



# Environmental Assessment

Lower Thunder Creek Trail and Camp Modifications

Public Scoping

April 2020

## **Public Input Sought on Relocation of Trail and Camp in Thunder Creek Area**

**Sedro Woolley, WA** – The public is invited to comment on a preliminary proposal for repair and reroute of a portion of the lower Thunder Creek Trail, relocation of a hiker camp, and creation of an administrative camp along the trail. The entire project is proposed within the Stephen Mather Wilderness.

Per the requirements of the National Environmental Policy Act (NEPA), North Cascades National Park Complex intends to prepare an Environmental Assessment (EA) to analyze the effects of the proposal and other alternatives. The proposed action (fully detailed below) would reroute approximately 1,500 feet of trail, relocate a hiker and group camp in the vicinity of McAllister Camp on the Thunder Creek Trail, and construct a new administrative camp near Junction Camp.

The purpose of this action is to minimize the impacts of hiker and stock use along the trail, thereby preserving the character of the designated wilderness.

Feedback on the proposed action, environmental issues that should be addressed, other potential alternatives, and sources of data that should be considered by the NPS are requested. Specific feedback on the proposed action as it relates to visitor experience is also sought. Comments will be accepted April 2 through May 1, 2020.

### **Comment at:**

<https://parkplanning.nps.gov/ThunderRelo2020Scoping>

Hardcopy comments can be mailed to:

Superintendent  
810 State Route 20  
Sedro Woolley, WA 98284

Substantive public comments will assist in shaping the alternatives in the EA and the assessment of impacts. The EA will be provided for public review in late summer 2020.

## **PURPOSE AND NEED FOR ACTION**

The purpose of this action is to preserve wilderness character in the lower Thunder Creek valley by minimizing the impacts associated with recreation. This is accomplished by maintaining the trail at a level that allows both hiker and stock use and the continued policy of maintaining designated campsites within the wilderness.

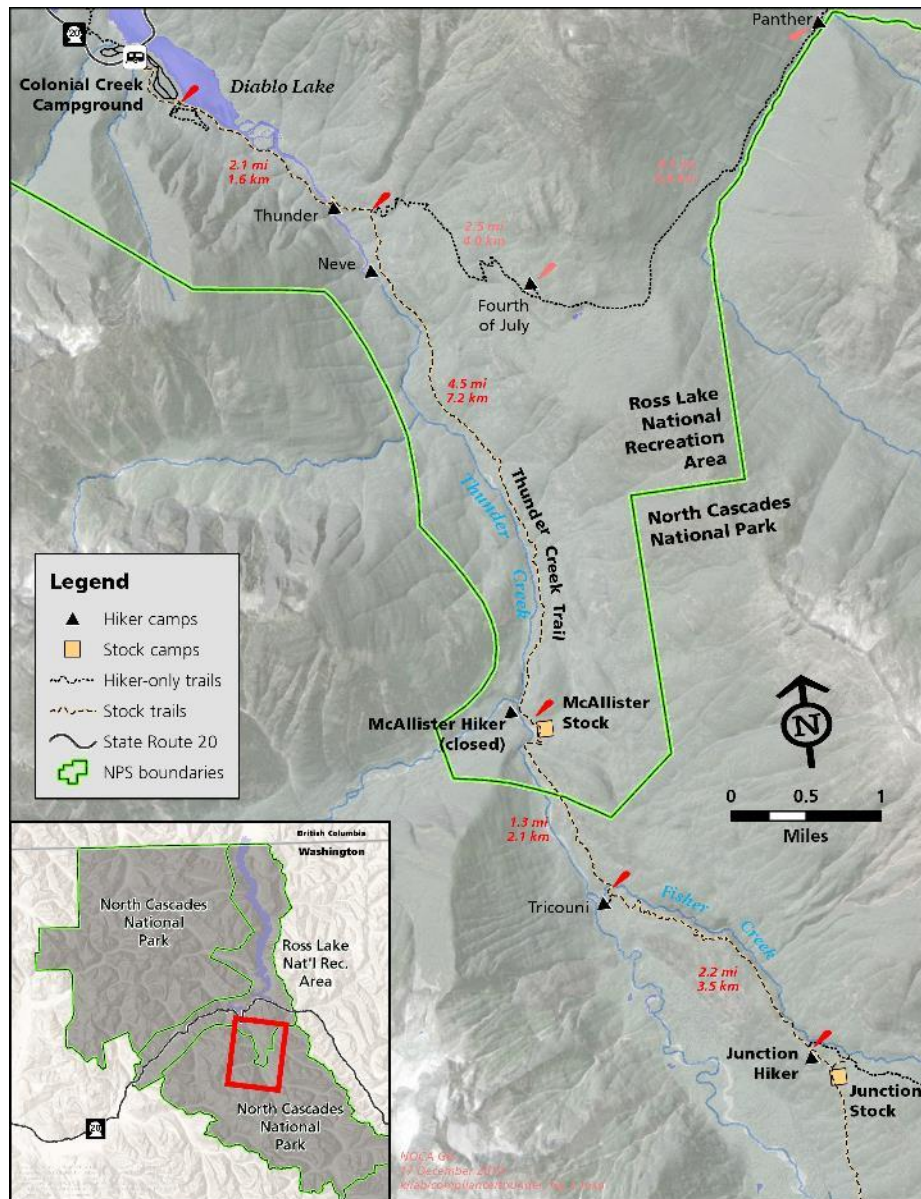
The need for the project arises from the Park Service's responsibilities under the Organic Act of 1916 and the Wilderness Act of 1964. Maintaining the character of wilderness, allowing for recreation, and minimizing impacts to resources are further addressed in the North Cascades National Park Wilderness Management Plan (1989) and [Ross Lake National Recreation Area General Management Plan \(2012\)](#). As a whole these provide the legislative and policy framework for the NPS and its actions, including the proposed action.

