



Centennial Grove Trail and Berry Glen Connector Trail Environmental Assessment August 2020



Estimated Agency Total Costs
Associated with Developing and
Producing this EA- \$58,200

This page left intentionally blank

This page left intentionally blank

Table of Contents

Introduction_____	2
Purpose of and Need for Action_____	3
Previous Planning_____	3
Public Involvement_____	3
Alternatives_____	4
Proposed Action_____	4
Environmental Impacts_____	7
<i>Air Quality</i> _____	7
<i>Soils and Topography</i> _____	7
<i>Hydrology and Water Quality</i> _____	8
<i>Vegetation</i> _____	8
<i>Wildlife and Fish</i> _____	10
<i>Cultural Resources</i> _____	10
<i>Visitor Use and Experience</i> _____	11
<i>Socioeconomics</i> _____	11
Consultation and Coordination_____	13
References_____	14

Centennial Grove Trail and Berry Glen Connector Trail Environmental Assessment

Introduction

The proposed Centennial Grove Trail and Berry Glen Connector Trail project is the construction of approximately 5266 feet of trail in Redwood National Park (REDW). The trail would connect a proposed visitor center north of Orick, California with existing park trails in the Lost Man, Davison, Prairie Creek, and Redwood Creek areas and beyond. On a regional scale, the trail would serve as a new segment of the California Coastal Trail, an organization that seeks to connect 1200 miles of California coast with a single trail.

The trail would provide direct access to old-growth redwoods from a proposed NPS visitor center. Such access has never been realized in the history of Redwood National Park. The trail will span the distance between the proposed visitor center and the Berry Glen Trail which links into the popular Lady Bird Johnson Grove (LBJ) and other areas of the park.

The trail may serve over 70,000 visitors per year and help to reduce illegal parking and congestion issues at the LBJ parking lot and undesignated parking areas.

The proposed trail is a partnership project with Save The Redwoods League (League). The League is providing philanthropic support to the trail project in addition to providing major donor support for the proposed visitor center which will be located on the site of the former Arcata Redwood Company Mill A off Bald Hills Road just north of Orick, California.

This Environmental Assessment (EA) analyzes the impacts on natural and cultural resources and the human environment from trail construction. Construction elements of the trail that affect resources and environments are summarized in this EA.

This EA discusses a trail that has not yet been constructed. Images used in this document were taken at the Trillium Falls Trail which is located near the proposed Centennial Grove Trail and Berry Glen Connector Trail site. Trillium Falls Trail vegetation is similar in character to the vegetation at the project site, and the path width captured in photos is comparable to the finished width of the proposed new trail. (Photos NPS 2020)



Purpose of and Need for Action

The purpose and need for the construction of the trail are overlapping. The purpose of the action is to construct a trail that will connect the proposed visitor center complex to other park and regional trails. Access from a visitor center is something the park does not currently offer. The trail will create additional recreational opportunities for hiking in Redwood National Park, and it will connect visitors to old growth redwood forest by providing direct access. The trail will also contribute to the California Coastal Trail.

Additionally, the proposed trail may lead to less congestion at the LBJ trailhead and reduce the number of cars parking in undesignated parking areas as visitors may choose to access trails from the proposed visitor center via the trail. The trail could also serve larger groups such as busloads of school children or tour groups from the proposed visitor center site. This too may reduce congestion at other sites.

The need for action derives in part from *Redwood National Park Trail and Backcountry Management Plan* (NPS, 2009) in which new trails and links from park trails to regional trails, including the California Coastal Trail were stated goals. There is also currently a need to manage traffic congestion and reduce parking in undesignated areas. Currently, overcrowded parking lots and parking in undesignated areas is a safety and resource concern.

Previous Planning

This EA is tiered off the *Redwood National and State Parks 1999 Final General Management Plan/General Plan, Environmental Impact Statement/Environmental Impact Report* (GMP/FEIS; NPS and CDPR 1999, 2000). The GMP called for a comprehensive trail plan, which was completed in 2009 (NPS 2009). The *Redwood National Park Trail and Backcountry Management Plan* called for new trails and links from park trails to regional trails, including the California Coastal Trail.

Public Involvement

The NPS did not conduct public scoping specifically for the proposed trail construction. Instead, the trail was included in discussions about the proposed visitor center. The discussions were presented in meetings and announcements from partners and other avenues, including development proposals submitted to Humboldt County Planning Division in 2012 by the Redwood Parks Lodge Company (County of Humboldt 2012).

