is no Forest Service stated objective of providing a multiple-use trail from Pack Saddle to A-Tree in the PCTOLR, or in this proposal. The stated purpose of the proposal is to analyze options for implementing the recommendations of the PCTOLR. The Forest Service then must also decide what to do with, and how to manage, any abandoned segments of the old PCT alignment, one option of which is also part of the project proposal. It was determined in the PCTOLR that the segments of PCT north of the proposed realignment to the A-Tree were already optimally located. Therefore, reviews of the PCT's alignment to the A-Tree are not planned in the foreseeable future.

4-2: "Option 1. ….multiple use designation, mitigation and/or reroutes of the existing Spencer Lakes Trail."

Response: Management of the Spencer Lakes Trail, or creating motorized alternatives to the Spenser Lakes Trail, is outside the scope of this project. The stated purpose of the proposal is to analyze options for implementing the recommendations of the PCTOLR. Along with the stated purpose of the Forest Service must also decide what to do with, and how to manage, any abandoned segments of the old PCT alignment and consider if there is a need for any logical trail connections.

4-3: "Option 2. Consider another trail realignment. With the PCT being relocated to the Spencer Lake trail, including mitigation and/or reroutes to make the trail sustainable and safe for Equestrians and backpackers. …. The PCT segment from A-Tree to the first road crossing should be reclassified as a multiple use trail."

Response: This option is outside the stated purpose and need. The stated purpose of the proposal is to analyze options for implementing the recommendations of the PCTOLR. Along

with the stated purpose of the project, the Forest Service must also decide what to do with, and how to manage, any abandoned segments of the old PCT alignment and consider if there is a need for any logical trail connections. One connector trail option is a part of the project proposal. It was determined in the PCTOLR that the segments of PCT north of the proposed realignment to the A-Tree were already optimally located. Therefore, reviews of the PCT's alignment to the A-Tree are not planned in the foreseeable future.

4-4: "I encourage this project to provide the multiple use, single track trail connectivity to the A-Tree Lavezolla trail, which this proposal fails to illustrate."

Response: This recommendation is outside the scope of the project. The Forest Service is aware that both mountain bicyclists and motorcyclists desire a mechanized single-track trail between Pack Saddle and the A-Tree. However, the stated purpose of the proposal is to analyze options for implementing the recommendations of the PCTOLR. A new and separate mechanized trail proposal between Pack Saddle and the A-Tree would need to be considered in a separate analysis.

5-1: "There were way too many sustainable MC trails removed as part of the [Travel Management] inventory process. Moving the PCT and allowing motorcycles to use the old trail would go a long way to show a non biased management plan."

Response: The proposed action (Alternative A) would relocate a segment of the PCT and allow motorized use on the abandoned segment of PCT between Pack Saddle and the Deer Lake 4x4 Trail intersection. It would also create a new multiple-use (including motorized) single-track trail connection from the Deer Lake 4x4 Trail intersection to the beginning of the Gold Valley OHV Trail. The proposed project considers the needs and desires of both the motorcycle and mountain bike user groups by providing a single-track trail experience from Pack Saddle to a broad trail network via the Gold Valley Trail, and therefore this project would be a benefit to both these user groups that highly value this area.

Additionally, Mr. Cochran (Respondent 5) attached a copy of Mr. Wood's comments, and stated that these were what he wanted to express as his comments on this project as well. See comments under respondent 4 (David Wood) for responses.

6: Mr. Lewis' comments were an identical copy of Mr. Woods' comments (See comments under respondent 4 – David Wood) for responses.

7-1: "We are concerned that your Pacific Crest Trail Realignment Proposal scoping letter does not address the proposed action. While we support this trail segment, it fails to examine options

to the A-Tree "Pacific Crest Trail Highway 49 to the A-Tree Optimal location review (PCTOLR)" signed July 18, 2011." Please amend this project to include the stated goal of Optimal Location Review, including the segment to the A-Tree."

Response: The reader misread the PCTOLR. It was determined in the PCTOLR that the segments of PCT north of the proposed realignment to the A-Tree were already optimally located, so no proposal was brought forward for that section of the PCT. Therefore, this proposal is outside the scope of the project.

7-2: "We are concerned about the loss of the Tamarack Lakes trail to Mechanized use. We suggest that a Motorized Multiple User trail, all the way to the A-Tree is a reasonable compromise."

Response: This project does not propose any changes to the management of the Tamarack Lake 4X4 Trail. Therefore, all uses, including motorized use, would continue on that trail. Additionally, this project does not propose any changes the management of the *non-motorized* Tamarack Connection Trail. Therefore, mountain bikers would still be able to ride between the intersection of Packer Lake Road/Sardine Lake Road and Tamarack Lakes. Under the proposed project, the non-motorized Sierra Buttes Trail, between Tamarack Lakes and the existing PCT would become the new PCT alignment, and therefore, would no longer be available to mountain bike users. However, this loss of opportunity effects the relatively few mountain bicyclists that actually choose to use this trail (based on past use patterns).

Providing a motorized multiple-use trail between Pack Saddle to A-Tree is not an objective of this proposal and is outside of its scope.

7-3: "We are also concerned that this proposal does not address the loss of the only RV camping spot for OHV in the Yuba Ranger District. OHV campers have camped at the bottom of the final grade on Packer Saddle road for decades."

Response: Addressing RV camping for OHV users is not an objective of the proposed project. The recent Tahoe National Forest Travel Management decisions made no change to management of the paved road segment (Forest Service Road 93) between Packer Lake and Pack Saddle. As this segment of road is unsafe for mixed uses, it has been, and will continue to be, managed for highway legal vehicles only.

8-1: "We do not support the old PCT being converted to a motorized trail…..for a number of reasons. First, the noise pollution from motorized use on the old PCT would be heard from the new Trail alignment. …… Secondly, by converting the old PCT to a motorized trail, PCTA is concerned the new Trail location could experience increased motorized trespass as a result. Both of these impacts will defeat one of the goals of the OLR to separate the PCT experience from the impacts of motorized use."

Response: This is considered a significant issue, and an analysis of potential noise from motorcycles will be conducted and disclosed in the EA. Also, an alternative to the proposed action, which would allow only non-motorized use on the abandoned section of PCT, has been developed and will be analyzed in detail in the EA.

To prevent the trespass of both motorcyclists and mountain bicyclists onto the proposed new PCT alignment, the proposal includes obliteration of approximately ¼ mile of the abandoned PCT to create a separation between the converted mechanized trail and PCT. This would prevent inadvertent trespass and effectively discourage purposeful trespass on this segment of the PCT (Pack Saddle to Summit Lake). Motorcycle trespass onto the PCT in this area (Yuba River Ranger District) in general has not been a frequent problem. However, mountain bike trespass on the PCT between Pack Saddle and A-Tree has been a regular occurrence. The proposed action attempts to diminish these conflicts for the segment between Pack Saddle and Summit Lake with the proposed ¼ mile trail obliteration.

Alternative C analyzes the social and environmental effects of managing the abandoned segment of the PCT between Pack Saddle and a junction above Deer Lake as a non-motorized trail.

9-1: "There is a piece of your proposal that I do not agree with, that is converting the abandon section of the PCT to a **motorized** trail…… I feel that the Lakes Basin is at capacity. The trailheads are packed even on weekdays and recreationists travel from far to hike, fish, swim and enjoy this special but small recreation place. Your proposal will funnel more visitors toward this high Sierra spot."

Response: See the response to 8-1. Alternative C analyzes the social and environmental effects of managing the abandoned segment of the PCT between Pack Saddle and a junction above Deer Lake as a non-motorized trail.

By law and policy, the National Forests are managed for many uses and the Forest Service must attempt to balance those uses. With this mandate, the Yuba River Ranger District designed the proposed project to enhance the high Sierra experiences for three major user groups that greatly value the Pack Saddle and Sierra Buttes/Lakes Basin recreational areas (hikers, motorcyclists and mountain bicyclists).

The proposed project is predominately within the Lakes Basin Management Area (009), with some of the proposed abandoned segment of the PCT (west of the ridge) falling within the Lavezzola Management Area (005) (Tahoe National Forest Land and Resource Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment (2004)). The management emphasis for the Lakes Basin Management Area is to "*provide a variety of recreation opportunities consistent with maintaining the high visual quality of the area.*" The management emphasis for the recreation resource in the Lavezzola Management Area is to "*Emphasize recreation opportunities on system trails by giving consideration to trail use and the recreation experience of trail users in project planning.*" The Recreation Opportunity Spectrum

(ROS) for most of the project area is Roaded Natural, with a very small area nearest the Buttes being Semi primitive Motorized. The area is not managed for minimal visitor contacts as one would expect in an area managed for wilderness. Therefore, an increase in visitation to Tamarack and Deer lakes would be within the management objectives.

10-1: "Please **DO NOT** turn the old (existing) PCT trail from Pack Saddle Junction to Deer Lake into a motorized trail. Why would the Forest Service even think of doing that? There is the very obvious motorized road almost next to the PCT trail. Why would you make a 2nd motorized road? The old, existing PCT trail is a very nice 3 mile hike to Deer Lake without much change in elevation. It is possible now for youngsters and seniors to enjoy this hike. If you motorize this trail there will be no way for these ages to have a "wilderness experience" along the ridge from the Pack Saddle Junction to Deer Lake."

Response: A motorized single-track trail provides a very different and highly desired riding experience for motorcyclists and mountain bicyclists than the road that parallels the existing PCT segment. The Recreation Opportunity Spectrum (ROS) for most of the project area is Roaded Natural, with a very small area nearest the Buttes being Semi primitive Motorized. The area is not managed for a wilderness experience. Alternative C analyzes the social and environmental effects of managing the abandoned segment of the PCT between Pack Saddle and a junction above Deer Lake as a non-motorized trail. Additionally, see the response to 8-1.

10-2: "If the Forest Service feels that a new PCT trail needs to be made so that the PCT hikers can avoid all the activity at the Pack Saddle Junction, please consider the following: Going North the PCT hikers will just have climbed seven miles up from Sierra City to the trail to the Tamaracks. That's a 3000 ft climb up. Then the new trail would lead them down 1000 ft. to Pack Saddle Campground only to climb up the Deer Lake Trail –up 1000 ft again. Wouldn't it be good to give the hikers a choice here – either to take the easier but more populated route along the existing (NOT MOTORIZED) trail, or to go on the new PCT trail?"

Response: Alternative C has been developed to address this issue. Under Alternative C, the abandoned section of the PCT would be managed as a non-motorized trail. The EA will disclose the social and environmental effects of managing the abandoned segment of the PCT between Pack Saddle and a junction above Deer Lake as a non-motorized trail.

10-3: "With all the government calls for cutting expenses why is the Forest Service going to spend a lot of money improving Pack Saddle Campground? It has a large area allocated for parking and camping already."

Response: This is considered a significant issue. Alternative D analyzes the option of not making the proposed enhancements at Packsaddle Campground/Trailhead. The current proposal is to slightly enlarge and place barriers for parking. This is not a campground expansion proposal.

11-1: "Is there any way that more of the PCT can be converted so that all people can enjoy more of it?"

Response: The PCT is a significant national trail opportunity stretching from Mexico to Canada that is managed specifically for a non-mechanized trail experience, wherever possible. For the section of PCT analyzed in the PCTOLR from Highway 49 to the A-Tree, the signing officials (Tahoe and Plumas Nation Forest Supervisors, Yuba River and Beckworth District Rangers, Pacific Crest Trail Association Executive Director, and the FS R5 Regional Pacific Crest Trail Program Manager) determined that all other segments not proposed for realignment in this proposal are already optimally located. Since no need to realign the other segments between Deer Lake and the A-Tree was identified, no such proposal was brought forth. Rerouting more of the PCT in order to convert the abandoned segments of the PCT to motorized use is beyond the scope of this proposal. Converting actual PCT segments to motorized is against the management objectives for the PCT and outside the scope of this proposal.

12-1: "Currently there isn't a place to OHV/RV camp within the entire Yuba Ranger District. I propose along with the PCTOLR we provide OHV/RV access at the bottom of the final grade on Packer Saddle Road where RV campers can stay the night and stage to access the newly created trail, as well as the Gold Valley trail system.

Response: Providing RV camping opportunities for OHV recreationists is outside the scope of this project proposal. However, Gold Lake Campground on the adjacent Plums National Forest provides RV camping opportunities and this area is already connected to the Gold Valley Trail network and the Pack Saddle area via 4x4 trails. Also see the response to 7-3.

13-1: "One element of the plan that is particularly disturbing is the conversion of the current PCT alignment into a motorized trail. As you stated in your letter dated 8/25/2011, the trail is proximate "*to a four-wheel drive trail, which it closely parallels on and off for about a mile*". If a motorized trail exists so close to the proposed abandoned alignment, why add to the already prolific network of trails in the area? Why not allow the abandoned alignment to return to its natural state? Wouldn't that help minimize potential erosion and silt transport? Given the current volume of mountain bike and off-road activity in the area, it would be prudent to retain as much native soil and flora as possible."

Response: The Forest Service must strive to balance a variety of recreation user needs/desires in this area of diverse users. A motorized single-track trail provides a very different and highly desired riding experience for motorcyclists and mountain bicyclists than the road that parallels the existing PCT segment. The social and environmental impacts of managing the abandoned segment of PCT as motorized is analyzed under Alternatives A, D and E. Alternative C analyzes

the social and environmental effects of managing the abandoned segment of the PCT between Pack Saddle and a junction above Deer Lake as non-motorized. An alternative was considered that would allow a length of trail equal to the length of the proposed trail construction to return to its natural state; however, it was dropped from detailed study because it was not within the purpose and need, nor scope of the project, which is to implement the recommendations outlined in the PCTLOR while addressing recreation needs associated with the abandoned segment of the PCT.

