Pacific Crest National Scenic Trail

Optimal Location Review Process Guidelines

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Pacific Crest Trail Optimal Location Review Guidelines Signature Page

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Executive Summary: This document outlines the format, process, and considerations for an Optimal Location Review (OLR) on the Pacific Crest National Scenic Trail (PCT). This analytical process is critical to ensure that the trail is located in the setting that best meets the congressional intent for location, outstanding recreation opportunities, and scenic resources. Pioneered by the US Forest Service and the Appalachian Trail Conference on the Appalachian National Scenic Trail, this analysis process reviews land ownership, scenic resource values, natural and cultural resource concerns, and trail location and determines the optimal location for the PCT. Actual relocation of the PCT will require NEPA compliance, and significant relocation proposals will require USFS Chief or Congressional approval.

Special thanks to the following people who have contributed to the writing and editing of this document: Liz LaPorta, USFS TEAMS Enterprise Recreation Planner; Mike Dawson, PCTA Trail Operations Director; Beth Boyst, USFS PCT Program Manager; Leanne Veldhuis, USFS Presidential Management Fellow.

I. INTRODUCTION

This white paper is written with the intent of standardizing the process to relocate segments of the Pacific Crest National Scenic Trail (PCT), to better ensure protection of the trail and trail corridor for an outstanding recreation, scenic and wilderness experiences. The trail relocation review developed for the PCT, hereafter referred to as the Optimal Location Review (OLR), establishes a systematic and objective framework for determining the best location for the PCT and for acquiring lands to meet the criteria outlined in the PCT Comprehensive Plan. The optimal location of the trail should be located within a corridor which can sustain the most desirable recreation setting, including natural-appearing scenery, safe public access, suitable water sources, and reasonable separation from residential, commercial and industrial development that could impair the desired experience of the Trail. This document describes the need for relocating segments of the trail and the desired outcome of an OLR (Sections I, II, and III). It explains the entire OLR process (Section IV) and the final steps involved in completing the analysis (Sections V, VI, and VII). Lastly, it explains the role of OLR in the NEPA process (Section VIII).

II. BACKGROUND

The National Trails System Act of 1968 (the Act) assigned the US Forest Service (USFS) as the lead managing agency for the Pacific Crest Trail's administration. To coordinate the management and operations of the PCT, a Memorandum of Understanding (MOU) Agreement was established between the USFS, Bureau of Land Management (BLM), National Park Service (NPS), California State Parks and the Pacific Crest Trail Association (PCTA). Jurisdiction for managing segments of the PCT has been divided among the land managing agencies based on which agency manages underlying lands or interest in lands. The USFS may decide to pursue further analysis leading to relocation of PCT right-of-way segments. A successful analysis would include consultation with the relevant partners, such a cooperation with the federal or state agency having jurisdiction over the lands involved.

The PCT's selected initial route location was published in the Federal Register of January 30, 1973 (Vol. 38, #19, Part II). The Trail currently extends a total distance of 2,650 miles. According to the PCT Comprehensive Plan, "the routes of national scenic trails… should avoid, insofar as practicable, established highways, motor roads, mining areas, power transmission lines, existing commercial and industrial developments, range fences and improvements, private operations, and any other activities that would be incompatible with the protection of the trail in its natural condition and its use for outdoor recreation."

Of the total trail miles, approximately 300 miles cross non-federally owned lands (i.e. private, county, state-owned land). Several issues, including a lack of adequate funding and/or unwilling sellers during initial construction, resulted in locating several segments of the Trail on "interim" routes along public roads, and on narrow, non-restrictive private easements (with the majority providing only 10 to 20 feet of right-of-way) that provide little if any protection of the Trail experience or its users. These interim routes have created conflicts with motorists and landowners, leading to concerns that portions of the current route fail to meet the intent of the Act. To further exacerbate the problem, many trail segments are located in less-than-optimal locations, and constantly evolving land uses have resulted in residential, commercial or industrial encroachment within and upon the PCT trail corridor.