Redwood Community Action Agency, Save the Redwoods League, and Cal Trout engaged in outreach for the Prairie Creek Gateway Trail Plan and the idea of a proposed connector to the Berry Glen Trail. (RCAA 2017).

In June 2016, the parks and the League celebrated the NPS Centennial at the site of the proposed visitor center. Over 1,000 people attended the Centennial celebration. The trails planning team provided information and received feedback on the potential to link the mill site to the California Coastal Trail and the REDW trails system.

Alternatives

This EA describes the Proposed Action and analyzes the impacts of trail construction. Under a no action alternative, there would be no change from the current management direction. The forest, which is not maintained in any way by the park, would remain as is. Since the trailhead and trail are approximately 1/4 of a mile away from the proposed visitor center there is not a concern that the project site would be impacted by social trails, nor is there an expectation that forest closer to the proposed visitor center will be impacted by social trails or other visitor-related adverse impacts. By not building the trail there would be no alternative access to the forest near the proposed visitor center. Not building the trail would be a missed opportunity to meet the goals related to trail expansion in the park stated in the 2009 Redwood National Park Trail and Backcountry Management Plan. The no action alternative will not be formally analyzed in this document.

Proposed Action

Under the Proposed Action, an approximate 5266-foot trail would be constructed. One section of the trail will be referred to as the Centennial Grove Trail and the other section will be called the Berry Glen Connector Trail. The difference between the two is in name only and may be interchangeable. The Centennial Grove Trail section would be a short hike up the slope and around a short loop and a back to the trailhead. Identifying a section of trees as a named grove is within the tradition that the League has created. Many areas in the park are identified as named groves, which speaks to the identification of those groups, individuals and events whose donations and attentions have made it possible for the park to exist and for areas to have been saved from logging. It would be easily understood by the public who may be sent there if they ask interpretive staff for suggestions for a short hike near the proposed visitor center. The section referred to as the Berry Glen Connector refers to the trail in the larger context of being a connection to the Berry Glen Trail and sites beyond. The entire length of trail will be constructed as one undertaking.

The trailhead would be located near (approx. ¼ mile) the proposed visitor center and parking area on a roadbed-turned-path formerly associated with logging operations that runs along the base of the hillslope parallel to US Highway 101. From the trailhead, a 5 ft. wide section of trail referred to as the Centennial Grove Trail will wind uphill approximately 750ft. to an area where the trail becomes a loop; 189 ft. on its north side

and 32 ft. on its south side. Beyond that, the trail is referred to as the Berry Glen Connector Trail which continues uphill and terminates at the Berry Glen Trail approximately 4,004 ft. from the loop. The trailhead will be located at an elevation of 60 ft. above sea level and the trail terminates at 620 ft. elevation. The trail will not meet accessibility guidelines due to the steep grade of the hillslope.

During the first phase of construction, a trail dozer and other power equipment will be used to clear downed logs within the proposed trail corridor. Approximately 20 trees, 16in. diameter at breast height (DBH) and under, will be cut. This phase is estimated to take 10 to 12 weeks due to the amount and size of downed logs needing clearing. After clearing, work will include selective removal of vegetation and roots from the trail and up to 4 ft. beyond the trail so a clear path is delineated, and trail stabilization is possible.

Vegetation on the slope is primarily composed of native tree species including coast redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*), and red alder (*Alnus rubra*). The second growth forest at the bottom of the slope is dominated by red alder, Douglas-fir, and redwood. Vegetation includes an understory component of ferns, huckleberry (*Vaccinium sp*), salmonberry (*Rubus spectabilis*), elderberry (*Sambucus sp*), and cascara (*Rhamnus purshiana*).

During planning, the trail route was laid out to minimize removal large trees or large numbers of smaller trees. When appropriate, crib walls filled with native soil will be built to preserve the roots of trees that are impacted by trail construction. Fill materials and rock will be gathered from the project site as it is cleared. Cut and fill will be balanced. There will be no need to remove fill from the site or acquire off site fill for the project.