13-2: "There exists a spur trail that leads from the Tamarack Lakes up to the Packer Saddle Ridge south of Tamarack Lakes. Having hiked this spur trail regularly, I wonder why that trail is inadequate for seasoned PCT hikers and why a new alignment is needed in this area."

Response: The existing segment of the trail in question (Sierra Buttes Trail) contains portions that exceed the design goals of the PCT (maximum 10% sustained grade). It is these portions of the trail that are proposed for realignment. The portions of the trail that are within the desired grade standard would still be used. The abandoned portions of trail would be obliterated after the reroutes are completed, in order to promote revegetation and return to a natural state.

13-3: "Similarly, the Forest Service is proposing creating an additional 4.3 miles of trails to circumvent the Tamarack OHV 4X4 trail. Having hiked many miles of the PCT on similar OHV trails, I question the need to construct an additional transportation corridor in the area. 4X4 traffic on this trail is minimal and has never lessened my enjoyment of the area."

Response: One of the goals of the PCTOLR envisioned was to improve the experiences for PCT users in this area. Although the PCT utilizes sections of 4x4 trails elsewhere, this is not the preferred experience for most hikers. Additionally, one of the opportunities presented by realigning the PCT is to bring the trail through, or near, Pack Saddle Campground making potable water and formal camping opportunities available to the PCT hiker. The proposed new section of trail would also take advantage of the Deer Lake Trail, which also connects to Packsaddle Campground, as a logical route to return back to the original PCT alignment while avoiding the safety, mountain bike trespass and other experiential issues with the current PCT location along the ridge immediately north of Pack Saddle.

The entirely new section of trail that would need to be constructed between Tamarack Lakes and Packsaddle Campground is approximately 1½ miles.

The No Action alternative (Alternative B) analyses the social and environmental effects of not implementing the proposed action or any of the alternative action proposals.

13-4: "The parking area at Pack Saddle Campground has always been adequate. There is ample room for horse trailers, spare parking, RVs, etc. Has a study been done that supports expansion of the existing parking in the campground? As a local user that frequents the area, I have never

seen a parking problem in that area. Again, it would be better to maintain as much natural area as possible given the huge strain that current usage puts on the forest."

Response: See response to 10-3.

The equestrian and 1st stage parking improvements would be done within the existing campground/trailhead boundaries with minimal clearing, leveling and the moving of rock barriers. If needed over time, the 2nd stage parking expansion would utilize an existing ¼ acre, brushy flat immediately across the road from Packsaddle Trailhead/Campground. This flat could be easily cleared to provide additional parking capacity in the future, if needed.

Alternative D analyzes the option of not making the proposed enhancements at Packsaddle Campground/Trailhead.

13-5: "We are not in favor of further scarring in an area that already has an abundance of trails. Personally, I would like to see heavy-use areas such as Packer Lake Basin controlled by a ***net-zero impact*** philosophy. If 4.3 miles of new trails are required, 4.3 miles of old trail should be removed and restored to a natural state. This type of policy would prevent the increased degradation of our national forests."

Response: The Tahoe National Forest is divided into logical Management Areas based on similar resources or management emphases. The management emphasis for the Lakes Basin Management Area (009), where the majority of the project area lies, is to "*provide a variety of recreation opportunities consistent with maintaining the high visual quality of the area."* About half of the proposed abandoned segment of the PCT (west of the ridge) falls within the Lavezzola Management Area (005). The management emphasis for the recreation resource in the Lavezzola Management Area is to "*Emphasize recreation opportunities on system trails by giving consideration to trail use and the recreation experience of trail users in project planning."* It is appropriate in areas where recreation is the management emphasis and there is existing heavy recreational use to provide a level of recreational facilities and trails that will support this use.

Alternative G considered the *net-zero* concept, but it was eliminated from further analysis because it was not within the purpose and need, and it was outside the scope of the project.

Pacific Crest Trail

Realignment EA

Appendix C

Watershed Data

Pacific Crest Trail

Realignment EA

RCO Analysis

May, 2012

RIPARIAN CONSERVATION OBJECTIVE ANALYSIS

PACIFIC CREST TRAIL (PCT) REALIGNMENT PROJECT
Yuba River Ranger District
Tahoe National Forest

Introduction

The Sierra Nevada Forest Plan Amendment (SNFPA), Final Supplemental Environmental Impact Statement, Record of Decision (USDA 2004) requires that a site-specific project-level analysis be conducted to determine whether activities proposed within Riparian Conservation Areas (RCAs) meet the Riparian Conservation Objectives (RCOs). This analysis examines how well the Proposed Action for the Pacific Crest Trail (PCT) Realignment project (PCT Realignment project) meets the Riparian Conservation Objectives and/or how it would bring the PCT Realignment project area closer to meeting these objectives. This document presents the results of the RCO analysis for the PCT Realignment project.

Riparian Conservation Areas

As defined in the Sierra Nevada Forest Plan Amendment Record of Decision (ROD), RCAs "are land allocations that are managed to maintain or restore the structure and function of aquatic, riparian, and meadow ecosystems. The intent of management direction for RCAs is to (1) preserve, enhance, and restore habitat for riparian- and aquatic-dependent species, (2) ensure that water quality is maintained or restored, (3) enhance habitat conservation for species associated with the transition zone between upslope and riparian areas, and (4) provide greater connectivity within the watershed." RCAs are delineated and managed consistent with the riparian conservation objectives defined in the ROD.

RCA widths vary with the type of water body. The types of water bodies are designated as follows: (1) perennial streams; (2) seasonally flowing streams (includes ephemerals with defined stream channel or evidence of scour); (3) streams in inner gorge; (4) special aquatic features (lakes, meadows, bogs, fens, wetlands, vernal pools, and springs); and (5) other hydrologic or topographic depressions without a defined channel. All of these types exist within the PCT Realignment project. The SNFPA ROD defines RCA widths as follows:

Stream Type	Width of the Riparian Conservation Area
Perennial Streams	300 feet measured from bank full edge
Seasonal Flowing Streams	150 feet measured from bank full edge
Streams In Inner Gorge	Top of inner gorge if beyond 300 feet
Special Aquatic Features: Meadows, Lakes, Springs, and Ponds	300 feet from edge of feature or riparian vegetation, whichever is greater

Analysis of Proposed Activities within RCAs

"As part of project-level analysis, conduct peer reviews for projects that proposes ground-disturbing activities in more than 25 percent of the RCA or more than 15 percent of a CAR" (Standard and Guideline #94, FSEIS, ROD, USDA 2004).

The PCT Realignment project does propose "ground disturbing activities" within RCAs. "Ground disturbing activities" is defined in the ROD, Appendix B as "activities that result in detrimental soil compaction or loss of organic matter beyond the thresholds identified in the soil quality standards." (See Appendix F of the Final EIS). New trail construction would take place within RCAs as part of the proposed trail system. All of these activities within RCAs would utilize hand labor and the finished trail would be compacted to a maximum four foot width. Project activities within RCAs would be governed by the ROD Standards and Guidelines, RCOs, Project Management Requirements, and Best Management Practices (BMPs). The PCT Realignment project does not exceed the 25 percent threshold for proposed ground-disturbing activities in the RCAs and peer review is not required.

Riparian Conservation Objectives

The ROD defines the standard and guidelines that address the types of management activities that are allowed in RCAs. RCOs provide a checklist for evaluating whether a proposed activity is consistent with the desired conditions described in the Aquatic Management Strategy. For projects that include proposed activities within RCAs all applicable RCOs and their associated standards and guidelines must be analyzed. Applicable objectives including standards and guidelines and a discussion of how they are met by the proposed project follow.

RIPARIAN CONSERVATION OBJECTIVE #1: *Ensure that identified beneficial uses for the water body are adequately protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards and guidelines will protect the beneficial uses. (RCO #1 is linked to the following AMS goals: #1: Water Quality; #2: Species Viability; #7: Watershed Condition)*

State designated beneficial uses within the fourth field watershed, Yuba River, includes municipal and domestic water supplies, hydroelectric power generation, contact and non-contact recreation, canoeing and rafting, cold freshwater fisheries habitat, and wildlife habitat (CRWQCB 1998). The project is located within one fifth field watershed, Upper North Yuba River.

The Pacific Crest Trail Realignment project will have little affect to beneficial uses of water. The California Regional Water Quality Control Board (CRWQCB, 1998) for the Central Valley Region sets water quality standards and objectives for these watersheds. The objectives applicable to this project, as well as existing conditions, are sediment, turbidity, and temperature. The State and Regional Boards entered into an agreement with the U.S. Forest Service which requires the agency to control non-point source discharges by implementing control actions certified by the State Board as Best Management Practices (BMPs). BMPs are designed to protect water quality including sediment, turbidity, and water temperature.

Standards and Guidelines Associated with RCO #1:

95. *For waters designated as "Water Quality Limited" (Clean Water Act Section 303(d)), participate in the development of Total Maximum Daily Loads (TMDLs) and TMDL Implementation Plans. Execute applicable elements of completed TMDL Implementation Plans.*

There are no streams within or adjacent to the project area designated as "Water Quality Limited" and thus this S&G is not applicable for this project.

96. *Ensure that management activities do not adversely affect water temperatures necessary for local*

aquatic and riparian-dependent species assemblages.

Shade and temperature are important habitat elements on the Sawmill and Packer Creeks along with unnamed perennial and intermittent streams. Vegetation providing shade and controlling water temperature would be retained, except within the trail right-of-way (approximately 4 feet in width) during implementation of the project. Every effort would be made to maintain all vegetation outside the trail right-of-way and especially within RCAs.

97. *Limit pesticide applications to cases where project level analysis indicates that pesticide applications are consistent with riparian objectives. Prohibit application of pesticides to livestock in RCAs.*

No pesticide use would occur within the PCT Realignment project area.

98. *Avoid pesticide applications within 500 feet of known occupied sites for the California red-legged frog, Cascade frog, Yosemite toad, foothill yellow-legged frog, mountain yellow-legged frog, and northern leopard frog unless environmental analysis documents that pesticides are needed to restore or enhance habitat for these amphibian species.*

No pesticide use would occur within the PCT Realignment project area.

99. *Prohibit storage of fuels and other toxic materials within RCAs except at designated administrative sites and sites covered by a Special Use Authorization. Prohibit refueling within RCAs unless there are no other alternatives. Ensure that spill plans are reviewed and up-to-date.*

Best Management Practices (BMPs) include BMP 2.11 Equipment Refueling and Servicing. This BMP limits servicing and refueling areas in RCAs and wet areas.

RIPARIAN CONSERVATION OBJECTIVE #2*: Maintain or restore: (1) the geomorphic and biological characteristics of special aquatic features, including lakes, meadows, bogs, fens, wetlands, vernal pools, springs; (2) streams, including in stream flows; and (3) hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species. (RCO #2 is linked to the following AMS goals: #2: Species Viability; #3: Plant and Animal Community Diversity; #4: Species Habitats; #5: Watershed Connectivity; #6: Floodplains and Water Tables; #8: Streamflow Patterns and Sediment Regimes; #9: Streambanks and Shorelines)*

The PCT Realignment project is designed to maintain key aquatic and riparian habitat elements including: recruitment of woody debris to aquatic habitats and RCAs; shade along the perennial and intermittent streams; natural levels of sediment delivery to aquatic habitats through retention of potential woody debris near aquatic habitats and within portions of the RCAs; bank stability; and hydrologic regime. Trees retained within the riparian buffer would provide bank stability and woody debris for sediment routing, flow deflectors and habitat structure.
Standards and Guidelines Associated with RCO #2:

100. *Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.*

The trail system within the PCT Realignment project area would be managed in accordance with management requirements and BMPs included in the environmental document. There are no identified segments of trails

requiring "full bench" construction and cutting into the adjacent hillslope would be kept to a minimum. Erosion control barriers would be incorporated into the design of the trail, especially on new construction segments and reconstructed trail segments. The identified stream crossings would be armored to protect water quality and maintain hydrologic connectivity. Bridge installation would be considered at specific stream crossings to keep sediment and other pollutants from entering identified streamcourses.

101. *Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water- drafting sites to avoid adverse effects to in stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.*

No new culverts would be constructed under this project. The identified stream crossings would be armored to protect water quality and maintain hydrologic connectivity. There are no plans to use or develop water-drafting facilities for this project.

102. *Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate requried long-term restoration actions and implement them according to their status among other restoration needs.*

The PCT Realignment project does not propose any trail construction activities that would affect any of the geomorphic characteristics of the perennial and seasonal streams within the project area. All management activities would incorporate LRMP Standards and Guidelines, Best Management Practices, and additional protection measures.

103. *Prevent disturbance to meadow-associated streambanks and natural lake and pond shorelines caused by resource activities from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines.*

To prevent disturbance to meadow-associated streambanks and natural ponds, the PCT Realignment project will establish riparian buffers which prohibits ground-based equipment from entering the near stream and shoreline areas.

All remaining Standard and Guidelines associated with RCO #2 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #3*: Ensure a renewable supply of large down logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the RCA. (RCO #3 is linked to the following AMS goals: #2: Species Viability; #3: Plant and Animal Community Diversity)*

No large, living trees are designated for removal within the PCT Realignment project. Dead or hazardous trees within the designated RCAs that pose a hazard to the safe construction of the trail and subsequent use of the trail by the public would be felled and left. If hazard trees are felled, they would provide additional suitable habitat within and adjacent to the RCA.