In response to these problems, the MOU partners have identified segments located on or adjacent to public roads, utility corridors, and areas of development as trail segments with an immediate need for relocation to improve user safety and the quality of the recreation

experience, and to protect the PCT by improving the trail corridor where the trail crosses private lands. In addition, to meet the intent of the National Trails System Act, the PCT location on all existing federal lands will be reviewed using this process to assure that it is optimal, maximizing the quality of the PCT experience.

III. THE GOAL OF AN OLR

The decision for the optimal trail location is based upon the desired PCT experience and achieving consistency with the criteria outlined in the PCT Comprehensive Plan. The federal managing agencies must determine if: (1) relocation is necessary to preserve the wilderness and scenic recreation 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. To accomplish an OLR, the entire length of the PCT should be reviewed within a section of trail extensive enough to assure that significant opportunities are not missed, to determine if there are any unknown problems areas or possible opportunities. An OLR can recommend a combination of land acquisitions, conservation easements and/or trail relocations to optimize and preserve the PCT experience for the purposes for which the PCT was established and to protect the PCT from residential, commercial and industrial encroachment by establishing a trail corridor. The OLR identifies the best possible location for the PCT regardless of land ownership or construction needs. Acquisition of the land or sufficient interest in lands surrounding the Trail and completion of relocations may at times require a long or uncertain wait. This should not deter land managers from pursuing the location deemed most desirable. Land ownership conditions change over time and provide opportunities to acquire the optimal location. Land management agencies should pursue alternate locations to those identified as "optimal" only if exceptional circumstances warrant using an alternate route.

Optimal Location Review Objectives:

The purpose of conducting an OLR is to:

1. Determine an optimal trail location prior to land or easement acquisition and/or trail construction, that:
    a. Meets the intent of Congress that the PCT act as a recreation resource of superlative quality and physical challenges (PCT Comprehensive Plan)
    b. Achieves consistency with design criteria for location outlined in the PCT Comprehensive Plan.
    c. Ensures a trail location that meets stability and maintenance requirements which blends with the environment in a cost-effective and environmentally responsible manner.
    d. Selects the best solution that will resolve concerns and provide for an optimal trail location and continuous public access.
2. Evaluate the physical, biological and social environments to locate the trail within a corridor which can sustain the most desirable recreation setting, including natural appearing scenery, safe public access, suitable water sources, and reasonable separation from residential, commercial and industrial developments that could impair the desired PCT experience.
3. Provide an accurate and complete inventory of Pacific Crest Trail locations and alternatives using GPS technology that meets USGS National Map Accuracy Standards of 40 feet at 1:24,000 scale (USGS Fact Sheet FS-171-99, November 1999). USFS will

use GIS technology to maintain GPS inventoried data. Maps created using GIS technology will identify areas of greatest concern and potential trail management opportunities.

4. Provide site photography to communicate desired recreation settings and scenery, and to identify adverse conditions to be avoided or minimized by the OLR.
5. Provide a method to facilitate an OLR process and a format to document agreements between partner agencies and organizations.
6. Establish the purpose and need to begin NEPA environmental planning and obtain funding.

IV. OLR PROCESS

The steps for the OLR process are outlined below:

1. Determine the Scope of the OLR:

MOU partners may initiate an OLR process to resolve impaired PCT experiences and conditions resulting from:

- land uses and developments that excessively alter the desired recreation setting and scenery
- severe ecosystem disturbance events such as floods or fires
- safety concerns
- conflicts with motorized vehicles and mechanized recreation activities
- unique circumstances such as newly identified habitat for an endangered species

An OLR process may also be pursued to take advantage of opportunities to protect the existing trail location, to improve the trail experience through trail relocation, or to expand the trail corridor. Frequently, an OLR will evaluate lands across administrative boundaries providing sufficient size to consider alternatives regardless of land ownership. To accomplish an OLR, the entire length of the PCT should be reviewed within a section of trail extensive enough to assure that significant opportunities are not missed, to determine if there are any unknown problems areas or possible opportunities. It is important to locate anchor points for the OLR that are very likely not to be moved such as a very important viewpoint or a critical road or river crossing.