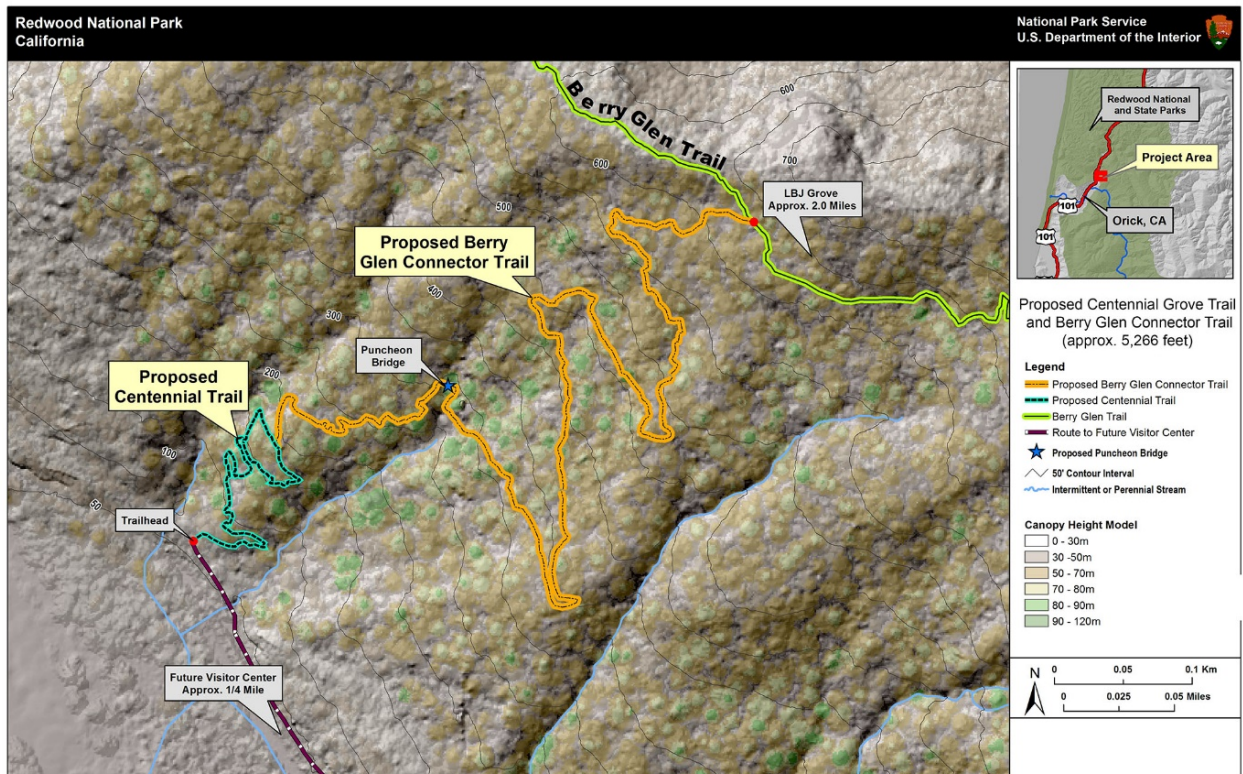
The amount of soil disturbance created during trail construction will vary considerably throughout the route, depending on the cross slope, terrain, and natural obstacles. The depth will vary on average from a few inches, to about 4 ft. deep. At one site, there will be a 4 ft. wide by 10 ft. long puncheon bridge constructed to span a wet area. Minimal excavation will be needed to level and place plastic lumber footings to support the bridge. The area of disturbance will be approximately 16in. wide by 6 ft. wide by 6 ft. long by 8 ft. deep for each footing. Wattle and silt fencing will be used if needed for erosion control.

This trail will be sited between two drainages to avoid crossing active waterways. Rolling grade dips will be constructed to control anticipated water accumulation and run-off that may occur during storm events. In the few areas where the trails cross small springs, they will be treated with a combination erosion fabric placed under a compacted layer of native rock to preserve native drainage areas.

Centennial Grove Trail and Berry Glen Connector Trail
Environmental Assessment 8/2020

Duff and vegetation will be collected on the route ahead of the excavation process and stored in various locations along the route. The duff will be placed on the trail tread and slopes to cover disturbed soil surfaces, to reduce possible silt movement, and to increase the speed of revegetation where needed. Ferns and other selected plants will be salvaged and stockpiled during the excavation process for replanting.

Work will begin after noise restrictions lift in September to avoid adverse impacts to threatened wildlife species that occur in old growth redwood forests.



Site plan 8_2020 (Redwood National Park files)

Environmental Impacts

Construction and maintenance of the trail as described in the Proposed Action would have negligible short-term and cumulative impacts to the environment. Items below evaluate the relevant direct, indirect, and cumulative impacts which may be caused by implementation of the trail.