All remaining Standard and Guidelines associated with RCO #3 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #4*: Ensure that management activities, including fuels reduction actions, within RCAs and CARs enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species. (RCO #4 is linked to the following AMS goals: #2: Species Viability; #7: Watershed Condition)*

This project is designed with special protection measures for areas on the landscape that would be most susceptible to impacts from management activities. The areas that have the greatest sensitivity to management activities are aquatic adjacent areas including riparian habitats, areas with seasonal high-water tables, and areas with slopes generally over 30% slopes. All management activities would incorporate LRMP Standards and Guidelines, Soil Quality Standards, Best Management Practices, and additional watershed protection measures needed to reduce effects from erosion and sediment production.

Physical and biological characteristics of aquatic and riparian habitats within the PCT Realignment project area should be maintained when all watershed protection measures are implemented. All proposed actions are designed to minimize impacts to aquatic- and riparian-dependent resources while providing for the recreational experience.

Standards and Guidelines Associated with RCO #4:

113. *Allow hazard tree removal within RCAs. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within RCAs when the activity is consistent with RCOs. Utilize low ground pressure equipment, helicopters, over the snow logging, or other non-ground disturbing actions to operate off of existing roads when needed to achieve RCOs. Ensure that existing roads, landings, and skid trails meet Best Management Practices. Minimize the construction of new skid trails or roads for access into RCAs for fuel treatments, salvage harvest, commercial fuelwood cutting, or hazard tree removal.*

This Standard and Guideline is not applicable to this project.

114. *As appropriate, assess and document aquatic conditions following the Regional Stream Condition Inventory protocol prior to implementing ground disturbing activities within suitable habitat for the California red-legged frog, Cascade frog, Yosemite toad, foothill and mountain yellow-legged frogs, and northern leopard frog.*

There is no proposed ground disturbing activities within the above listed suitable Region 5 Forest Service Sensitive species habitat within the PCT Realignment project area.

116. *Identify roads, trails, OHV trails and staging areas, developed recreation sites, dispersed campground, special use permits, grazing permits, and day use sites during landscape analysis. Identify conditions that degrade water quality or habitat for aquatic and riparian- dependent species. At the project level, evaluate and consider actions to ensure consistency with standards and guidelines or desired conditions.*

This standard and guideline ties the landscape analysis and the project level analysis with regards to roads, trails, etc. The North Yuba Watershed Assessment (WA) was used to identify conditions that degrade water quality and habitat for aquatic and riparian- dependent species.

All remaining Standard and Guidelines associated with RCO #4 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #5*: Preserve, restore, or enhance special aquatic features, such as meadows, lakes, ponds, bogs, fens, and wetlands, to provide the ecological conditions and processes*

needed to recover or enhance the viability of species that rely on these areas. (RCO #5 is linked to the following AMS goals: #1: Water Quality; #2: Species Viability; #3 Plant and Animal Community Diversity; #4: Special Habitats; #7: Watershed Condition; #9: Stream Banks and Shorelines)

All special aquatic features identified within the project area including meadows, fens, ponds and springs would be protected during the trail activites by implementing LRMP Standards and Guidelines, Soil Quality Standards, Best Management Practices, and additional watershed protection measures needed to reduce effects from erosion and sediment production.

All remaining Standard and Guidelines associated with RCO #5 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #6*: Identify and implement restoration actions to maintain, restore or enhance water quality and maintain, restore, or enhance habitat for riparian and aquatic species. (RCO #6 is linked to all AMS goals)*

The restoration actions of the PCT Realignment project is designed to: 1) reduce the impact of the recreational use of the Pacific Crest Trail by rerouting the trail from steep (>10 percent grade) sections to sections with trail grades < 10 percent for user perferrence and to minimize erosion potential; 2) obliterate the abandoned sections of the rerouted PCT; and 3) obliterate the abandoned PCT between the newly converted multiple-use trail and the new PCT.

122. *Recommend restoration practices in: (1) areas with compaction in excess of soil quality standards, (2) areas with lowered water tables, or (3) areas that are either actively down cutting or that have historic gullies. Identify other management practices, for example, road building, recreational use, grazing, and timber harvests, that may be contributing to the observed degradation.*

The recommended restoration practices described above were included in the purpose and need for the proposed PCT Realignment project.

All remaining Standard and Guidelines associated with RCO #6 are not applicable to this project.

Conclusion:

The proposed Pacific Crest Trail Realignment project is consistent with the Aquatic Management Strategy for the Sierran Forests, as required by the Sierra Nevada Forest Plan Amendment ROD (USDA 2004). This project also incorporates LRMP Standards and Guidelines, Soil Quality Standards, Best Management Practices, and additional protection measures listed above. Standards and guidelines, along with mitigation measures, are designed to protect downstream beneficial water uses. The potential for direct, indirect, and cumulative effects from the proposed project would be minimized with implementation of identified protection measures.

Pacific Crest Trail Realignment EA

Best Management Practices

Pacific Crest Trail (PCT) Realignment Project
BEST MANAGEMENT PRACTICES (5/2/2012)

Forest Management and associated road and trail building has long been recognized as sources of non-point water quality pollution. Non-point pollution is not, by definition, controllable through conventional water treatment plant methods. Non-point pollution is controlled by containing the pollutant at its source, precluding delivery to surface water. Sections 208 and 319 of the Federal Clean Water Act, as amended, acknowledge land treatment measures as being an effective means of controlling non-point sources of water pollution and emphasizes their development.

Working cooperatively with the California State Water Quality Control Board, the Forest Service developed pollution control measures, referred to as Best Management Practices (BMPs), that are applicable to National Forest System lands. The BMPs were evaluated by State Water Quality Control personnel as they were applied on site during management activities. After assessment of the monitoring data and completion of public workshops and hearings, the Forest Service's BMPs were certified by the State and approved by EPA as the most effective means to control non-point source pollution.

The land treatment measures incorporated into Forest Service BMPs evolved through research and development measures, and have been monitored and modified over several decades with the expressed purpose of improving the measures and making them more effective. On-site evaluations of the control measures by State regulatory agencies found the practices were effective in protecting beneficial uses and were certifiable for Forest Service application as their means to protect water quality. The Clean Water Act provided the initial test of effectiveness of the Forest Service non-point pollution control measures by requiring evaluation of the practices by regulatory agencies (State Board and EPA) and the certification and approval of the practices as the "BEST" measures for control.

BMPs are designed to accommodate site specific conditions. They are tailor-made to account for the complexity and physical and biological variability of the natural environment. In the 1981 Management Agency Agreement between the State Water Resources Control Board and the Forest Service the State agreed that: "The practices and procedures set forth in the Forest Service document constitute sound water quality management and, as such, are the best management practices to be implemented for water quality protection and improvement on NFS lands." Further the Water Quality Control Plan for the Central Valley Regional Water Quality Control Board states "Implementation of the BMPs, in conjunction with monitoring and performance review requirements approved by the State and Regional Boards, is the primary method of meeting the Basin Plan's water quality objectives for the activities to which the BMPs apply."

Implementation and effectiveness of BMPs are evaluated following the R5 BMP Evaluation Program (BMPEP) guidelines. Results of this monitoring as well as the results from other projects on the Tahoe and throughout the Region are used to fine tune BMPs including the CWE analysis.

Water quality should not be adversely impacted if current management direction along with the BMPs specified below are implemented. When these practices have been adhered to in the past they have been effective in maintaining water quality. Similar BMPs have been effective in protecting beneficial uses affected by other projects located on the Tahoe National Forest. The practices specified herein are expected to be fully effective in maintaining the identified beneficial uses.

1.1 RESOURCE MANAGEMENT PLANNING PROCESS

The PCT Realignment Project Interdisciplinary (ID) Team included the District Hydrologist, District Biologist, and District Botantist, along with Recreation Specialists providing input on the proposed trail projects. They identified sensitive land and soils within and adjacent to the project area and specific mitigation measures for the project area. The Forest Hydrologist provided input on watershed protection needs. (During Project Planning)

1.4 USE OF PROJECT AREA MAPS FOR DESIGNING WATER QUALITY PROTECTION NEEDS

A project area map has been developed during the project preparation process. It identified sensitive areas to be protected such as streamcourses, lakes, meadows, fens, and riparian zones. (During Project Planning)

1.8 RIPARIAN CONSERVATION AREA DESIGNATION

Management in Riparian Conservation Areas (RCAs) needs to be consistent with Riparian Conservation Objectives (RCOs) and Aquatic Management Strategy (AMS) goals. The intent of management direction for RCAs is to (1) preserve, enhance, and restore habitat for riparian- and aquatic-dependent species; (2) ensure that water quality is maintained or restored; (3) enhance habitat conservation for species associated with the transition zone between upslope and riparian areas; and (4) provide greater connectivity within the watershed. Projects that propose activities in RCAs need to enhance or maintain the physical and biological characteristics of the RCA.

All associated Standards and Guidelines identified in the Tahoe National Forest Land and Resource Management Plan (Forest Plan) associated with this project will be adhered to.

Widths of RCAs vary with the type of water body. The types of water bodies are designated as follows: (1) perennial streams; (2) seasonally flowing streams (includes ephemerals with defined stream channel or evidence of scour); (3) streams in inner gorge; (4) special aquatic features (lakes, meadows, bogs, fens, wetlands, vernal pools, and springs); and (5) other hydrologic or topographic depressions without a defined channel. The Sierra Nevada Forest Plan Amendment ROD defines the widths of the RCAs as follows:

Stream Type	**Width of the Riparian Conservation Area**
Perennial Streams	300 feet each side, measured from bank full edge
Seasonal Flowing Streams	150 feet each side, measured from bank full edge
Streams In Inner Gorge	Top of inner gorge if beyond 300 feet*
Meadows, Lakes, Fens, and Springs	300 feet from edge of feature or riparian vegetation, whichever is greater

*Note: If inner gorge is present and extends beyond specified RCA width, the RCA width will extend to the top of the inner gorge. The inner gorge area is defined as slopes adjacent to the stream channel greater than 70 percent gradient.

Riparian Buffers

Riparian buffers will be established within all RCAs. The purpose of the riparian buffer is to

minimize impacts from management activities to the stream-adjacent zone and riparian habitat. The following are specified widths of the riparian buffer related to stream types:

Perennial Streams and Special Aquatic Features
-100 feet slope distance from the edge of the existing riparian vegetation.
Seasonal Streams (intermittent and ephemeral)
- Intermittent streams: 50 feet slope distance from the edge of the existing riparian vegetation or, if no riparian vegetation exists, from the apparent high water mark.
- Ephemeral streams: 25 feet from stream channel.

Other hydrologic or topographic depressions without a defined channel will be protected through standard operating procedures during trail layout. (During Project Planning and Implementation)

1.19 STREAMCOURSE AND AQUATIC PROTECTION

Streamcourse protection measures will be implemented during all aspects of the project to protect the natural flow of streams, to provide unobstructed passage of stormflows, and to reduce sediment and other pollutants from entering streams. Rocking and/or use of paver blocks on the trail tread will occur within identified riparian buffers and stream crossings. Bridge installation would be considered at specific stream crossings to keep sediment and other pollutants from entering perennial and intermittent streamcourses. A riparian specialist will be consulted during streamcourse protection work including stream crossing designation. (During Project Implementation)

2.2 GENERAL GUIDELINES FOR THE LOCATION AND DESIGN OF TRAILS

Locate and design trails with minimal resource damage including risks to water, aquatic, and riparian resources. All resource-coordinating instructions for the protection and prevention of damage to National Forest lands, resources, and ecological systems including wetlands and floodplains shall apply to the planning, development, and operation of trail facilities. All stream crossings will be designed to provide for unobstructed flows and fish passage, and to minimize diversion potential and alteration of stream channels. (During Project Implementation)

2.3 TRAIL CONSTRUCTION AND RECONSTRUCTION

Construction and reconstruction activities will be conducted when weather and ground conditions are such that impacts to soils and water quality will be minimal. Prior to impending winter storms, construction and reconstruction activities shall be closed down and erosion work completed so that the erosion potential is reduced. To minimize sediment production originating from sidecast material during trail construction and reconstruction activities, sidecasting of uncompacted material will only be permitted at locations shown on the plans or agreed to by a riparian specialist. When streamflow is deverted around construction or reconstruction sites, diverted flows are to be returned to their natural streamcourse as soon as possible after construction or at least prior to the rainy season. All disturbed areas are stabilized prior to to the rainy season or as needed. The design of the diversion will include mitigation necessary to protect instream values and downstream beneficial uses of the water. Debris from clearing and grubbing operations shall not be placed where the material can be transported to stream channels, snow ponds, lakes, meadows, fens, or in a location that will impede flow through or from drainage structures.