## **BACKGROUND AND ISSUES DRIVING NEED FOR ACTION**

The Thunder Creek Trail is located in North Cascades National Park Service Complex and includes portions of Ross Lake National Recreation Area and North Cascades National Park (Figure 1). The trail and designated campsites are almost entirely located in the Stephen Mather Wilderness. The NPS maintains trails to standards established in the park's Trails Handbook; those standards include maintaining for pack stock and hiker use. Backcountry camping along the trail is only allowed in designated camps, which protects natural and cultural resources by concentrating

recreational use to specific areas. Backcountry camping is only allowed by permit in the park complex, including along the Lower Thunder Creek trail. “The objective of the backcountry permit system is to disperse visitor use, reduce crowding and conflicts, and provide information and education about safe and low impact wilderness and backcountry use, thereby providing a quality wilderness experience that protects natural resources.” (Ross Lake NRA GMP 2012).

Flooding, erosion, and resource protection concerns have informed the proposed action by the NPS. The trail follows the top edge of a large bluff above Thunder Creek just west of McAllister Stock Camp. The bluff is eroding, and there is limited space to continue to incrementally move the trail (Figure 2).



In November 2017 a large flood on Thunder Creek completely washed out the pedestrian bridge that provided access from the main trail to McAllister Hiker Camp. The debris of the bridge now sits on a gravel bar in Thunder Creek and is comprised of wood and two 50-foot long, 2,300-pound steel I-beams. A survey that same year identified approximately thirty large diameter hazard trees in the McAllister Hiker Camp, necessitating closure of the entire camp.

The camp includes a single large group site for up to twelve people and four smaller sites designed to accommodate up to four backpackers each. Normally, in accordance with established policy, the NPS would fell hazard trees in designated camps to abate the risk of falling dead and dying trees. In this instance, the hazard trees in the vicinity of McAllister Hiker Camp are valuable wildlife habitat and the NPS prefers not to cut such a large number of trees, and instead prefers to move the camp. In turn, relocation of the camp supports wilderness character by maintaining the area so it “generally

appears to have been affected primarily by the forces of nature, with the imprint of man’s work... substantially unnoticeable” (Section 2(c), Wilderness Act of 1964).

Recreation along Thunder Creek Trail and camping within the designated camps is increasing in popularity. All camps in lower Thunder Creek have seen year-over-year increases in recreational use. From 2007 to 2017 backcountry overnight use along Thunder Creek increased from 430 to 1,100 visitor use nights per year at McAllister Hiker Camp, an increase of 155%. The NPS Trail Crew often occupies McAllister and Junction Stock camps when conducting annual trail maintenance work, often for weeks at a time. This results in competition with the public for camp space in the valley.



Figure 2. Photo showing the eroding bluff above Thunder Creek in the vicinity of the McAllister camps. The trail follows the edge of the bluff on the middle left side of the photo.