Air Quality

The Proposed Action would pose no long-term or widespread adverse effects on air quality or air quality related values in the parks. Adverse effects on air quality would be considered negligible as they would be localized at the construction sites and temporary during the work periods. Those effects would include dust kicked up by human activity and construction-related machinery emissions produced during construction. There would be no change in green-house gas (GHG) emissions from construction or subsequent use of the trail.

Cumulative Impacts: Combined with other past present and future trail construction and maintenance activities, which include emissions from construction equipment and minor dust, the Proposed Action would contribute to overall emissions. However, emissions would be short term, localized, and minor and would not violate air quality standards. Cumulative impacts to air quality would be non-existent or negligible and would not result in a substantial cumulative contribution to air quality impacts.

Soils and Topography

Elevations of the Centennial Grove Trail range from 60 feet at the trailhead to 620 feet at its terminus at the Berry Glen Trail intersection. Topography of the hillslope would be slightly altered to establish a safe and walkable trail up the slope. As needed, topographical changes would be reinforced and stabilized. These alterations to the existing topography are long-term and have a negligible effect on the environment.

Construction of the approximate 5,266 linear feet of trail would affect 1.45 acres in a 12 foot wide corridor on the hillslope between the trailhead and the existing Berry Glen Trail. The finished trail would be 5 feet wide. Excavation depths and volumes would vary depending on the slope steepness, and cuts would be as minor as possible. Excavated material will be placed on the outside of disturbed areas and replaced using a naturalistic planting style along the trail edges.

Soil would be disturbed to a maximum depth of 4 inches on level stretches. About half of the total length of the trail requires excavation between 1 and 2 feet on slopes; the cut along the steepest switchback would be as much as 4 feet for 34 linear feet. Excavations for bridge footings would disturb 5.85 cubic yards of soil. Soils will be conserved and used as

needed on site during trail construction. Bare soils created during construction on the trail edges would be protected with mulch from salvaged vegetation. Soil erosion will minimize as vegetation re-establishes within the disturbance corridor.

Cumulative Impacts: Combined with other past present and future trail construction and maintenance activities, the Proposed Action will incur negligible impacts to topography and soils. Work plans include treatments to prevent erosion and topographical changes will be minor. The Proposed Action would not result in a substantial cumulative contribution to changes in soils and topography.

Hydrology and Water Quality

During trail construction there will be an effort to avoid the impacts that may be caused by runoff entering waterways from temporarily disturbed and bare soils. This will be accomplished by using vegetation salvaged from trail construction to cover soils and filter any potential runoff where cuts are made, and by using erosion fabric in places where small springs occur. Silt fencing and wattles will also be used as needed.

To retain natural drainage patterns and reduce erosion over the long term, the trail would be outsloped, with rolling dips installed and rock-armored crossings in moist areas. It would avoid crossing flowing water as much as possible. Where the trail does cross one wet area, a small puncheon (A walkway over wet ground made by laying planks or dressed timbers over sills set directly on the ground) will span a length of the trail in a wet area along the route where large trees are established. The route here and installation of the bridge was identified as the preferred method to span the wet area without tree removal or building a more substantial bridge in another location that would have a more significant impact to this section of the trail.

Cumulative Impacts: The Proposed Action, when combined with future actions would not result in cumulatively considerable impacts to hydrology and water quality in the affected environment or waterways downstream of the project site.

Vegetation

Construction of the trail will permanently impact approximately 1.45 acres of vegetation. During trail creation, vegetation would be cleared within a 12-foot-wide corridor. Vegetation will be selectively salvaged for eventual repositioning along trail edges. Twenty trees with a maximum 16 inches DBH would be removed, and downed logs would be cut through or removed from the project site.

Future vegetation maintenance of trails would permanently affect vegetation growing into the trail corridor within the finished 5 ft. trail corridor, a total area of .6 acres. This is a

maintenance activity that is routinely practiced to keep roads and trails open and is common throughout the park, region, and service. Effects on vegetation from trail construction are short-term and adverse and would be repeated as part of regular trail maintenance. Activities would include trimming back vegetation that would make the trail non-navigable. The effects on vegetation from trail maintenance are long-term, adverse, and permanent and would impact trailside vegetation only.