Material generated from RCAs will be disposed of by any combination of the following so long as the RCA ground cover goals are maintained and channels are not obstructed: piling and burning (outside of riparian buffers), chipping, lop and scatter, or removal to agreed upon location. (During Project Implementation)

2.4 TRAIL MAINTENANCE AND OPERATIONS

The trails and associated facilities shall be maintained in a manner which provides for water quality protection by minimizing rutting, failures, sidecasting and blockage of drainage facilities (all of which can cause sedimentation and erosion). To disperse runoff and to minimize erosion of the trail prism by runoff from the trail surface and from uphill areas, measures such as properly spaced waterbars or cross drains, dips, and outsloping shall be installed. This level of maintenance often requires an annual inspection to determine what work, if any, is needed to keep drainage functional and the trail stable. To minimize sediment production originating from sidecast material during trail maintenance activities, sidecasting of uncompacted material will only be permitted outside of identified riparian buffers. (During Project Implementation)

2.7 TRAIL DECOMMISSIONING

Approximately 1.11 miles of existing trails would be decommissioned. All identified portions of trails to be decommissioned would have the soil decompacted, hydrologic function restored, provide effective soil cover through mulching exposed ground and establishing vegetative cover, and install barriers to ensure compliance. Mulching can include slash, chipped material, or weed-free rice straw to protect the surface of the trail from erosion. Other erosion measures, such as waterbars, may be needed to supplement the erosion needs.

2.8 STREAM CROSSINGS

Locate stream crossings to minimize water, aquatic, and riparian resource disturbances and related sediment production when constructing, reconstructing, or maintaining permanent stream crossings. Permanent crossings are designed to meet applicable standards while also protecting water, aquatic, and riparian resources. All stream crossings will be designed to provide for unobstructed flows and fish passage, and to minimize diversion potential and alteration of stream channels. All excavated materials shall be kept out of the streamcourses. Any materials stockpiled will be removed prior to the runoff season. Excess spoil material will be disposed of through BMP 2.3. Divert flowing water around work sites to minimize erosion and sedimentation. Streams identified as important for fisheries or other aquatic resources may require that the channel not be disturbed except during low flow periods. Work would not be allowed during spawning periods, or other peroids critical to aquatic resources. Downstream sediment basins or other sediment reduction facilities or techniques may be necessary to mitigate impacts. (During Project Planning and Implementation)

2.10 PARKING AND STAGING AREAS

Construct, install, and maintain an appropriate level of drainage and runoff treatment for parking and staging areas to protect water, aquatic, and riparian resources. Runoff from these areas can create rills and gullies, and carry sediment, nutrients, and other pollutants to nearby surface waters. Avoid locating parking and staging areas within or adjacent to sensitive areas such as riparian buffer areas. Take advantage of existing openings and sites away from waterbodies.

2.11 EQUIPMENT REFUELING AND SERVICING

To prevent pollutants such as fuels, lubricants, and other harmful materials from being discharged into or near rivers, streams or into natural channels leading thereto, service and refueling areas shall be located outside of RCAs if possible. Report spills and initiate appropriate clean-up action in accordance with applicable State and Federal laws, rules, and regulations. (During Project Implementation)

2.13 EROSION CONTROL PLAN

All erosion control measures will be shown on the project design plans and will be implemented in all phases of the project. The kinds and intensity of erosion control work shall be adjusted to ground conditions. Erosion control work shall be inspected and maintained preceding expected seasonal periods of precipitation. Effectiveness of erosion structures will be monitored and maintained during the life of the project. Trail construction, reconstruction, and maintenance activities within the designated RCAs shall be kept to a minimum to protect riparian habitat, channel stability, and to prevent sediment from entering the stream channel. (During Project Implementation)

7.8 CUMULATIVE OFF-SITE WATERSHED EFFECTS

The Pacific Crest Trail Realignment project is located within three HUC 7 “Drainages”: Upper Pauley Creek (5,085 acres), Upper Salmon Creek (5,478 acres), and Lower Salmon Creek (5,438 acres). A cumulative watershed effects (CWE) analysis was done as part of the environmental analysis and no significant impacts are anticipated. The project is considered to have minimal ground disturbing activities with an average 4 foot trail tread on approximately 6.1 miles of trail. Beside new trail construction, the project would also include obliterating unneeded trail sections and improving drainage and erosion control structures on the remaining existing trials. There are no affects to beneficial uses anticipated if BMPs are implemented correctly. (During EA Process)

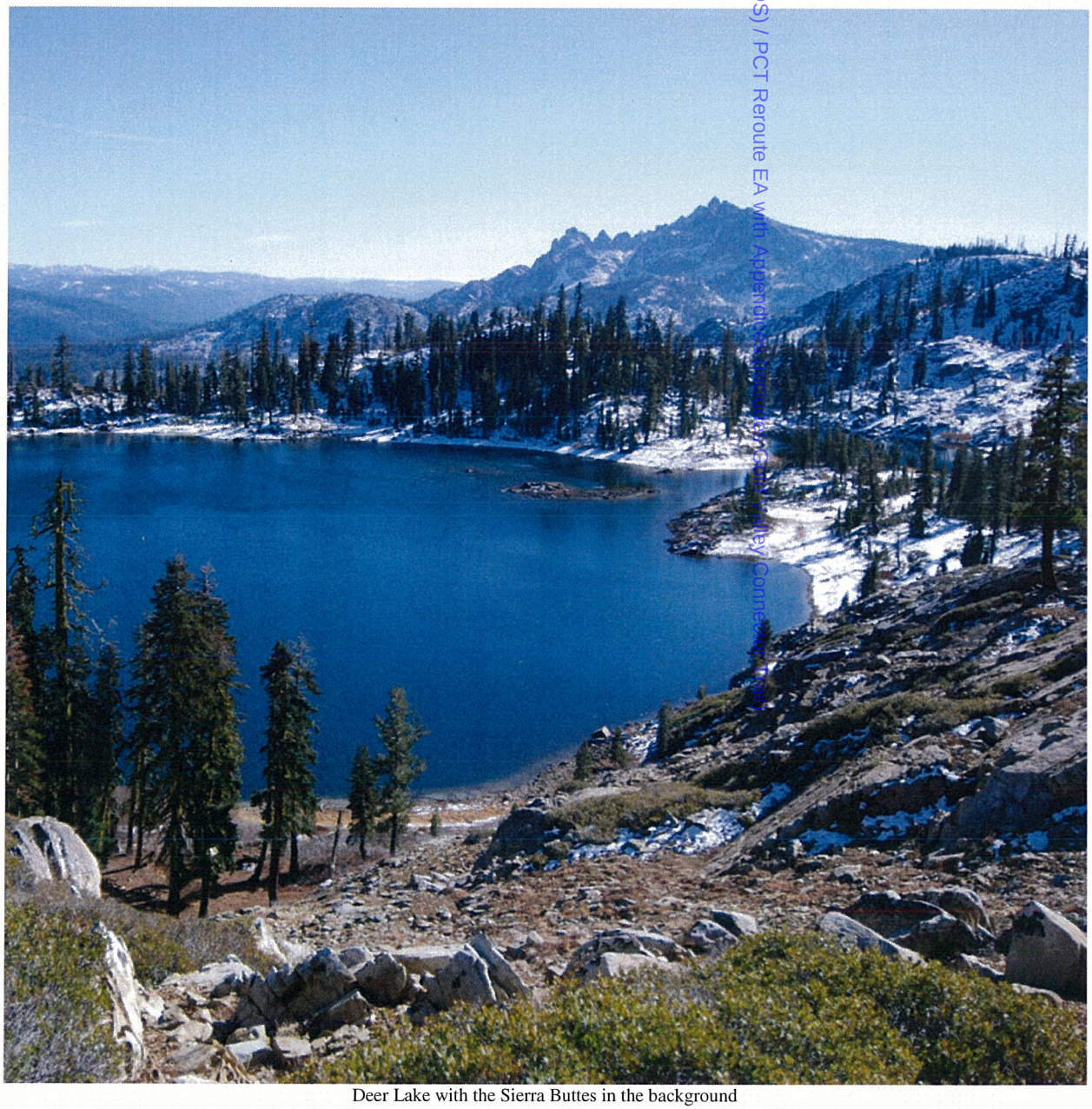
Pacific Crest Trail

Realignment EA

Appendix D

Final OLR Report

Pacific Crest National Scenic Trail
Highway 49 to the A-Tree
Optimal Location Review



Deer Lake with the Sierra Buttes in the background

Tahoe National Forest
Yuba River Ranger District
June 2011

Pacific Crest National Scenic Trail
Sierra Buttes Optimal Location Review

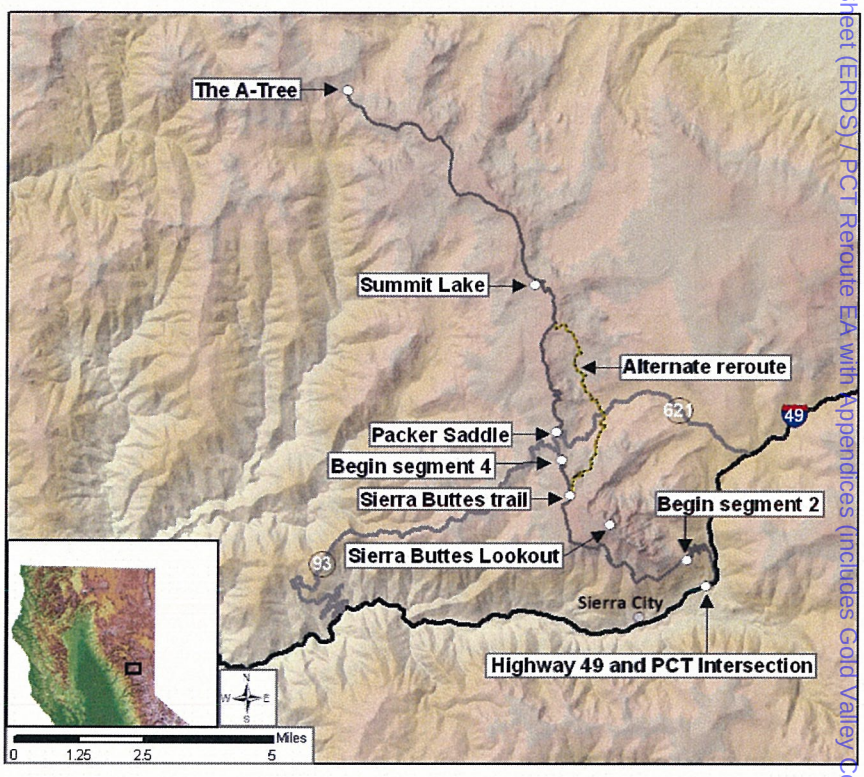
This Optimal Location Review studies an approximate 16-mile segment of the Pacific Crest National Scenic Trail (PCT), managed by the Tahoe National Forest (TNF), United States Forest Service (USFS), located in northern California. The trail relocation review developed for the PCT is referred to as an Optimal Location Review (OLR). The OLR can recommend a combination of land acquisitions, conservation easements and/or trail relocations in order to preserve the purposes for which the trail was established, or simply confirm that the PCT is optimally located and adequately protected. The decision for the optimal trail location is based upon the desired PCT experience and follows the criteria outlined in the PCT Comprehensive Plan. The National Trails System Act of 1968 authorizes the USFS to relocate segments of the PCT where: (1) such a relocation is necessary to preserve the purposes for which the trail was established, or (2) the relocation is necessary to promote a sound land management program in accordance with established multiple-use principles.

All Federal Actions, whether located on federal or non-federal land, are subject to compliance with the National Environmental Policy Act (NEPA). A proposed action to relocate a section of a congressionally designated area, such as the Pacific Crest National Scenic Trail, is an important decision that requires further analysis and documentation to comply with NEPA. If relocating a segment of the PCT is recommended, the OLR process functions as the analysis that establishes the purpose and need to begin a NEPA analysis. The OLR is neither a substitute for NEPA compliance nor the legal requirements for publishing major shifts for the location of the PCT in the Federal Register. The final OLR report and NEPA documentation sets the stage for publishing a notice in the Federal Register that describes the trail relocation. If the PCT is in its optimal location and acquisition of land or interest in lands are required to protect the PCT in this location, these processes may move forward without additional analysis or NEPA compliance.

<u>Description of the Current Route (from south to north):</u>

This OLR studies a 16-mile segment of the PCT in Sierra County, near Sierra City, California. The trail segment under consideration is administered by the Tahoe National Forest, Yuba River Ranger District; the main office is located in Camptonville, CA. The segment begins at the intersection with Highway 49 in T20N, R12E, Section 27 Mountain Diablo Base Meridian (MDM) and ends at the A-Tree in T21N, R11E, Section 4 MDM. For the purposes of this document, the description of the current route has been divided into six sections sharing common characteristics, covering a total length of 16 miles (see Map 1). In this OLR process Segments 1, 2 and 6 have been found to be already located in the optimal location, therefore this OLR analysis will focus on the remaining portions (Segments 3, 4, and 5) where the optimal location is still to be defined.

Map 1. Overview of PCT route segments and alternate reroute



Segment 1 of the existing PCT crosses over State Highway 49 approximately 1.3 miles northeast of Sierra City at an elevation of 4,580 feet. A good source of untreated water can be obtained where the trail bridges the North Yuba River just south of the Highway 49 crossing. After crossing the highway, the PCT climbs 3.5 miles in a series of switchbacks and reaches an elevation of 6,090 feet on the eastern slopes of the Sierra Buttes. This segment begins in a shady, forested environment, but gradually opens up to a drier, hotter one on the southern slopes of the Sierra Buttes, with a vegetation type dominated by shrubs and bushes. Segment 1 does not cross through private land. Through this PCTOLR process, Segment 1 has been found to be sited in the optimal location.

Along Segment 2, the trail traverses 3.8 miles across the southern then western slopes of the Sierra Buttes climbing to the ridge at an elevation of 7,400 feet. High quality views of the North Yuba River canyon and southern slopes of the Sierra Buttes are visible as the trail nears the crest. At the north end of Segment 2 the view expands west towards the Central Valley and east into the Lakes Basin. 0.9 miles of Segment 2 are located across private land. The United States holds a recorded easement on this segment of the PCT. Through this PCTOLR process, Segment 2 has been found to be sited in the optimal location.