2. Form the OLR Team:

The OLR Project Team Leader coordinates and provides oversight for the OLR process. The Team Leader will coordinate with the PCTA regional representative and the federal land agency (or agencies) having jurisdiction for the trail relocation, to become familiar with sections in need of protection. The OLR Team Lead should select team members who have expertise on what an optimal location for the trail would be, including key nongovernmental personnel such as the PCTA regional representative. Early in the process, the Team Leader will develop a schedule for meetings and fieldwork to assure adequate participation and representation of the partners on the team.

3. Preliminary Office Review:

- For the segment under review, Team Leader will determine if the current route is located within the original route selection as published in the Federal Register of January 30, 1973 (Vol. 38, #19, Part II) or a published amendment to the original route. Information

regarding unpublished current route locations should be forwarded to the US Forest Service Pacific Crest Trail Manager for appropriate action.

- Team Leader will provide team members with those sections of the PCT Comprehensive Plan, the National Trails System Act, subsequent legislation and other guiding documents pertaining to the PCT.
- Team Leader will provide team members with land ownership patterns for review.
- Team Leader will provide team members with any associated planning direction (i.e. a National Forest Plan), and desired conditions for Recreation and Scenery (i.e. Recreation Opportunity Spectrum (ROS) class and Scenic Integrity Objectives/Visual Quality Objectives (SIO/VQO) pertinent to the project area, as well as its mapped "Scenic Attractiveness"/"Variety Class").

4. Preliminary Field Meeting:

The Team Leader will set up preliminary field meetings to identify obvious issue areas, e.g. proximity to private land, roads, leasing applications, power lines, wind energy operations, residential developments, etc. The Team Leader will consult with all team members to:

- Discuss the unique recreational niche of the area/place, and its desired recreation setting conditions (access, sights, sounds, bodily contacts and challenges, site facilities and management, social encounters, visitor impacts)
- Discuss the desired scenic character conditions that are sustainable and can best provide an enduring, attractive PCT setting
- Discuss other resource objectives and their potential as additional attractions or vulnerabilities along the PCT
- Review known issues, concerns, and opportunity / problem areas
- Identify potential alternate trail locations to maximize the enjoyment and safety of PCT travelers.

"Opportunity Area" Examples

- Vistas
- Meadows
- Unusual topographic and geologic features
- Streams, rivers, lakes, waterfalls and other nearby scenic or cultural attractions
- Areas where an opportunity for unconfined recreation exists
- Areas where the trail experience would have a minimum of influence from residential, commercial or industrial development or where the landscape retains an appearance of being unaffected by man.

It should be noted that because travel on the PCT is primarily linear in nature, it is possible for a user to have, and the managers to provide, a more remote and unaffected experience than may be indicated by typical application of ROS analysis. Sections of the trail providing experiences at the primitive end of the Recreation Opportunity Spectrum should be protected to preserve that experience and new opportunities to provide such experiences along the PCT should be of a high priority in seeking the optimal location and planning trail protection recommendations.

"Problem Area" Examples

- User safety, e.g. road walks, particularly if extensive in length

- A pronounced lack of desired recreation setting or scenery conditions
- Incompatible uses such as off-highway vehicles, bicycles and other mechanized or motorized equipment
- Excessive disturbance within the PCT corridor or viewshed due to existing or potential residential, commercial or industrial development
- Resource damage due to underlying geophysical conditions or poor design
- Chronic, recurring trail maintenance demands or problems
- Hazards to the public
- Indirect routing
- Excessive steepness resulting in hazardous footing, poor visitor experience or maintenance problems.