# Preliminary Alternatives

## PROPOSED ACTION

This alternative entails short-term impacts from the proposed use of helicopters and motorized tools in wilderness, but the trail and camp modifications are designed to preserve wilderness character in the long-term. The proposed action would:

- reroute ~1,500 feet of Thunder Creek Trail in the vicinity of McAllister Stock Camp, including a new small puncheon bridge;
- relocate McAllister Hiker Camp to the vicinity of McAllister Stock camp;
- expand McAllister Stock Camp by building a cook area 100 feet from tent pads;
- install “bear wires” at the camps to encourage proper food storage. A bear wire is a metal cable suspended between two trees to make it easier for campers to hang their food out of reach of animals at night and when away from camp;
- construct a new administrative camp near Junction Stock Camp;
- include limited restoration of abandoned campsites, trails, and the old bridge site;
- disassemble the washed-out bridge and remove the debris (including two large steel I-beam stringers) from the wilderness by helicopter;
- require various hand tools, power saws, and other small power tools such as hand drills and take an eight-person crew ~100 days of effort.

To the greatest extent possible the camp location and design have been chosen to fit as many of the preferred design features outlined below. These preferred design features are chosen to minimize resource impacts and conflicts as much as possible for wilderness camp developments.

## NO ACTION ALTERNATIVE

Under the No Action Alternative, the Thunder Creek Trail would undergo incremental rerouting to respond to ongoing erosion. McAllister Hiker Camp would remain closed. Administrative use would continue with NPS staff sharing Junction Stock Camp capacity with the public.

Abandoned campsites would receive limited restoration. Any installations, such as fire grates, tent pads cribbing logs, and trail structures would be removed. Further restoration would rely on natural processes such as forest decay and regrowth. Abandoned trails would be scarified, by spreading logs, brush, and duff across the surface, and then planting native plant seeds or seedlings. Old tent pads would be scarified. The washed-out bridge would likely be disassembled, and the stringers removed from the wilderness by helicopter. The bridge abutments, which include a mix of native rock, concrete, and wood, would be demolished and removed.



## **OTHER ALTERNATIVES CONSIDERED BUT DISMISSED FROM DETAILED ANALYSIS**

### ***Reopen McAllister Hiker Camp***

The alternative of reopening the existing McAllister Hiker Camp and reinstalling the washed-out bridge that spanned Thunder Creek was considered, but at this time the NPS is planning on dismissing it from detailed analysis on the grounds that it would cause too great of an environmental impact. The primary reason for dismissal is that reopening as a designated campsite would necessitate felling approximately 30 large diameter hazard trees and many smaller diameter trees. The camp is located in suitable northern spotted owl habitat (a federally Threatened species) and reopening the camp would require suitable nest trees to be felled. Dismissing this option has the added benefit of not requiring a bridge across Thunder Creek, thereby removing an installation in designated wilderness and reducing maintenance needs and the potential for damage from future floods.

### ***Other Locations Considered***

Two other options were considered to replace and redistribute the camp capacity of McAllister Hiker Camp, but at this time the NPS is planning on dismissing from detailed analysis in the EA:

- A potential new location was identified just north and across from the Tricouni Camp on Fisher Creek. This location was dismissed because it was in suitable nesting habitat for northern spotted owl.
- An option to replace the capacity of McAllister Hiker camps by expanding capacity at existing camps such as Neve, McAllister Stock, Tricouni, and Junction camps was also considered. Alternatives with various combinations of these were dismissed after the proposed action site was identified. Expanding the footprint at several different locations introduces a higher level of uncertainty of environmental impacts. In addition, the location of McAllister Camp along the trail provides a desirable distance for many people (~7 miles) for a first day of backpacking up Thunder Creek Trail.

### ***Capacity Changes***

Construction of an administrative camp near Junction Stock Camp would result in a small increase in capacity in lower Thunder Creek valley. This potential alternative was dismissed because addressing capacity it is beyond the scope of this particular project. Addressing overnight capacity beyond the site-specific level is a larger question that needs to be addressed systematically across the Stephen Mather Wilderness. The NPS plans to take this up in the next few years in a comprehensive wilderness stewardship plan.

### ***Project Work Solely with Non-motorized Tools***

Removal of the washed-out bridge debris (50-foot long, 2,300-pound steel I-beams) was considered with stock animals but deemed likely unfeasible. It may be possible to cut up the I-beams with motorized tools for stock removal, but this would result in long durations of motorized noise in the wilderness, more noise than would be produced by solely using a helicopter for removal.