Segment 3 begins at the intersection of the PCT and the Sierra Buttes trail and ends 0.6 miles later at the junction with Forest Road 93-2. Over the length of this segment the trail tread and user experience transitions from singletrack to one located on an old roadbed. Trail user volume increases sharply here, especially on summer weekends, as this section of the PCT is utilized as

the primary access to the Sierra Buttes Lookout. While the southbound visual quality becomes somewhat obstructed as the trail user drops into the trees, southbound users enjoy high quality views of the northern slopes of the Sierra Buttes. The northern half of Segment 3 (0.3 miles) is located across private land. The United States holds a recorded easement on this segment of the PCT.

Segment 4 begins at the Sierra Buttes Trailhead (an approximate 10-car parking area) along Forest Road 93-2, the primary trailhead for most hikers headed to the Lookout (see Photo 2). For the next 0.2 miles the PCT shares the tread with gravel-surfaced Forest Road 93-2, with moderate traffic volumes. The PCT then passes the large Sunrise parking area utilized primarily by the downhill mountain bikers and a commercial shuttle operation to access the steep, rocky, technical Downieville trail system (see Photo 3). Segment 4 continues for another 0.4 miles sharing the tread with Forest Road 93, until it reaches Packer Saddle (see Photo 4). This segment of paved 1 1/2-lane road receives high volumes of vehicular traffic as it serves as a major public access for numerous hiking, mountain bike and motorized trails, and miles of graveled USFS roads. The combination of high volumes of traffic, on a paved road with short sight distances, and no shoulder, leaves the PCT trail user with a degraded recreational experience and a potential safety situation. This 0.6-mile segment is located almost entirely across private land. The United States holds a recorded easement on this segment of the PCT.

Photo 2. PCT (Segment 4), Forest Road 93-2 at the Sierra Buttes parking area.

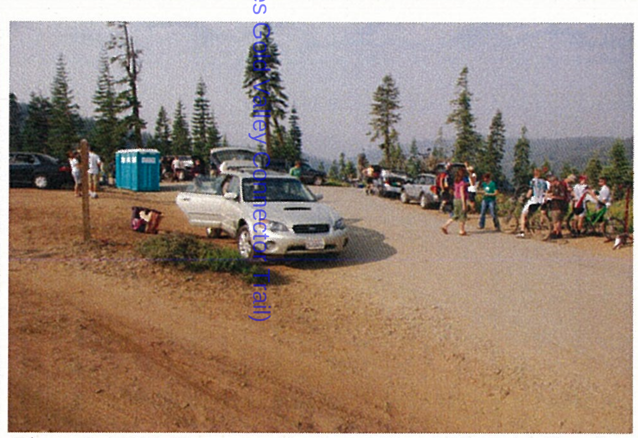


Photo 3. PCT (Segment 4), Forest Road 93 at the Sunrise parking area during a permitted mountain bike race.

Photo 4. PCT (Segment 4), Forest Road 93.

Segment 5 extends north for 3.6 miles from Packer Saddle to Summit Lake. For the first 2.2 miles, Segment 5 is located immediately adjacent to the Lots-A-Lakes OHV 4X4 trail (see

Photos 5 and 6), and crosses it twice (see Photo 7). As this segment of the Lots-A-Lakes trail is travelable by stock pickups with 4-wheel drive, this section of OHV trail is experiencing an increase in the volume of OHV traffic. The close proximity of the PCT and the Lots-A-Lakes OHV 4X4 trail in this area results in the PCT trail user being in sight and/or within sound of the adjacent motorized route. As the PCT passes west of Deer Lake, opportunities for high quality scenery include views of the Sierra Buttes, Deer Lake, Upper Salmon Lake, and extensive views of the Lakes Basin (Photo 8). An extremely limited number of PCT users may drop down (a steep 400 vertical feet) to Deer Lake for water or camping, typically utilizing the Deer Lake OHV 4X4 trail. 0.1 miles of Segment 5 are located across private land. The United States holds a recorded easement on this segment of the PCT. Currently mountain bikers are consistently (and illegally) riding this segment of the PCT.

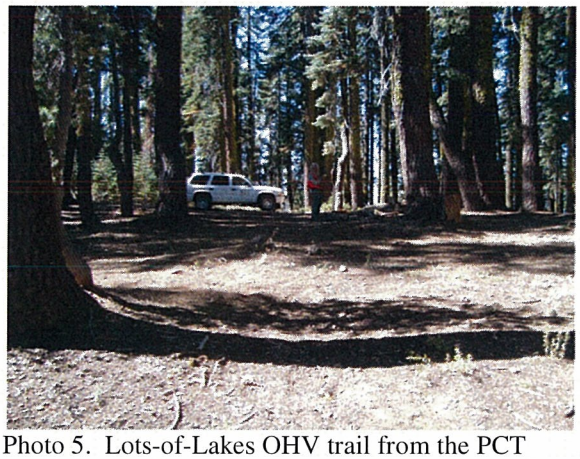


Photo 5. Lots-of-Lakes OHV trail from the PCT (Segment 5).

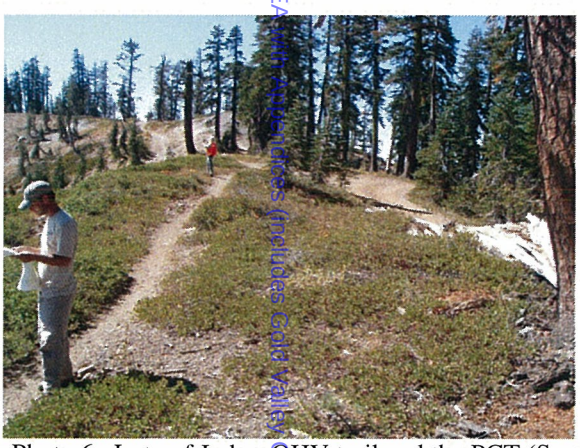


Photo 6. Lots-of-Lakes OHV trail and the PCT (Segment 5) above Deer Lake.

Photo 7. PCT (Segment 5) crossing Lots-of-Lakes OHV trail.

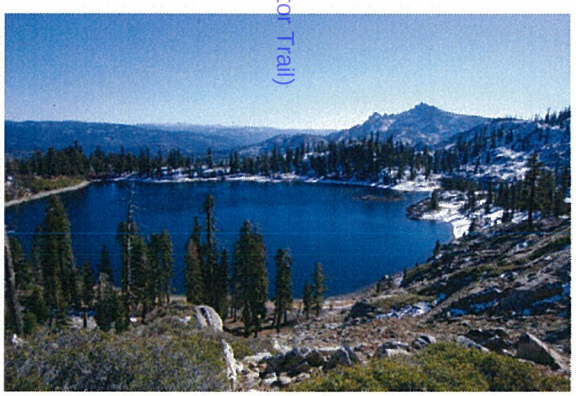


Photo 8. View of Deer Lake from the PCT (Segment 5).

Segment 6 of the PCT continues north from Summit Lake to A-tree, a distance of 6.4 miles. This segment of the PCT is intermittently located adjacent to lightly-used, technically-difficult sections of the Lots-of-Lakes OHV 4X4 trail. This segment of trail offers extensive views of both the Spencer and Gold Lakes Basins, and of Mt. Elwell and Mt. Washington. An extremely limited number of PCT users may drop down to nearby Little Deer Lake, Snake Lake, Hawley Lake, or the Spencer Lakes for water or camping but will potentially be encountering motorized and mechanized users accessing these lakes via the Lots-of-Lakes 4X4 trail. Segment 6 does not

pass through private land. Currently a limited number of mountain bikers are illegally riding this segment of the PCT. Through this PCTOLR process, Segment 6 has been found to be sited in the optimal location.

The Packsaddle Campground (Packsaddle CG) is the final element of the existing condition to describe. While the Packsaddle CG is not located along the existing PCT alignment, it currently serves as a critical recreation resource in the Packer Saddle area, and is proposed to remain an important feature in the future. Currently the Packsaddle CG is designed with two primary loops including 17 individual campsites, 2 equestrian-centric campsites, a single horse corral facility broken into four, individual corrals, a two-riser toilet building, and a hand-pumped water well. Parking for approximately 25 individual vehicles (sedans, SUVs, pickups) and 10 extended-length vehicles (e.g. pickups with horse trailers, or large recreational vehicles (RVs)) is also provided in the initial loop of the Packsaddle CG. Currently this parking area primarily serves trail users heading up the Deer Lake trail (pedestrians, equestrians, and a limited number of mountain bikers). A few visitors may also park in the Packsaddle CG to access the Tamarack Lakes area, utilizing a primitive, user-created trail connecting the two.

<u>Background and Statement of the Problem</u>:

The field review for this OLR was conducted by the Tahoe National Forest during 2009. This 16 mile segment of the PCT is currently located on the "published trail route" as indicated by the original legislation. There are several issues with the current PCT alignment including potential safety issues, lack of access to good water and camping opportunities, and a degraded recreational experience due to conflicts with concurrent or adjacent uses. The primary potential safety situation occurs in Segment 4, where PCT trail users are required to traverse 0.4 miles of high volume paved road (Forest Road 93), 0.2 miles of moderate volume gravel road (Forest Road 93-2), and three major parking areas (Sierra Buttes, Sunrise, and Packer Saddle). Current conditions are resulting in a direct mixing of pedestrian, equestrian, bicycle, off-highway and highway traffic on a narrow 1 1/2-lane paved road with short sight distances and no shoulders. The second potential safety issue concerns the illegal use of the PCT by mountain bikers, and their interactions with equestrians, especially in Segment 5 north of Packer Saddle. While all mountain bike/equestrian encounters may include some accident potential, that risk is heightened on the PCT because some equestrians choose the PCT explicitly due to the motorized, mechanized prohibitions. Hence equestrians on the PCT are more likely to be riding young, moderately-trained, bicycle-sensitive horses, and the chance of an accident-resulting encounter with illegal mountain bikers is increased. Lastly, from the Sierra Buttes trailhead to the junction with the Deer Lake OHV 4X4 trail (3.4 miles), the existing PCT is located immediately on top of or closely paralleling a motorized route. The immediacy of the motorized route, combined with the isolated nature of the northern portions of this segment of trail may increase the likelihood that individuals or small groups of PCT users could be harassed in this area, with a low probability of being discovered.

The current alignment of the PCT lacks easy access to good water and camping opportunities. From the crossing with State Highway 49 to Summit Lake (12.0 miles), no sources of water are found within easy access of the current trail location. Water can be obtained from Deer Lake, which is approximately 0.3 miles and 400 vertical feet below the current PCT location, or Summit Lake itself, which is typically stagnant after early June. Opportunities for high quality

dispersed camping are minimal along this portion of the PCT. Due to the relatively heavy amount of motorized use in the area, preferred campsites (flat, with appropriate tree canopy and wind protection) are often filled with car campers, or the sites have been degraded by such users. When PCT users do drop off the ridge to find better camping they are most likely to follow the Deer Lake OHV 4X4 trail down to the west side of Deer Lake to camp, where the impacts of motorized use are more likely to affect the non-motorized experience the PCT is managed for. Finally, for equestrian campers who are typically more sensitive to motorized use, and require larger areas of flat terrain, the situation is even more challenging.

The final major concern regarding segments 4 and 5 of the existing PCT is the degraded recreational experience due to concurrent or adjacent motorized uses, and illegal mountain bike use. From the Sierra Buttes trailhead to Packer Saddle (Segment 4), the PCT is located on top of gravel then paved road, negatively impacting the non-motorized, non-mechanized recreational experience for which the PCT is managed. Most of Segment 5 (3.6 miles) is located immediately adjacent to the Lots-of-Lakes OHV 4X4 trail, which also conflicts with the outcomes for which the PCT is managed. In regard to mechanized use, especially during the summer months, mountain bikers are illegally riding this segment of the PCT (whose entire length is limited to pedestrians and equestrians) to access legal mountain bike trails including Big Boulder, Gold Valley, and Lavezzola, and destinations including Deer Lake, the Gold Lakes Basin, and A-Tree. Legal access to these recreation resources is currently provided via the Lots-A-Lakes OHV 4X4 trail, or Forest Road 507/506 on the Plumas National Forest (PNF). Those breaking the law are believed to prefer the PCT because it provides faster access without the climbing required on the Lots-A-Lakes OHV 4X4 trail, because those users prefer a single-track trail experience, or because access from the PNF would require additional travel and/or shuttle time and expense.

Trail Objectives:

The objectives for this Optimal Location Review are as follows:

1. Locate and maintain the trail corridor in the safest, least-developed location while connecting trail users to high-valued recreation resources.
2. Protect and enhance the "trail experience" by locating the trail corridor where it is most compatible with the surrounding uses, while highlighting the scenic value of the area.
3. Maintain federal ownership of the trail.
4. Build and maintain high public support of the PCT.

Routes considered but dropped:

A route paralleling, but to the west and below the existing PCT trail was considered but dropped. As this route would have typically been well below the tree canopy, it would not have provided any high quality visual opportunities. In addition, long-term management might have been more difficult because of conflicts with the timber management objectives of the surrounding area. Because this route had no advantages over the proposed alternate, it was dropped from consideration.