5. Contact Land Owners:

Agency Representatives and PCTA staff and/or volunteers should have permission to access private lands if these areas are under consideration. If staff is unable to secure permission for access and field review, use the best information available to complete the analysis.

6. Full Field Review:

All segments under review require an on-site intensive visit to determine if the current location meets all objectives of an "optimal location". The field review should involve key members of the OLR team. The OLR team will develop alternate routes and analyze in comparison with the current route for identification of an optimal location.

- Use GPS technology to collect the spatial location of trail features.
- Note opportunities and problems for the current, and all alternative routes considered.
- Examine whether the trail segment was or could be designed for sustainability.

7. Post-Field Review:

The final steps for completing an Optimal Location Review include:

- Conduct a "Landscape Viewshed Analysis" for the optimal trail location. This will be described in further detail in Section V.
- Design a "Trail Corridor".
- Collect GIS parcel data for the private lands which fall within the "Trail Corridor" (see Section VI).
- Document findings by generating a report and GIS map (see Section VII).

V. LANDSCAPE VIEWSHED ANALYSIS

The purpose of a landscape viewshed is to identify the relative importance of what is seen and perceived in the landscape. A high priority must be given to maximizing the scenic nature of the PCT, given its status as a National Scenic Trail. The OLR will conduct a landscape viewshed

analysis to help determine the best boundaries for (or extents of) a “trail corridor”. The Distance Zones described in the USDA Agriculture Handbook Number 701: “Landscape Aesthetics, A Handbook for Scenery Management” will be used to guide the process (Refer to Figure 1).

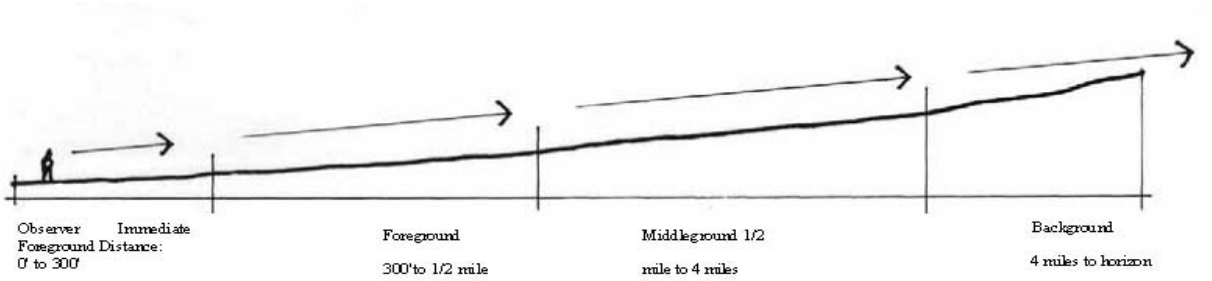


Figure 1: Distance Zones described in the USDA Agriculture Handbook Number 701: “Landscape Aesthetics, A Handbook for Scenery Management” (page 83 of chapter 4; Landscape Visibility and Scenic Classes”)

Landscape viewshed analyses utilize GIS technology to run a viewshed analysis to determine the area that can be “seen” from the optimal trail location. The “seen area” is overlaid with Immediate Foreground and Foreground distance zones to determine which portions of the landscape should be defined and then managed as the formal PCT trail corridor.

Distance Zones:

- Where the viewshed is greater than ½ mile and the trail is located adjacent to or within a developed community or near highways; the PCT trail corridor will be developed within the “Immediate Foreground” for a minimum distance of **300 feet** on either side of the trail centerline.
- In all other locations where the viewshed is greater than ½ mile, the “trail corridor” can be developed within the “Immediate Foreground” and “Foreground” for at least **½ mile** on either side of the trail centerline.
- Where geophysical barriers limit the extent of the foreground zone, limits of the corridor should include the potential effect of structures, such as wind towers, on unseen land projecting above landscape features.
- Because vegetation is ephemeral and may disappear due to factors such as insects, disease and fire, visual analysis should not consider current vegetation in establishing distance zones or the trail corridor.