Chainsaw and motorized tool use for the project work helps the limited number of trail crew members to keep all trails and designated camps in the Park Complex up to established standards. Trails and camps maintained to standards protect natural and cultural resources by reducing erosion and the development of social trails. They also provide opportunities for primitive recreation for stock users and other visitors who prefer or need trails for recreational access. NOCA's trail system has a history of recreational use predating both park and wilderness designation. The NPS established standards for the trail system in 1982, predating wilderness designation. The Wilderness Act specifically states that "the designation of any area of any park, monument, or other unit of the national park system as a wilderness area pursuant to this Act shall in no manner lower the standards evolved for the use and preservation of such park, monument, or other unit of the national park system..." (section 4(a)(3)).

# Stephen Mather Wilderness Camp Preferred Design Features

- New or relocated camps should be sited away from:
  - dynamic geologic processes and landforms that may disrupt the camp or endanger visitors (floodplains, debris cones, and rockfall areas);
  - rare plant habitat; and
  - sensitive archeological sites.
- Locations should be chosen to avoid impacts to suitable or sensitive wildlife habitat (northern spotted owl and/or marbled murrelet suitable nesting habitat, grizzly or black bear, other species as applicable).
- If in forest, camps should be sited so that hazard tree risks are minimized and will be for the foreseeable future.
- Camps should be at least 100 feet away from a water body.
  - Personal experiences and social science show that visitors want to camp as close as possible to waterbodies. Depending on the local conditions (soils, vegetation, wildlife, and visitor use patterns), campsites may be located closer to water but would require a site-specific evaluation and containment strategy (see Marion, Wimpey, and Lawhorn 2018).
- The toilet should be at least 200 feet away from a water body.
- The camp is not so far away from a water source as to be inconvenient to the user.
- The cooking and food storage areas should be combined and at least 100 feet away from tent pads/sleeping areas to reduce risks of human-bear conflict.
  - Cooking and food storage areas may be communal for multiple campsites or each individual site may have its own area. The rule of thumb is 1 cook site for a large group camp and 1 cook site for every 2 small group campsites within the same camp area.
  - A concerted effort is needed to provide guidance to public to show where the proper cook/food storage area is.
  - A cooking area should be visible, not screened either by topography or vegetation, so that a bear can be seen on approach or, conversely, an approaching bear is visible to campers.
  - Whenever possible new camp areas should be contained by terrain or in a vegetation type that resists growth of barren ground from foot traffic. One example includes constructing sidehill campsites. In areas of flat and open terrain, camp trails, tent pads, and cooking areas should be delineated using logs and rocks where appropriate.
- Meets privacy standards:
  - The entire camp should be out of sight of the main trail.
  - Individual campsites should be out of sight of each other to preserve solitude for visitors.
- As appropriate and applicable a camp may have the following installations for visitor use mitigation:
  - Fire rings should be constructed of local rock where fires are allowed.
  - Food storage – Depending on the site the NPS will provide either a bear wire or a metal wildlife resistant storage box or will require use of a bear resistant food container.
  - The toilet type needs to be appropriate to the amount of visitor use and the setting.
    - Open air pit toilet boxes (Wallowa toilets) are appropriate to low to moderate visitor use areas with deep enough soil for excavation.
    - Composting toilets are appropriate to many higher use areas, areas with thin soils.
    - Large group camps should have separate toilets from small group camps in the same area.
- Stock Users have different needs, therefore Stock Camps have different PDFs:
  - Need <20% slopes as stock don't navigate steep slopes as well as people.
  - Generally larger area to accommodate animals
  - Close to water so watering is not overly time consuming (for example if animals need to be led singly to water).
  - Well-constructed trail to water access

- Tent pad next to the hitchrails for the packer(s).
- Special considerations for siting and layout of hitch rail/post areas.
- Administrative camps have a few different standards:
  - Admin camps can have Knaack boxes (large metal storage boxes).
  - Some ranger camps have wood platforms (Pelton Basin and Boston Basin)
  - New camps would ideally extend the footprint of existing camps to concentrate all human camping impacts in a locale.

### ***References and Recent Literature***

- Marion, J. L., Y. F. Leung, H. Eagleston, and K. Burroughs. 2016. A review and synthesis of recreation ecology research findings on visitor impacts to wilderness and protected natural areas. *Journal of Forestry* 114(3): 352–362.
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- Marion, J. L., J. Arrendondo, J. Wimpey, and F. Meadema. 2018. Applying Recreation Ecology Science to Sustainably Manage Camping Impacts: A Classification of Camping Management Strategies. *International Journal of Wilderness* 24(2): 84-101.
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- National Park Service. 2012. Ross Lake National Recreation Area General Management Plan.