A route paralleling, but to the east and below the existing PCT was also considered but dropped. Potentially located between the existing PCT and Deer Lake trails, this route would have

provided many of the benefits identified in the alternate route, but the steep sidehill and rocky shelves traversed along this alignment were of concern. After an intensive field search, Forest Service and PCTA staff concluded the technical challenges of constructing a trail in this area would be prohibitively difficult, nor was the terrain conducive to building a sustainable trail, so this route was dropped from further consideration.

Alternate PCT Route Considered:

An alternative alignment has been proposed to address the known issues of segments 3, 4 and 5 of the current PCT alignment including potential safety issues, lack of access to good water and camping opportunities, and a degraded recreational experience. In addition to addressing the aforementioned issues, the proposed alternate route would also improve overall visual quality, and reduce the distance spent crossing private land, resulting in greater public support of the PCT. An alternate route for the PCT would begin at the intersection with the Sierra Buttes trail. The alternate route would descend to the northeast, passing by and weaving through the Tamarack Lakes, running parallel but out of sight and sound of the Tamarack Lakes OHV 4X4 trail, dropping a total of 1,300 feet in elevation to the Packsaddle campground (Packsaddle CG, see Figure 1, and Map 2). From the Packsaddle CG the alternate route would climb back up to the ridgetop, roughly following the existing Deer Lake trail, meeting back up with the current PCT alignment north of the junction with the Deer Lake OHV 4X4 trail, but south of Summit Lake (see Map 3). The alternate route would stretch approximately 6.0 miles and use about 1.7 miles of existing non-motorized trail (mostly the Deer Lake trail), requiring approximately 4.3 miles of new trail construction. During the summer of 2010 resource surveys were completed along the alternate route including a review by recreation staff, an archaeologist, a botanist, a wildlife biologist, and a soils/hydrology specialist. The results from this interdisciplinary review failed to expose any significant issues associated with the proposed alternate route. A detailed breakdown of the pros and cons of the alternate route are discussed below.

Pros:

1. The alternate route would locate and maintain the trail corridor in a safer, less-developed location.

In regard to safety, the alternate route would remove the PCT completely off of Forest Roads 93 and 93-2. While the alternate route would still require PCT trail users to cross Packer Lake Road (which becomes Forest Service Road 93 above Packer lake) at one location, the risk of a PCT user involved in an accident with highway vehicle traffic would be greatly reduced. For equestrians, the alternate route would dramatically decrease the likelihood of an accident-resulting encounter with an illegal mountain biker by removing most of the incentive for mountain bikers to utilize the PCT to access mountain bike resources north or west of Packer Saddle. By reducing the mileage where the PCT is located immediately on top of or adjacent to motorized routes, the alternate route location would also reduce the chance of predatory stalking along this section of the PCT.

2. The alternate route would connect trail users to high-valued recreation resources.
The alternate route would better connect PCT trail users to high-valued resources including quality water sources and camping opportunities, especially for equestrians. The alternate route

would run proximate to three major water sources which are currently difficult to access from the existing route. Those sources include the Upper and Lower Tamarack Lakes, Deer Lake (without the 400 vertical foot loss/gain) and potable water accessed via a hand-pumped well located at the Packsaddle Campground (outflows from the Tamarack, Packer and Deer Lakes might also be available seasonally). The alternate route would also provide increased access to high quality camping opportunities. The areas around the Upper and Lower and Tamarack Lakes, and Deer Lake provide some of the highest quality dispersed camping found in TNF. For those PCT users searching for a more developed camping experience, the alternate route leads immediately past the Packsaddle Campground (with potable water). Packsaddle is especially attractive to equestrian users as it provides large parking and turning areas, and corral facilities. During peak times, if Packsaddle is filled to capacity, the Berger Campground is only ¼ of a mile down Packer Lake Road, and the Diablo campground is just a ¼ mile beyond Berger (topography allows for easy, safe travel along this section of the Packer Lake Road). For PCT pedestrians searching for a more luxurious experience, the alternate route would bring the PCT closer to 3 overnight lodges namely the Packer Lake Lodge, the Salmon Lake Lodge, and the Sardine Lake Lodge which could be easily reached via the Packer Lake, Salmon Lake, and Tamarack connection trails respectively.

<u>3. The alternate route would protect and enhance the trail experience by locating the trail corridor where it is most compatible with the surrounding uses, while highlighting the scenic value of the area.</u>

Foremost, the alternate route would move the PCT off of, and away from most adjacent motorized routes, namely Forest Road 93, 93-2, and the Lots of Lakes 4X4 trail. By reducing the duration the PCT is located on or in the immediate vicinity of roads and motorized trails, this action would enhance the non-motorized, non-mechanized experience for which the PCT is managed. From a broader perspective, a majority of the area visitors currently recreating between Sierra Buttes and Deer Lake do so by foot, or on horse. The alternate route would complement and enhance those existing pedestrian/equestrian uses, and provide additional separation from adjacent mechanized/motorized uses.

The alternate route could also eliminate the existing conflict with mountain bikers riding the PCT illegally between Packer Saddle and Summit Lake. If the PCT relocation were to occur, the existing alignment could be converted to a multiple-use trail, providing improved access to mountain bike and motorcycle destinations to the west. In addition, a link could be constructed from the then-multiple-use trail to the nearby Gold Valley trail, providing additional recreational opportunities, including other single-track trail opportunities.

The alternate route would have minimal or no impact to Forest visual resources from outside the trail corridor, while the relocation would enhance the scenic quality and recreation experience from inside the corridor. The Forest Service's scenery management system requires an examination of the impact of visual resources from significant viewing opportunities that have been identified in the TNF Land Management Plan. A review of visual impacts indicated likely significant viewpoints would include Highway 49, and the Sierra Buttes Lookout. From Highway 49, neither the existing nor alternate routes are, or would be, visible to the casual Forest viewer. From the Sierra Buttes Lookout, both the existing PCT, and the existing Tamarac Trail (which approximates the southern portion of the alternate route) are visible, but do not dominate

the landscape. Under the alternate route, this visual impact would be essentially unchanged. The existing PCT could be converted to a multiple use trail, with no corresponding change in visual impact. The existing Tamarac and Deer Lake trails would be improved (largely flattening them out to bring down the grade of the trail tread) to become the new PCT with minimal visual impact. New trail would be constructed between the Tamarac Lakes and the Packsaddle Campground, but this section would largely be located in a mature forest, where the trail would be hidden from the Lookout viewer, resulting in un-noticed visual impacts.

The visual analysis also examined the perspective of PCT trail users, who would enjoy improved scenery if the alternate route was adopted. Traveling northward, the alternate route would locate the PCT physically closer to the Sierra Buttes, and run the Trail down the northern shoulder of the Buttes, where the outstanding views of the mountain from the north and east could be better appreciated. The Sierra Buttes are one of the most impressive geologic features in the Northern Sierras. The alternate route would bring PCT users in closer contact with the Sierra Buttes and incorporates the feature more prominently as a part of the PCT experience. The alternate route would also move the PCT immediately adjacent to, and provide improved access to the beautiful Tamarack, Packer, Deer, Horse, and Salmon lakes. Perhaps most importantly, the alternate route would move the PCT off gravel and paved roads, and away from parking areas and OHV routes, providing more undeveloped, natural, visual opportunities for PCT trail users.

<u>4. The alternate route would better maintain federal ownership of the trail by reducing the distance the PCT is located across private land.</u>

The alternate route would reduce the distance the PCT is located across private land by approximately 0.9 miles. Currently Segments 3 and 4 are located across 0.3 and 0.6 miles of private land, respectively; while the alternate route would relocate these two segments of the PCT completely onto US Forest Service system lands. Both the existing Tamarack/Sierra Buttes trails and the proposed alternate PCT are located across Parcel ID H (see Map 2, Table 3) for approximately 0.2 miles. Currently, while there is no formal easement for the existing Tamarack/Sierra Buttes trails, the landowners have been contacted and are supportive of the alternate PCT alignment, and of issuing the Forest Service an easement for the PCT across this property. The replacement of the Tamarack/Sierra Buttes trails with the PCT is preferable because the trail alignment would be moved to the very edge of the private parcel. In addition, compared to the existing trails, the alternate route would be constructed at a reduced grade to minimize existing trail erosion issues, which would in turn lower the overall resource impacts to the associated piece of private property, and reduce the need for trail maintenance.

<u>5. To best accommodate the alternate PCT alignment, modifications to the Packsaddle CG would also be required.</u> Generally speaking, the alternate alignment would require an increase in parking capacity at the Packsaddle CG because the PCT would no longer pass by the existing Sierra Buttes, Sunrise, and Packer Saddle parking areas. Based on existing and projected future use of the PCT in this area, pedestrians visiting for the day, and all equestrians (both daytime and overnight visitors) are the two primary user types predicted to need additional parking capacity. Finally, demand for large recreational vehicle (RV) parking and camping along the Packer Lake Road corridor is growing, and additional capacity for those vehicles could also be accommodated. Reconstructed portions of the Packsaddle CG (and the enclosed day use parking

area) would be redesigned to meet current Forest Service standards, including accessibility standards. Depending upon the final development plans, additional toilet facilities within the Packsaddle CG may be appropriate.

To accommodate additional parking for pedestrians (primarily day users, but overnight backpackers would also park here), existing Packsaddle CG campsites 1, 2, and 14 would be eliminated, and converted to parking for individual vehicles (sedans, SUVs, and pickups). With minor grading, tree removal, and defining of parking spaces, parking capacity would be roughly doubled from approximately 25 to 50 vehicles. Additional signing, better defining parking for PCT trail users (opposed to those camping in the campground) would also be required. Finally, additional parking located immediately across Packer Lake Road from the Packsaddle CG was also considered as part of this PCTOLR process, but neither the need for additional parking capacity, nor the funds to construct such a facility, were identified at this time.

To accommodate additional parking for equestrians and operators of large RVs, existing Packsaddle CG campsites 3 and 4 would be improved to accommodate long vehicles (pickups/SUVs pulling horse trailers, pickups/SUVs pulling camp trailers, and large RVs over 25' in length). As these sites are envisioned to primarily accommodate equestrians who are likely to want to tie their horses to both sides of their trailer, these sites would be provide at least 10' of cleared space on either side of the graveled parking area. At these sites, the picnic table and firering would be placed in the very back of the campsite, and equestrian users would be expected to park head-in, creating distance between the horse and human "living areas".

At the same time, the existing equestrian corrals and two associated campsites (corral campsites 1 and 2) would also be redesigned. The existing four-in-one corral facilities would be broken apart and distributed to four separate campsites. Each corral is assumed to be able to accommodate up to 2 horses (that know and like each other). Corrals would be located at each of the two existing corral sites, and at existing campsites 3 and 4 (identified to become equestrian/RV campsites in the paragraph above).

And finally two additional, equestrian/large RV campsites would be identified and designated out of the large, flat graveled areas located adjacent to the existing restroom building. These two pull-through campsites would be designed to accommodate the largest of equestrian/RV vehicles, would provide a picnic table and firering, but would not include any corral facilities. As these two sites would include minimal visual screening, these sites are expected to be some of the last sites selected by overnight campers in the Packsaddle CG. However, since many large equestrian horse trailers and RVs are designed with living spaces built into these vehicles, the somewhat reduced experience provided by the Forest Service is not expected to be of major concern.

The alternate route would enhance public support of the PCT by increasing safety, providing additional access to high-valued recreation resources, by highlighting the scenic values of the area, by locating the Trail where it is most compatible with the surrounding uses, by reducing the distance the PCT crosses private land, and by reducing existing trail erosion issues and improving recreational opportunities.

Cons:

1) The alternate route would increase the vertical drop of the current PCT alignment by about 900 vertical feet, and would increase the vertical climbing by about 600 vertical feet.

The alternate route would include a substantial drop and corresponding climb the current alignment does not (see Figure 1). From the junction of the existing PCT (Segment 3) and Tamarack/Sierra Buttes trails, the alternate route would descend approximately 1300 vertical feet to the Packsaddle campground. The route would then climb back approximately 1100 vertical feet to the ridge. However, two substitutes would likely be available for those trail users focused on high mileage days, namely the existing PCT alignment, and the Lots-of-Lakes OHV trail. If the alternate route was adopted, the existing PCT would likely be converted to a multi-use trail available to pedestrians, equestrians, mountain bikers and motorcyclists, maintaining a singletrack, multi-use opportunity. So while sharing the trail with mountain bike and motorized users is typically not the preferred experience sought after by PCT users, it would be available for those long distance trail users who are looking to avoid the vertical relief identified in the alternate route.

2) Doesn't the Pacific Crest Trail get its name from being located on the Pacific Crest, including the backbone of the Sierra Nevada mountains? How can you move the PCT off the Pacific Crest?

Historically, planners locating the 3,000-mile long PCT considered numerous factors when locating the trail, including the physical highpoint of the Pacific Crest. In fact, the current ridge the PCT follows throughout the involved 16-mile section is not the true Pacific Crest. As the existing PCT was already detached from the Pacific Crest, this was not identified as a significant issue.