Scenic Integrity/Disturbance:

- Consider the PCT’s scenic integrity/disturbance visible within all distance zones during evaluation of proposed projects. Scenic Integrity levels of “Very High”, “High”, or “Moderate” are typically compatible with PCT user preferences for a dominant natural appearance (refer to Scenery Handbook 701 Chapter 2 for Scenic Integrity criteria). Thresholds for visible disturbance (called Scenic Integrity Objectives/SIOs) should be established whenever possible, for both the PCT trail corridor and its entire viewshed (all applicable distance zones).

VI. LANDS ACQUISITION INVENTORY

After selection of the optimal location and identifying the trail corridor boundaries, the OLR shall identify all of the private lands located within this boundary. The OLR team will categorize the land parcels as either acquisition "Priority 1" or "Priority 2". "Priority 1" parcels are those non-federal parcels located directly on or immediately adjacent within 100 feet of the optimally determined location for the trail itself. "Priority 2" parcels do not cross the trail but are located within the Trail Corridor determined by the visibility analysis. The OLR team leader will list parcels in a table that includes: a parcel ID that will cross-reference with the assessor's parcel number (APN) on a map provided of the OLR area; a legal description; whether there is an easement; assessor parcel number; acres; landowner; and acquisition priority. An example table is shown below:

Priority Level	Acquisition Inventory or map ID	Legal Description	Assessor's Parcel Number (APN)	Parcel Acres	Land Owner	Easement present?
1	A	S 20, T19N, R15E	XXX-XXX-002	54	Mr. Smith	Yes
2	D	S 20, T19N, R13E	XXX-XXX-003	125	Mrs. Smith	Yes
3	E	S 21, T18S, R12W	XXX-XXX-017	219	Dr. Liz Lou	Yes

The PCT Manager will maintain a "Lands Acquisition Inventory" database of the PCT protection priorities. Priorities identify areas most in need of protection and assists with securing funding and resources to pursue land acquisitions.

VII. DOCUMENTATION

The OLR report shall be formatted and numbered as follows. It is not necessary to include a background of the PCT's history or the purpose of the OLR process:

1. **Description of the Current Route:** Describe the location of the current route (from south to north) and whether the trail is located along the route identified and published in the Federal Register, or if it is an "interim" route.
2. **Background and Statement of Need:** Describe why there is a need to do an Optimal Location Review by identifying the known problems, issues, concerns and opportunities with the existing trail location. Issues and concerns include such things as: unsafe road crossings, road walks, reservoir crossings, protection of unique areas, and encroachment by development. Describe the outcome of any public meeting(s) that may have been held.
3. **Trail Objectives:** Describe the objectives for the trail in the area under review. This section should list the potential improvements or added benefits of moving the trail. For example, this could include improving safety by moving the trail from a highway shoulder, or providing a unique recreation experience by allowing the hikers to see an interesting geological formation. These objectives should follow the guidelines outlined in the PCT Comprehensive Plan and the National Trails System Act.