Cumulative Impacts: The Proposed Action, when combined with current and future actions would not result in significant cumulative impacts. Cumulative impacts to vegetation will be negligible as vegetation outside of the finished trail will reestablish itself over time, but will need to be maintained to keep the trail clear. Cumulative impacts on vegetation on the finished pathway are anticipated to be long-term adverse impacts associated with the removal of vegetation. Effects of vegetation removal beyond the finished corridor will be short-term and negligible. As vegetation is replanted or used as mulch there will be moderate long-term localized benefits.



Typical character of vegetation found on the project site. (Photos taken at Trillium Falls Trail NPS 2020)



Wildlife and Fish

The trail connection to the Berry Glen Trail contains suitable habitat for torrent salamander (*Rhyacotriton variegatus*), coastal giant salamander (*Dicamptodon tenebrosus*), ensatina (*Ensatina eschscholtzii*), and coastal tailed frog (*Ascaphus truei*). Mammals likely to occupy the project area include gray fox (*Urocyon cinereoargenteus*), mountain lion (*Puma concolor*), black bear (*Ursus americanus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), long-tailed weasel (*Mustela frenata*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), chipmunk (*Tamias*), Douglas squirrel (*Tamiasciurus douglasii*), brush rabbit (*Sylvilagus bachmani*), woodrat (*Neotoma*), flying squirrel (*Pteromyini*), vole (*Microtus*), shrew (*Soricidae*), deer mouse (*Peromyscus maniculatus*), and several species of bats. According to the *Biological Assessment of Impacts to Terrestrial Threatened and Endangered Species from the Centennial and Berry Glen Connector Trails Construction Project in Redwood National Park* (BA), the only threatened/endangered species that may have had the potential to be affected by the proposed project includes the northern spotted owl (*Strix occidentalis caurina*) and Pacific fisher (*Pekania pennanti*). The Humboldt marten (*Martes caurina humboldtensis*) is not listed or a candidate under the Federal Endangered Species Act but is listed as endangered under the California Endangered Species Act and was also included for assessment in the document. A letter of concurrence from the US Fish and Wildlife Service was received by REDW in 2020 in response to the BA. To summarize, the findings are that none of the activities described in the proposed action will disturb or result in the direct injury or mortality of spotted owls, marbled murrelets, fishers or martens.

No fish-bearing waterways would be affected by construction of the trail. Due to this, the NPS did not consult with National Oceanic and Atmospheric Administration (NOAA) Fisheries on impacts to threatened fish species. This project does not cross any boundaries outside of lands administered by REDW.

Cumulative Impacts: The Proposed Action is designed to result in a negligible difference in habitat features for avian, terrestrial, and aquatic-dependent species in the long term. Short-term impacts on biological resources would be less than significant. The Proposed Action, when combined with future actions in the region, would not result in cumulatively considerable impacts.

Cultural Resources

There were no National Register of Historic Places-eligible properties found in the project area. The NPS consulted the California State Historic Preservation Officer (SHPO) and federally recognized Tribes in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR 800 in the spring of 2020, and the SHPO had no objection to the proposed Finding of No Historic Properties Affected for

the undertaking as described by the NPS (SHPO) letter to Redwood National Park 6/24/2020).

NPS conducted Tribal consultation with the Yurok Tribe, Big Lagoon Rancheria, Trinidad Rancheria, Elk Valley Rancheria, Resighini Rancheria, and Hoopa Valley Tribe regarding this undertaking. None of the Tribes expressed concerns to REDW about the project.

Cumulative Impacts: The Proposed Action is not anticipated to result in substantial adverse change in the significance of a historical resource and impacts would be less than significant, because there has been a finding of no National Register of Historic Places eligible properties in the project area.

Visitor Use and Experience

Under the proposed action, visitors would have views of and direct access to existing park trails and old growth redwood forest from the new trail. The new trail will also connect visitors to a larger network of hiking and biking trails and day use areas.

Upon completion of the trail, several park trails will be connected to the proposed visitor center. The trail will contribute to and connect with this local network of trails in the park, and on a regional scale it will contribute to the California Coastal Trail which attempts to link 1200 miles of California coast with a trail system.

The new trail terminates at the Berry Glen Trail, and to the southeast of that intersection a hiker will be able to walk to the popular Lady Bird Johnson Grove Loop Trail. The new trail may alleviate parking congestion at the grove when visitors choose to access LBJ from the Centennial Grove Trail and Berry Glen Connector Trail. In the other direction, the Berry Glen Trail leads towards several trails and areas of interest including the Elk Meadow day use area, Lost Man Creek, the Davison Trail, the Prairie Creek Bike/Hike Trail, The Streelow Creek Bike/Hike Trail, the Trillium Falls Trail, existing sections of the California Coastal Trail, and many more.