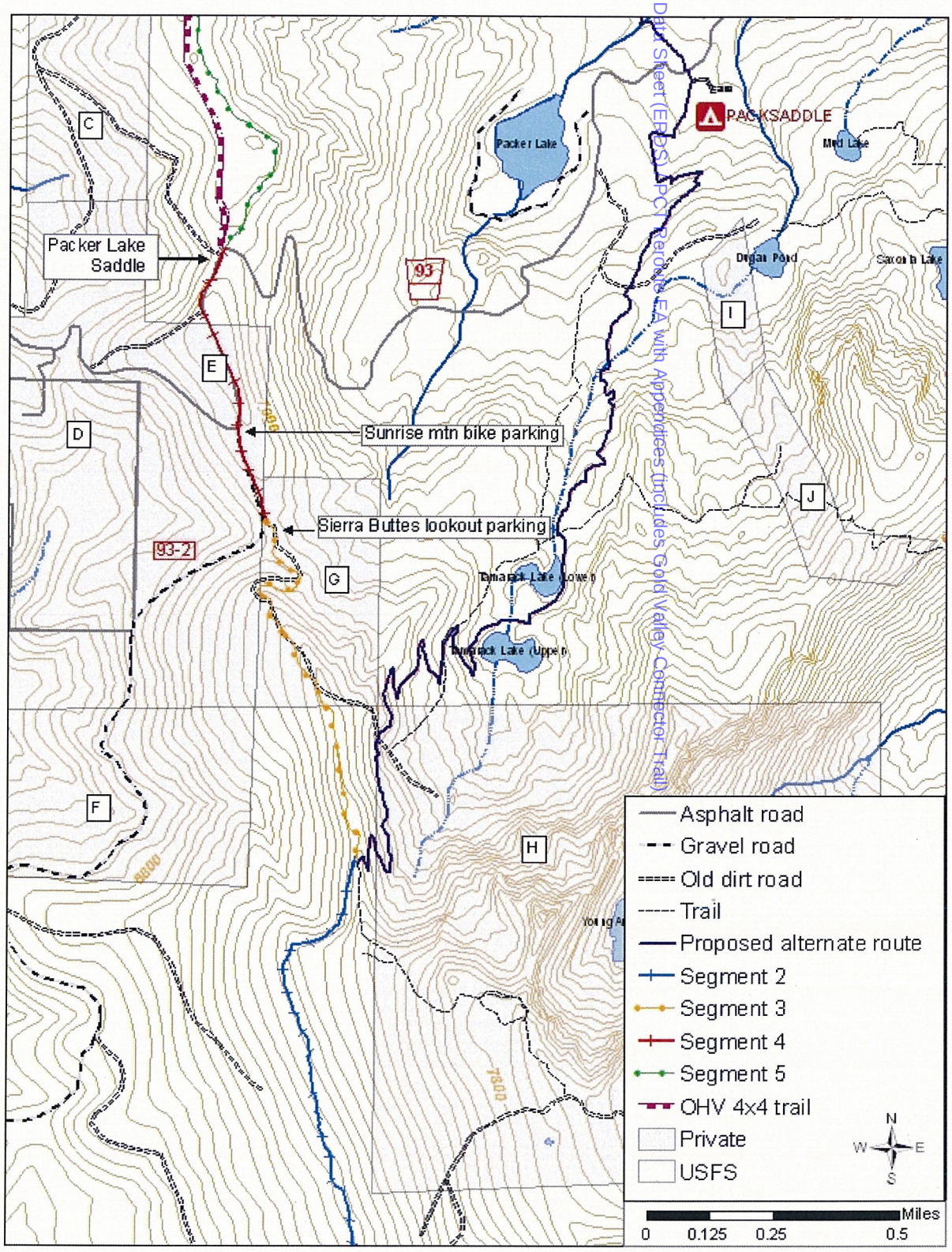
Public participation

The Tahoe National Forest has met with and discussed this OLR with area interest groups, primarily the Pacific Crest Trail Association (PCTA) and local hiking, mountain bike, and motorcycle trails groups. PCTA staff have covered most of the alternate route on foot with Forest Service staff, they understand the management issues, and are supportive of the new trail alignment as it will improve PCT recreational experiences on the TNF. A local hiking group (Skiing and Hiking Outdoor Enthusiasts (SHOE)) was very supportive of the proposed alternative alignment. A local mountain bike group (Sierra Buttes Trail Stewardship (SBTS)) and local motorcycle groups reported they would favor being able to use the old PCT alignment from Pack Saddle north to Deer Lake if the PCT trail was rerouted. However, SBTS reported that mountain bike interests would not support the loss of the ability to ride mountain bikes on what is now the Deer Lake Trail and a portion of the Tamarack Connector Trail if they were to become part of the new PCT alignment. From the SBTS perspective, the alternate route would provide an overall loss of riding opportunity and reported that this potential trade held little value to their group's membership. SBTS advocated for the Forest Service to focus on developing other mountain bike opportunities in the same area.

Route obliteration

If the alternate route is adopted, at least two sections of trail are expected to be obliterated. The first section is an approximate 0.2 miles of the existing Tamarack Lakes/Sierra Buttes trail as it crosses private property at an overly-steep grade (identified on Map 2 as property H). As most of this section of trail is located on private land, communication and support from the involved private land owners would be a prerequisite. The second section is an approximate 0.25 miles of the existing PCT, between the Deer Lake OHV 4X4 trail, and the alternate route as it reconnects back with the PCT (see Map 3). This second section of trail obliteration would be critical to maintain an appropriate separation of uses (pedestrian and equestrian on the PCT, all users could utilize the Lots-of-Lakes OHV 4X4 trail). In this situation, route obliteration would include decompacting the soil, restoring the hydrologic function, re-establishing vegetative cover (through planting and/or native recruitment), installation of barriers to ensure compliance, and monitoring for effectiveness.

Map 2. PCT segments 2 through 5 and the proposed alternate reroute



Map 3. PCT segments 5 and 6, and the proposed alternate reroute

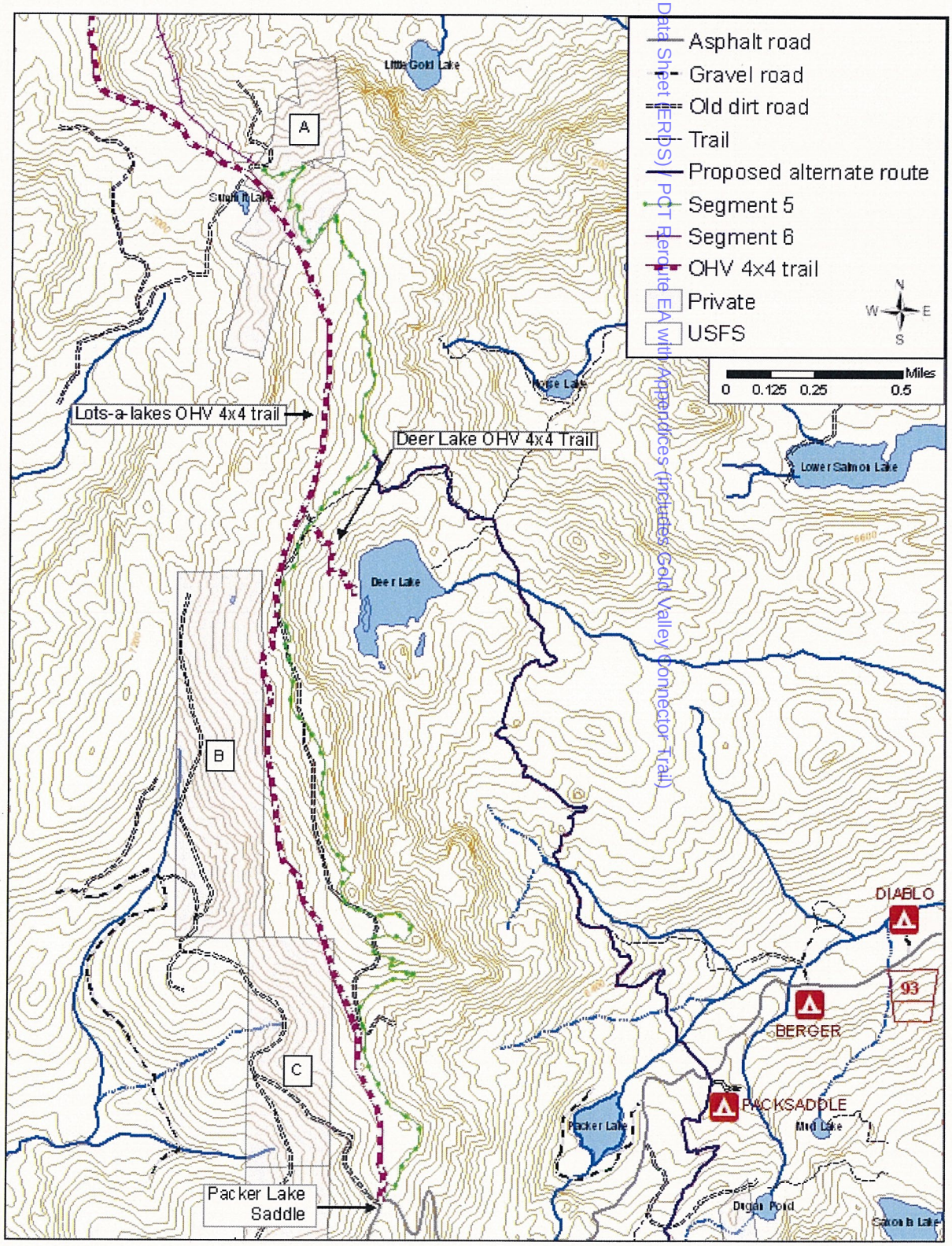
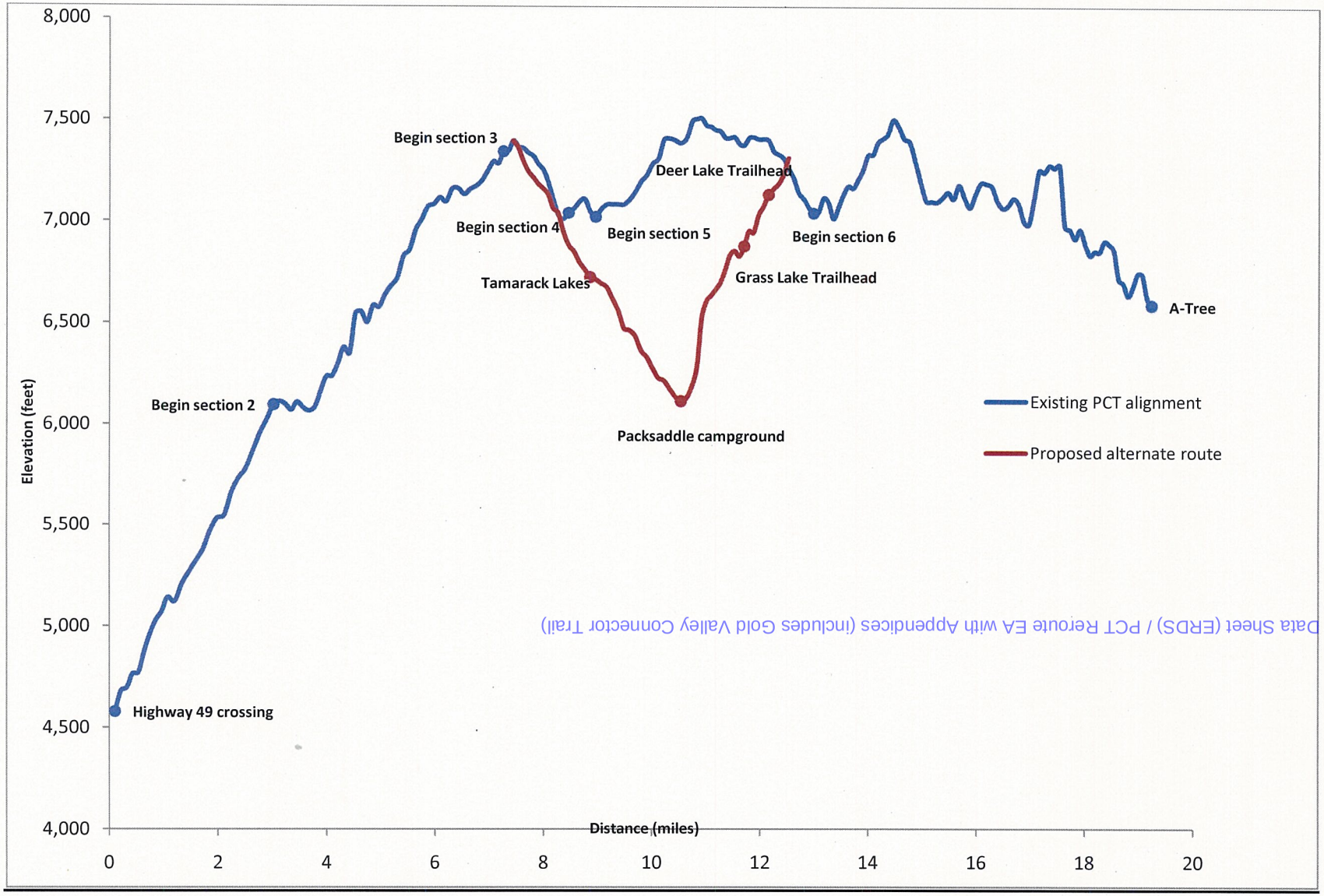


Figure 1. Profile of existing PCT and proposed alternate route



Trail Acquisition Corridor

The PCT trail corridor shown on the attached maps (Map 2 and 3) identifies both public and private lands along the PCT, and the alternate route. GIS technology was used to create the trail's corridor by developing a viewshed of what can be "seen" from the optimal trail location. Where the viewshed is greater than ½ mile and the trail is located adjacent to or within a developed community, highway, or flat fallow land; the trail corridor is a maximum distance of 300'. In all other locations where the viewshed is greater than ½ mile, the trail corridor is a maximum distance of ½ mile.