4. **Alternative Routes Considered:** Compare different route possibilities that will meet trail objectives, including the current route. List "pros" and "cons" of each. Each route considered will be referenced by an "Alternative Number" that is cross-referenced to the report's map. The discussion will include an evaluation of physical, site-specific trail considerations that locates the trail within a corridor which provides safety, a natural setting, suitable water sources, and avoids residential, commercial and industrial development. Opportunities documented should include any ability to provide a better trail experience that can be preserved in the long term.
5. **Optimal Trail Location:** Provide a description of which alternative provides for an optimal trail location, and describe how it resolves concerns and meets trail objectives. It may be determined that the existing route is already the optimal trail location.
6. **Trail Acquisition Corridor:** For the selected optimal trail location, identify its trail corridor and any parcels proposed for acquisition within this trail corridor. Identify any "Priority 1" and/or "Priority 2" acquisition parcels. Format this section as a table, discussed previously in Section VI.
7. **Maps:** Include a topographic map(s) produced using GPS and GIS technologies which meets national mapping accuracy standards (+/- 40 feet). GIS maps will provide a visual depiction of the PCT trail corridor, locations, alternatives, and areas of greatest concern and potential opportunities as described within the OLR Report. The appropriate map(s) will accompany each OLR report/document. Identify parcels proposed for acquisition with a parcel ID cross-referenced to the report's acquisition table.
8. **Photographs:** Include digital photography of the existing recreation setting and its scenic character, as well as problem areas demonstrating opportunities to improve PCT conditions and settings through the OLR process,
9. **Signatures:** Upon completion of the OLR report, the OLR Team Leader will obtain final review and signature of the document.
    - Signatures of recommendation: These should include the USFS PCT Program Manager, the PCTA Executive Director, and the local line officer in whose managing unit the trail relocation shall occur (i.e. the District Ranger(s) from the National Forest ranger districts involved).
    - Signatures of approval: The OLR requires approval from federal line officers with the authority for signature. This is a Forest Supervisor for USFS relocations, a Park Superintendent for NPS, and a Field Office Manager for the BLM. See Exhibit A for a template signature sheet.

VIII. CONCLUSION

It is a Federal Action to relocate a portion of a National Scenic Trail. All Federal Actions, whether located on federal or non-federal land, are subject to compliance with the National Environmental Policy Act (NEPA). The OLR process functions as the analysis which establishes the purpose and need to begin a NEPA analysis for relocating a segment of the PCT. The OLR report does not substitute for NEPA compliance or legal requirements for publishing major shifts in the location of the PCT in the Federal Register. After an agency completes NEPA compliance, the final OLR and NEPA documents set the stage for publishing a notice for trail relocation in the Federal Register, and the ultimate implementation of activities to improve PCT settings and conditions.

Exhibit A: Example Signature Sheet Template

Prepared by:

_____ _____

Keith Brown Date

Forest Recreation Planner
Tahoe National Forest

Recommended by:

_____ _____

Beth Boyst Date

Pacific Crest Trail Program Manager
USDA Forest Service
Pacific SW Region

Recommended by:

_____ _____

Liz Bergeron Date

Executive Director
Pacific Crest Trail Association

Recommended by:

_____ _____

Genice Froehlich Date

District Ranger
Yuba River Ranger District
Tahoe National Forest

Recommended by:

_____ _____

Deb Bumpus Date

District Ranger
Beckwourth Ranger District
Plumas National Forest

Approved by:

_____ _____

Tom Quinn Date

Forest Supervisor
Tahoe National Forest

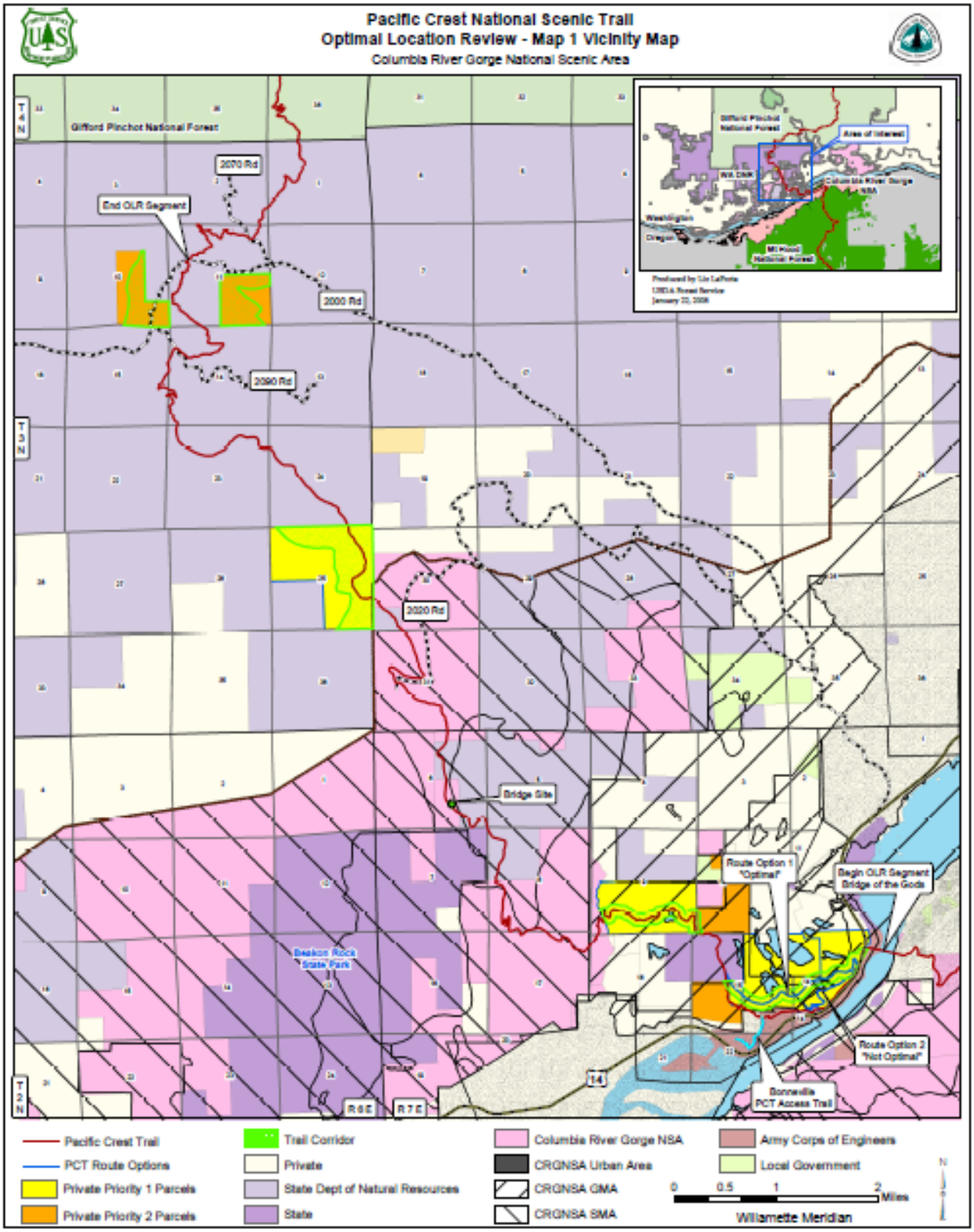
Approved by:

_____ _____

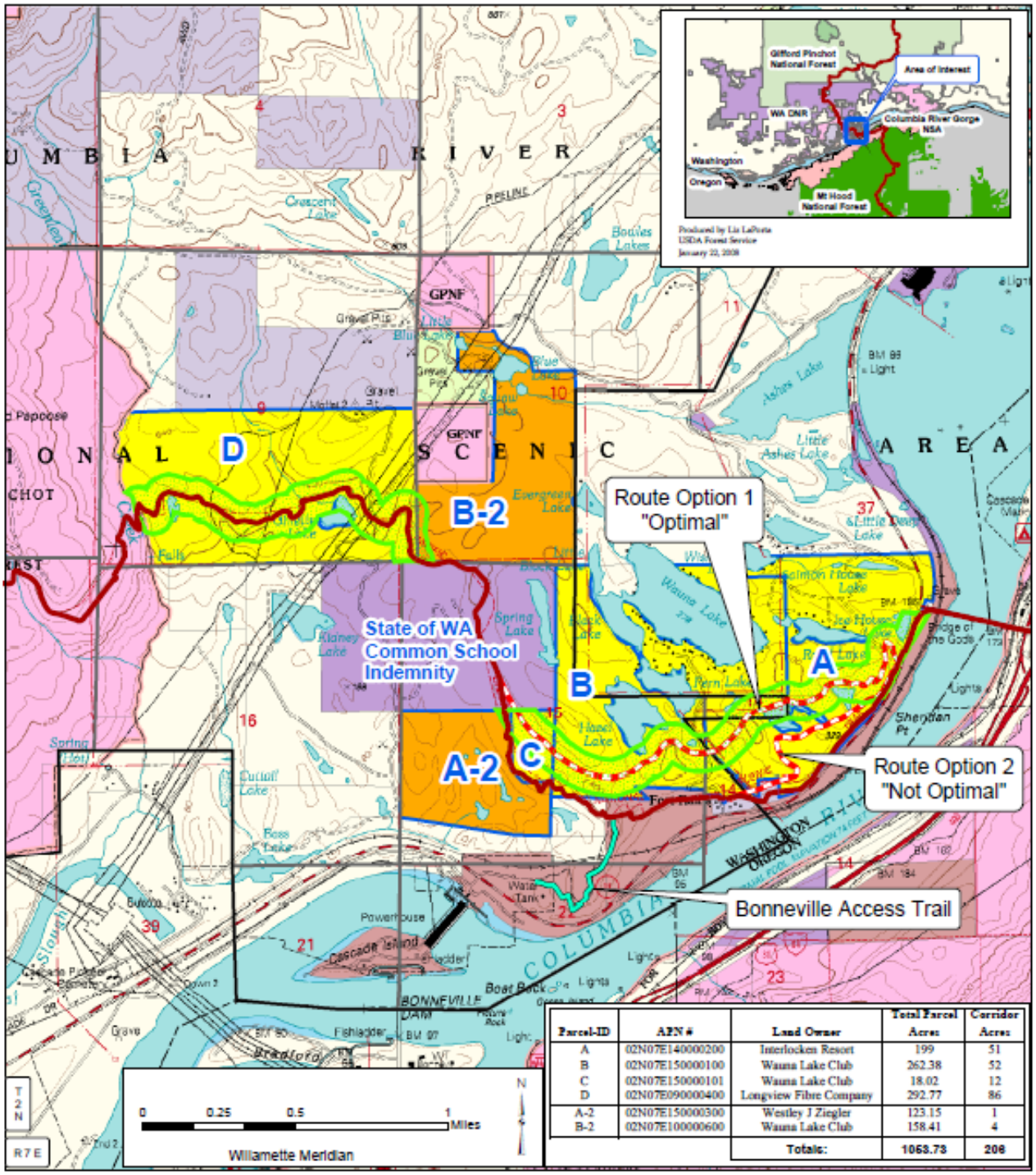
Alice Carlton Date

Forest Supervisor
Plumas National Forest

EXHIBIT B. Example Maps for an OLR



Pacific Crest National Scenic Trail
Optimal Location Review -- Map 2
Columbia River Gorge National Scenic Area



Parcel-ID	APN #	Land Owner	Total Parcel Acres	Corridor Acres
A	02N07E140000200	Interlocken Resort	199	51
B	02N07E150000100	Wauna Lake Club	262.38	52
C	02N07E150000101	Wauna Lake Club	18.02	12
D	02N07E090000400	Longview Fibre Company	292.77	86
A-2	02N07E150000300	Westley J Ziegler	123.15	1
B-2	02N07E100000600	Wauna Lake Club	158.41	4
		Totals:	1053.73	208

Pacific Crest Trail
PCT Route Options
Trail Corridor
Private Priority 1 Parcels
Private Priority 2 Parcels
Private
Columbia River Gorge NSA
Gifford Pinchot National Forest
State Dept of Natural Resources
State Lands
Local Government
Army Corps of Engineers