Cumulative Impacts: Combined with other past present and proposed visitor use related activities, the Proposed Action will have long term benefits as it will open up access to old-growth redwood forests to visitors and provide a connection between park and regional trails.

Socioeconomics

The proposed action has the potential to increase the number of visitors who will be able to experience old growth redwood forest from the comfort and convenience of the League proposed visitor center. Visitors who may not feel comfortable parking and accessing trails

in more rural settings, and busloads of school children are some of the user groups who may benefit from the construction of the proposed trail.

The trail, in combination with the proposed visitor center complex may also benefit the small community of Orick, an unincorporated community where visitors can purchase fuel, food, basic groceries, and supplies. Day and overnight horseback rides on the Orick Horse Trails are available under NPS commercial use authorizations. Local businesses offer guided kayak and rafting trips, bike rides, hikes, and day and overnight horseback rides on the Orick Horse Trails.

Cumulative Impacts: Combined with other past present and future socioeconomic-related activities, the Proposed Action may contribute to an economic benefit to the local economy and serve a community of visitors that has not been served in the past by creating access to old-growth redwood forest from a visitor center.

Consultation and Coordination

National Park Service, Redwood National Park, CA

Keith Bensen, Fish and Wildlife Biologist (ESA consultation)
Shaun Bessinger, Chief of Facility Management
Lynn Erickson-Levi, Trails Work Leader
Karin Grantham, Chief, Resource Management and Science (NHPA, Section 106)
Steve Mietz, Superintendent
Saylor Moss REDW Chief of Planning and Compliance
Stephen Prokop, (retired) Superintendent
Aida Parkinson, Environmental Specialist (retired, NEPA, EA preparer)
Barney Riley, (former) Chief of Facility Management
Dave Roemer, Deputy Superintendent

National Park Service, Pacific West Regional Office, San Francisco, CA

Jack Williams, PE, (NPS consultant)
Lynn Nakata, (NPS consultant)

Save The Redwoods League

Christine Aralia, Land Project Manager
Jessica Carter, Director of Parks and Public Engagement
Petra Unger, Consultant to Save the Redwoods League

Yurok Tribe

Rosie Clayburn, THPO
Robert McConnell, (former) THPO
Frankie Joe Myers, (former) THPO

U.S. Fish and Wildlife Service, Arcata Fish and Wildlife Office, Arcata, CA

Bill McIver (ESA consultation)
Clint Pogue (ESA consultation)

References

National Park Service, U.S. Department of the Interior, and California Department of Parks and Recreation. 1999. Final General Management Plan/General Plan, Environmental Impact Statement/Environmental Impact Report, Vols 1 & 2. Copy available at park offices in Crescent City and Orick, CA.

National Park Service, U.S. Department of the Interior and California Department of Parks and Recreation. 2000. General Management Plan/General Plan. On file at park offices in Crescent City, Orick, and Eureka, CA.

National Park Service. 2009. Redwood National Park Trail and Backcountry Management Plan Environmental Assessment. Redwood National Park. Del Norte and Humboldt Counties, California. April 2009.

National Park Service. 2009. Finding of No Significant Impact. Trail and Backcountry Management Plan. Redwood National Park. Del Norte and Humboldt Counties, California. June 2009.

National Park Service, U.S. Department of the Interior. 2013. Threatened, Endangered, Proposed, and Candidate Species in Redwood National and State Parks. Biological Assessment Reference Document. Division of Resource Management and Science, Fish and Wildlife Branch. On file at park office in Orick, CA.

National Park Service, U.S. Department of the Interior. 2016. Foundation Document. Redwood National and State Parks. California. REDW 167/132031 Denver, CO.

National Park Service, U.S. Department of the Interior. 2018. Draft Biological Assessment of Impacts to Terrestrial Threatened Species from Construction, Operation and Maintenance of the Redwood National Park Orick Visitor Center Complex. On file at park office in Orick, CA.

Redwood Community Action Agency, Natural Resources Division, and California Trout, Inc. 2017. Prairie Creek Gateway Trail Plan. Final. Prepared for the State Coastal Conservancy on behalf of Save The Redwoods League. Copy available at RCAA office, Eureka CA.

This page left intentionally blank

This page left intentionally blank