Any private lands which the Pacific Crest Trail passes through are identified as "Priority 1 Lands to Acquire". Private lands the trail does not cross, but falls within the trail's corridor are identified as "Priority 2 Lands to Acquire". Table 1 displays private property crossed by the existing PCT, and Table 2 outline the parcels of private land along the existing PCT which fall within the trail corridor. Table 3 displays private property that would be crossed by the alternate route, and Table 4 outline the parcels of private land along the alternate route which would fall within the trail corridor.

Table 1. Priority 1 Lands to Acquire along the existing PCT orientation

Parcel ID	Legal Description	Assessor's Parcel Number (APN)	Parcel Acres	Land Owner
A	S 19 & 30, T21N, R12E	007-090-009 and 007-110-001	90.1	Lowell G. Robinson
E	S 7, T20N, R12E	008-070-027	204.1	Sierra County Land Trust
G	S 7, T20N, R12E	008-070-008	55.4	John W. Harris

Table 2. Priority 2 Lands to Acquire along the existing PCT orientation

Parcel ID	Legal Description	Assessor's Parcel Number (APN)	Parcel Acres	Land Owner
A	S 19 & 30, T21N, R12E	007-090-009 and 007-110-001	90.1	Lowell G. Robinson
B	S 31, T21N, R12E	007-110-008	160	Robert Eshleman
C	S 6, T20N, R12E	008-070-002	138	Josh C. Finn
D	S 7, T20N, R12E	008-070-022	120	Joe D. Smailes Forestry, Inc.
E	S 7, T20N, R12E	008-070-027	204.1	Sierra County Land Trust
F	S 18, T20N, R12E	008-070-024	95.89	Steven E. Hayes
G	S 7, T20N, R12E	008-070-008	55.4	John W. Harris
H	S 17, T20N, R12E	008-100-002	580	John W. Harris

Table 3. Priority 1 Lands to Acquire along the alternative PCT route

Parcel ID	Legal Description	Assessor's Parcel Number (APN)	Parcel Acres	Land Owner
H	S 17, T20N, R12E	008-100-002	580	John W. Harris

Table 4. Priority 2 Lands to Acquire along the alternate PCT route

Parcel ID	Legal Description	Assessor's Parcel Number (APN)	Parcel Acres	Land Owner
E	S 7, T20N, R12E	008-070-027	204.1	Sierra County Land Trust
F	S 18, T20N, R12E	008-070-024	95.89	Steven E. Hayes
G	S 7, T20N, R12E	008-070-008	55.4	John W. Harris
H	S 17, T20N, R12E	008-100-002	580	John W. Harris
I	S 8, T20N, R12E	008-070-010	17.2	Central 4 Wheel Drive Inc
J	S 8, T20N, R12E	008-070-028 and 008-070-029	34.4	Dennis E Giuffre

Decisions being made in this PCTOLR process

Signing this Optimal Location Review document indicates concurrence that:

- Of the total 16 miles of the PCT reviewed in this OLR, approximately 10 of those 16 miles are already located in the optimal location.
- The alternate route, approximately 6 miles in length, locates the remaining portions of the larger 16-mile section of the PCT in the desired optimal location, requiring 4.3 miles of new trail construction.
- The recommendations in this Optimal Location Review document preserve the purposes for which the Pacific Crest National Scenic Trail was established, and promote a sound land management program in accordance with established multiple-use principles.
- The recommendations in this Optimal Location Review document do not override the Tahoe National Forest's adopted Land Management Plan objectives.
- Acquisition and/or conservation easements placed on the private parcels depicted in Tables 3 & 4 will develop a "trail corridor" along the optimal route option for the Pacific Crest Trail and will provide protection of the trail experience.

Prepared by:

Keith N. Brown 6/20/11

Keith Brown — Date
Forest Recreation Planner
Tahoe National Forest

Recommended by:

6-23-11

Beth Boyst — Date
Pacific Crest Trail Program Manager
USDA Forest Service
Pacific SW Region

Recommended by:

6/24/11

Liz Bergeron — Date
Executive Director
Pacific Crest Trail Association

Recommended by:

6/30/11

Genice Froehlich — Date
District Ranger
Yuba River Ranger District
Tahoe National Forest

Recommended by:

6-27-11

Deb Bumpus — Date
District Ranger
Beckwourth Ranger District
Plumas National Forest

Approved by:

7/18/11

Tom Quinn — Date
Forest Supervisor
Tahoe National Forest

Approved by:

for 6/27/11

Alice Carlton — Date
Forest Supervisor
Plumas National Forest

Pacific Crest Trail

Realignment EA

Appendix E

BE Executive Summaries

EXECUTIVE SUMMARY 0F WILDLIFE BE FOR THE PCT REALIGNMENT PROJECT
PREPARED BY: Marilyn Tierney, District Wildlife Biologist; mtierney@fs.fed.us.
February 29, 2012
PCT Realignment Project; Sec. 29, 30, 31, 32 of T 20N, R 12E; Sec. 5, 8, 17, 18 of T 19 N, R 12 E
The most recent list was obtained from the U. S. Fish and Wildlife Service on April 27, 2012.

Table 1. Executive summary of species analyzed in this Biological Evaluation / Biological Assessment.

SPECIES	SPECIES STATUS[1]	PRESENT IN PROJECT AREA: Habitat &/or detections	MANAGEMENT REQUIREMENTS, STANDARDS, GUIDELINES, SPECIES SPECIFIC PROJECT DESIGN STANDARDS	EFFECTS DETERMINATION
Valley elderberry longhorn beetle	T	No		No effect
Bald eagle	S	No nesting habitat; sightings		No effect
California spotted owl	S	No		No effect
Great gray owl	S	No		No effect
Northern goshawk	S	No		No effect
Willow flycatcher	S	No		No effect
Greater sandhill crane	S	No		No effect
Pacific fisher	S, C	No		No effect
American Marten	S	Habitat		May affect, no trend toward listing
Sierra Nevada red fox	S	Habitat		May affect, no trend toward listing
California wolverine	S	Habitat		May affect, no trend toward listing
Pallid bat	S	Habitat		No effect
Townsend's big-eared bat	S	Habitat		No effect
Western red bat	S	Habitat		No effect
California red-legged frog	T	No		No effect
Lahontan cutthroat trout	T	No		No effect
Northwestern pond turtle	S	No		No effect
Foothill yellow-legged frog	S	No		No effect
Mountain yellow-legged frog	S, C	No	Implement Best Management Practices; coordinate activities at stream crossings with biologist	No effect
Northern leopard frog	S	No		No effect
Great Basin rams-horn snail	S	No		No effect
Lahontan Lake tui chub	S	No		No effect
Hardhead	S	No		No effect
California floater	S	No		No effect

[1]Key: E = USFWS Endangered, T = USFWS Threatened, C = USFWS Candidate, S = USFS R5 Sensitive

EXECUTIVE SUMMARY OF BIOLOGICAL EVALUATION FOR SENSITIVE PLANTS AND FUNGI FOR THE PACIFIC CREST TRAIL OPTIMAL LOCATION PROJECT

Prepared by Kathy Van Zuuk

SPECIES	HABITAT/ DETECTIONS ARE PRESENT	EFFECTS DETERMINATION AND/OR SURVEY RESULTS
Arabis rigidissima var. *demota*	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Astragalus webberi	N/A	No effect. The Project Area is too high in elevation to provide potential habitat for this plant. .
Botrychium ascendens	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Botrychium crenulatum	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Botrychium lunaria	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Botrychium minganense	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Botrychium montanum	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Bruchia bolanderi	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Calochortus clavatus var. *avius*	N/A	No effect. The project is not located on the American River Ranger District.
Clarkia biloba ssp. *Brandegeae*	N/A	No effect. The Project Area is too high in elevation to provide potential habitat for this plant. .
Collybia racemosa	N/A	No effect. The Project Area does not contain older mixed-conifer forest habitats.
Cudonia monticola	N/A	No effect. The Project Area does not contain older mixed-conifer forest habitats.
Cypripedium fasciculatum	N/A	No effect. The Project Area does not contain older mixed-conifer forest habitats.
Cypripedium montanum	N/A	No effect. The Project Area does not contain older mixed-conifer forest habitats.
Epilobium howellii	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Erigeron miser	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Eriogonum umbellatum var. torreyanum	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Fissidens aphelotaxifolius	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Fritillaria eastwoodiae	N/A	No effect. The Project Area was surveyed and this plant was not found.
Helodium blandowii	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.

SPECIES	HABITAT/ DETECTIONS ARE PRESENT	EFFECTS DETERMINATION AND/OR SURVEY RESULTS
Ivesia aperta var. *aperta*	N/A	No effect. The project is not located on the eastside of the Forest.
Ivesia aperta var. canina	N/A	No effect. The project is not located on the eastside of the Forest.
Ivesia sericoleuca	N/A	No effect. The project is not located on the eastside of the Forest.
Ivesia webberi	N/A	No effect. The project is not located on the eastside of the Forest.
Lewisia cantelovii	N/A	No effect. The Project Area is too high in elevation to provide potential habitat.
Lewisia kelloggii ssp. *hutchisonii* and *Lewisia kelloggii* ssp. *kelloggii*	Potential habitat is present.	May effect but will not contribute to a trend for listing as federally threatened or endangered.
Lewisia longipetala	N/A	No effect. The project is too low in elevation to provide potential habitat.
Lewisia serrata	N/A	No effect. The project is not located in an American River watershed.
Lupinus dalesiae	Potential habitat is present.	No effect. The Project Area was surveyed and this lupine was not found.
Meesia triquetra	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Meesia uliginosa	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Mielichhoferia elongata	N/A	No effect. The Project Area does not have plant communities associated with rock containing heavy metals.
Monardella follettii	N/A	No effect. The project does not have serpentine soils, therefore it does not have potential habitat.
Peltigera hydrothyria	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Penstemon personatus	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Phacelia stebbinsii	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.
Phaeocollybia olivacea	N/A	No effect. The Project Area does not contain older mixed-conifer forest.
Pyrrocoma lucida	N/A	No effect. The project is not located on the eastside of the Forest.
Tauschia howellii	Potential habitat is present.	No effect. The Project Area was surveyed and this plant was not found.

For information about this plant and fungus Biological Evaluation, contact:

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Executive Summary for Watchlist Plants/Plant Communities Report
PACIFIC CREST TRAIL OPTIMAL LOCATION PROJECT
March 1, 2012

Plant Species	Habitat is affected by the project.	Habitat is not in or adjacent to the project area and is not directly affected by the project
Sanborn's onion (*Allium sanbornii* var. *congdonii*)	N/A	The project does not contain serpentine soils at elevations between 1,000-5,000 feet
Sanborn's onion (*Allium sanbornii* var. *sanbornii)*	N/A	The project does not contain serpentine soils at elevations between 1,000-5,000 feet.
Rock-jasmine (*Androsace occidentalis* var*. simplex*)	Potential habitat was surveyed and this plant was not found	N/A
Green spleenwort (*Asplenium trichomanes-ramosum*)	N/A	The project does not contain limestone crevices below 8,000 feet.
Red Hills soap plant (*Chlorgalum grandiflorum*)	N/A	The project does not contain serpentine soils 2,000 feet and below.
Fell-fields Claytonia (*Claytonia megarhiza*)	N/A	The project does not contain talus slopes/rock crevices above 8,000 feet.
California pitcher plant (*Darlingtonia californica*)	Potential habitat was surveyed and this plant was not found	N/A
English sundew (*Drosera anglica*)	Potential habitat was surveyed and this plant was not found	N/A
Round-leaved sundew (*Drosera rotundifolia*)	Potential habitat was surveyed and this plant was not found	N/A
Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*)	Project Area was surveyed even though the highest elevation for this plant is 5700' and the lowest elevation in the Project Area is 6000' and this plant was not found	N/A
Red-anthered rush (*Juncus marginatus* var. *marginatus*)	N/A	The project area does not have wet areas below 3,300 feet.
Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*)	N/A	The project area does not contain openings at 3,500 feet and below.
Cut-leaf monkey flower (*Mimulus lacinatus*)	Potential habitat was surveyed and this plant was not found	N/A
Bacigalupi's yampah (*Perideridia bacigalupi*)	N/A	Serpentine soils between 1,700 and 3,500 feet are not present.
Slender-leaved pondweed (*Potamogeton filiformis*)	Potential habitat was surveyed and this plant was not found	N/A
White beaked-rush (*Rhynchospora alba*)	Potential habitat was surveyed and this plant was not found	N/A
Brownish beaked-rush (*Rhynchospora capitellata*)	Potential habitat was surveyed and this plant was not found	N/A
Marsh skullcap (*Scutellaria galericulata*)	Potential habitat was surveyed and this plant was not found	N/A
Peatmoss (*Sphagnum* species)	Potential habitat was surveyed and this plant was not found	N/A

Plant Species	Habitat is affected by the project.	Habitat is not in or adjacent to the project area and is not directly affected by the project
Tahoe tonestus (*Tonestus eximius)*	N/A	The project area does not have granitic areas at elevations above 8,000 feet.
Lesser Bladderwort (*Utricularia minor*)	N/A	The project area was surveyed and no ponds are present.

Cusick's speedwell (*Veronica cusickii*)	The Project Area was surveyed and this plant was not found.	N/A
Fens/Peatlands and Special Aquatic Features	N/A	Riparian vegetation, fens, springs, seeps and streams are present in areas that would be impacted by implementation of the project.
Aspen (*Populus tremuloides*)	Potential habitat was surveyed. There is an aspen clone adjacent to the proposed staging area.	N/A

For more information about this watchlist plant and plant community report, contact:

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Pacific Crest Trail

Realignment EA

Appendix F

References Cited

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